

令和 6 年度入学者選抜学力検査問題
〈前期日程〉

外 国 語

英 語

(医学部 医学科)

注 意 事 項

- 1 試験開始の合図があるまでこの冊子を開いてはいけない。
- 2 問題はⅠからⅣまでである。
試験開始の合図のあとで問題冊子の頁数(1～13 頁)を確認すること。
- 3 解答は必ず解答用紙の所定の欄に記入すること。
所定の欄以外に記入したものは無効である。
- 4 解答用紙は持ち帰ってはいけない。
- 5 問題冊子は持ち帰ってよい。

I 次の英文を読み、以下の質問にすべて記号で答えなさい。

Charlie Chasen and Michael Malone met in Atlanta in 1997, when Mr. Malone served as a guest singer in Mr. Chasen's band. They quickly became friends, but they didn't notice what other people around them did: The two men could (1) for twins.

Mr. Malone and Mr. Chasen are doppelgängers*. They look strikingly similar, but they are not related. Their (2) ancestors aren't even from the same parts of the world; Mr. Chasen's forebears* hailed from* Lithuania and Scotland, while Mr. Malone's parents are from the Dominican Republic and the Bahamas.

The two friends, along with hundreds of other unrelated look-alikes, participated in a photography project by François Brunelle, a Canadian artist. The picture series, "I'm not a look-alike!," was inspired by Mr. Brunelle's discovery of his own look-alike, the English actor Rowan Atkinson.

The project has been a hit on social media and other parts of the internet, but it's also (3) the attention of scientists who study genetic relationships. Dr. Manel Esteller, a researcher at the Josep Carreras Leukaemia Research Institute in Barcelona, Spain, had previously studied the physical differences between (4) twins, and he wanted to examine the (5): people who look alike but aren't related. "What's the explanation for these people?" he wondered.

In a study published Tuesday in the journal *Cell Reports*, Dr. Esteller and his team recruited 32 pairs of look-alikes from Mr. Brunelle's photographs to take DNA tests and complete questionnaires about their lifestyles. The researchers used facial recognition software to quantify* the similarities between the participants' faces. Sixteen of those 32 pairs achieved similar (6) scores to identical twins analyzed by the same software. The researchers then compared the DNA of these 16 pairs of doppelgängers to see if their DNA was as similar as their faces.

Dr. Esteller found that the 16 pairs who were "true" look-alikes shared significantly more of their genes than the other 16 pairs that the software deemed* less similar. "These people really look alike because they share important parts of the genome, or the DNA sequence," he said. That people who look more alike have more genes in common "would seem like common sense, but never had been shown," he added.

However, DNA alone doesn't tell the whole story of our makeup*. Our lived experiences, and those of our ancestors, influence which of our genes are (7) on or off — what scientists call our epigenomes*. And our microbiome*, our microscopic co-pilot* made up of bacteria, fungi* and viruses, is further influenced by our environment. Dr.

Esteller found that while the doppelgängers' genomes were similar, their epigenomes and microbiomes were different. "Genetics put them together, and epigenetics* and microbiome (8) them apart," he said.

This discrepancy⁽¹⁾ tells us that the pairs' similar appearances have more to do with their DNA than with the environments they grew up in. That surprised Dr. Esteller, who had expected to see a bigger environmental influence.

Because the doppelgängers' appearances are more attributable* to shared genes than shared life experiences, that means that, to some extent, their similarities are just the (9) of the draw, spurred on by population growth. There are, after all, only so many ways to build a face.

"Now there are so many people in the world that the system is repeating itself," Dr. Esteller said. It's not (10) to assume that you, too, might have a look-alike out there.

Dr. Esteller is hopeful that the study's findings will help doctors diagnose illness in the future — if people have similar enough genes to look alike, they might share predilections⁽²⁾ for diseases too.

"There seems to be something pretty (11) in terms of genetics that is making two individuals who look alike also have genome-wide similar profiles," said Olivier Elemento, the director of the Englander Institute for Precision Medicine at Weill Cornell Medicine in New York, who was not involved with the study. Discrepancies between DNA's predictions and people's actual appearances might alert doctors to problems, he said.

Dr. Esteller also suggested that there could be links between facial features and behavioral patterns, and that the study's findings might one day aid forensic science* by providing a (12) of the faces of criminal suspects known only from DNA samples. However, Daphne Martschenko, a postdoctoral researcher at the Stanford Center for Biomedical Ethics who was not involved with the study, urged (13) in applying its findings to forensics*.

"We've already seen plenty of examples of how existing facial algorithms* have been used to (14) existing racial biases in things like housing and job hiring and criminal profiling," Dr. Martschenko said, adding that the study "raises a lot of important ethical considerations."

Despite the potential pitfalls⁽³⁾ of linking people's appearances with their DNA or their behavior, Mr. Malone and Mr. Chasen said the look-alike project, and the knowledge that we all might have a secret twin out there, was a (15) of bringing people together. The two have remained friends for 25 years; when Mr. Chasen got married last week, Mr. Malone was the first person he called. While not everyone with similar DNA shares such a

bond, Mr. Malone said that he saw Mr. Brunelle's photography project as "another way to connect all of us in the human race."

—From Kate Golembiewski, "Your Doppelgänger Is Out There and You Probably Share DNA With Them," *New York Times*, August 23, 2022.

Notes: doppelgängers 生き写し, 自身の姿を自分で目にする幻覚現象
forebear 先祖 hail from ~の出身である
quantify 数値化する deem 判断する
makeup 体質 epigenome エピゲノム
microbiome 生態系における生きた微生物の集合, 微生物叢
co-pilot 共同者 fungi 菌類
epigenetics 後成的遺伝学 attributable ~に起因する
forensic science 科学捜査技術 forensics 科学捜査
facial algorithm 顔認識アルゴリズム

問1 下線部(1)(2)(3)の語に最も近い意味を持つ定義を(A)~(D)から一つ選び, 記号で答えなさい。

- (1) discrepancy: (A) difference especially between things that should be the same
(B) quality that makes one person or thing like another
(C) difference in social status, wealth, or opportunity between people or groups
(D) typical or repeated habit, action, or belief
- (2) predilection: (A) unfair and unreasonable opinion or feeling
(B) strong feeling of dislike for someone or something
(C) path someone or someone moves along
(D) tendency to occur the most likely
- (3) pitfall: (A) fact or condition of being without doubt
(B) state of being free from danger or threat
(C) unapparent source of trouble or danger
(D) error caused by ignorance, bad judgment or inattention

問2 空所 (1) から (15) を補うのに適切な1語を下の語群内の(A)から(O)より選び、記号で答えなさい。

語 群

- | | | | |
|---------------|--------------|------------------|---------------|
| (A) caution | (B) drawn | (C) glimpse | (D) identical |
| (E) immediate | (F) luck | (G) means | (H) overall |
| (I) pass | (J) pulls | (K) reinforce | (L) reverse |
| (M) strong | (N) switched | (O) unreasonable | |

II

次の英文を読み、以下の質問に答えなさい。ただし、問5、問6、問8以外は日本語で解答すること。

Petey hadn't really believed that Dad would be doing it—sending Granddad away.

“Away” was what they were calling it. Not until now could he believe it of Dad.
(1)

But here was the blanket that Dad had that day bought for him, and in the morning he'd be going away. And this was the last evening that they'd be having together. Dad was off seeing that girl he was to marry. He'd not be back till late, and they could sit up and talk.

It was a fine September night, with a thin white moon riding high over the gully*. When they'd washed up the supper dishes they went out on the shanty* porch,* the old man and the bit of a boy, taking their chairs. “I'll get me* fiddle*,” said the old man, “and play ye* some of the old tunes.” But instead of the fiddle he brought out the blanket. It was a big double blanket, red, with black cross stripes.

“Now isn't that a fine blanket!” said the old man, smoothing* it over his knees. “And isn't your father a kind man to be giving the old fellow a blanket like that to go away with? It cost something, it did—look at the wool of it! And warm it will be these cold winter nights to come. There'll be few blankets there the equal of this one!”

It was like Granddad to be saying that. He was trying to make it easier. He'd pretended all along it was he that was wanting to go away to the great brick building—the government place, where he'd be with so many other old fellows having the best of everything. . . . But Petey hadn't believed Dad would really do it, until this night when he brought home the blanket.
(2)

“Oh, yes, it's a fine blanket,” said Petey, and got up and went into the shanty. He wasn't the kind to cry, and, besides, he was too old for that, being eleven. He'd just come in to fetch* Granddad's fiddle.

The blanket slid to the floor as the old man took the fiddle and stood up. It was the last night they'd be having together. There wasn't any need to say, “Play all the old tunes.” Granddad tuned up for a minute, and then said, “This is one you'll like to remember.”
(3)

The thin moon was high overhead, and there was a gentle breeze playing down the gully. He'd never be hearing Granddad play like this again. It was as well Dad was moving into that new house, away from here. He'd not want, Petey wouldn't, to sit here on the old porch of fine evenings, with Granddad gone.

The tune changed. “Here's something gayer*.” Petey sat and stared out over the gully. Dad would marry that girl. Yes, that girl who'd kissed him and slobbered over* him, saying

she'd try to be a good mother to him, and all. . . . His chair creaked* as he involuntarily gave his body a painful twist.

The tune stopped suddenly, and Granddad said: "It's a poor tune, except to be dancing to." And then: "It's a fine girl your father's going to marry. He'll be feeling young again, with a pretty wife like that. And what would an old fellow like me be doing around their house, getting in the way, an old nuisance*, what with my talk of aches and pains! And then there'll be babies coming, and I'd not want to be there to hear them crying at all hours. It's best that I take myself off, like I'm doing. One more tune or two, and then we'll be going to bed to get some sleep against the morning, when I'll pack up my fine blanket and take my leave. Listen to this, will you? It's a bit sad, but a fine tune for a night like this."

They didn't hear the two people coming down the gully path, Dad and the pretty girl with the hard, bright face like a china doll's. But they heard her laugh, right by the porch, and the tune stopped on a wrong, high, startled note. Dad didn't say anything, but the girl came forward and spoke to Granddad prettily: "I'll not be seeing you leave in the morning, so I came over to say good-by."

"It's kind of you," said Granddad, with his eyes cast down*; and then, seeing the blanket at his feet, he stooped* to pick it up. "And will you look at this," he said in embarrassment, "the fine blanket my son has given me to go away with!"

"Yes," she said, "it's a fine blanket." She felt of the wool, and repeated in surprise, "A ⁽⁴⁾fine blanket I'll say it is!" She turned to Dad and said coldly, "It cost something, that."

He cleared his throat, and said defensively, "(). . . ."

The girl stood there, still intent on the blanket, "It's double too," she said reproachfully* to Dad.

"Yes," said Granddad, "it's double — a fine blanket for an old fellow to be going away with."

The boy went abruptly into the shanty. He was looking for something. ⁽⁵⁾ He could hear that girl reproaching* Dad, and Dad becoming angry in his slow way. And now she was suddenly going away in a huff*. . . . As Petey came out, she turned and called back, "All the same, he doesn't need a double blanket!" And she ran up the gully path.

Dad was looking after her uncertainly.

"Oh, she's right," said the boy coldly. "Here, Dad," — and he held out a pair of scissors. "Cut the blanket in two."

Both of them stared at the boy startled. "Cut it in two, I tell you, Dad!" he cried out. "And keep the other half!"

“That’s not a bad idea,” said Granddad gently. “I don’t need so much of a blanket.”

“Yes,” said the boy harshly, “a single blanket’s enough for an old man when he’s sent away. We’ll save the other half, Dad; it will come in handy later.”

“Now, what do you mean by that?” asked Dad.

“I mean,” said the boy slowly, “that I’ll give it to you, Dad — when you’re old and I send you away.”

There was a silence, and then Dad went over to Granddad and stood before him, not speaking. But Granddad understood, for he put out a hand and laid it on Dad’s shoulder. Petey was watching them. And he heard Granddad whisper, “It’s all right, son — I knew you didn’t mean it. . . .” And then Petey cried.

But it didn’t matter — because they were all three crying together.

— Floyd Dell, “The Blanket,” *Collier’s*, October 16, 1926.

Notes:	gully 小峡谷	shanty 掘っ立て小屋
	porch ベランダ	me 私の
	fiddle バイオリン	ye あなたに
	smooth 滑らかにする	fetch 取ってくる
	gayer gay (陽気な) の比較級	slobber over 可愛がる
	creak きしむ音を立てる	nuisance 厄介者
	cast down 伏せる	stoop かがむ
	reproachfully 非難するように	reproach 非難する
	in a huff 怒って	

問1 下線部(1)は何を意味するのか、本文に即して説明しなさい。

問2 下線部(2)について下記の質問に答えなさい。

- 1) He は誰を指しているのか明らかにしなさい。
- 2) it は何を指しているのか明らかにしなさい。
- 3) easier は何を意味するのか、本文に即して説明しなさい。

問3 Granddad が Petey に下線部(3)を伝えた理由を説明しなさい。

問4 その女性が下線部(4)と言った理由を説明しなさい。

問5 本文中の（ ）に入る適切な英文を以下の選択肢から選びなさい。

- ① I wanted him to have the best
- ② You have done such a terrible thing
- ③ You bought something expensive
- ④ I am glad you dared to choose so

問6 下線部(5)の something は何を示すのか。本文中から抜き出さない。

問7 Petey が下線部(6)と言った理由を説明しなさい。

問8 本文の内容に関する以下の英文に関して、(A)～(C)から該当するものを一つ選びなさい。

- (A) 本文で述べられている内容と一致する。
- (B) 本文で述べられている内容と一致しない。
- (C) 本文で述べられている内容から判断できない。

- (1) Petey did not think his dad would send his granddad away.
- (2) Granddad played several fiddle tunes at Petey's request.
- (3) Dad's engaged woman was not on good terms with Granddad.
- (4) The separation from Granddad left Petey terribly alone.
- (5) When Petey cut the blanket with scissors, Dad and Granddad expressed their feelings for each other.

Ⅲ 次の英文を読み、以下の質問に答えなさい。問1以外は日本語で解答すること。

When Jen Park was an adolescent growing up in Korea, she was the oldest child in a family with two working parents. She remembers taking on responsibilities that made her feel older than her peers.

“I learned to grow up at an early age,” Park explains. “When I was 14, I’d pick my younger brother up from school,” Park says. “I’d be in (1) of checking his homework and making sure that he was fed until our parents got home. I’d make ramen for him.”

That early experience is one of the things that led Park, a Stanford Graduate School of Business (GSB) student working toward a PhD* in marketing, to become intrigued with how people’s perception of their own age can influence their actions.

“I wanted to test whether subjective age could influence people’s decisions to help others,” explains Park, whose research focuses on judgment and decision-making.

That curiosity led her to team up with Szu-chi Huang, an associate professor of marketing at Stanford GSB, on a series of experiments in which they shifted participants’ perception of their own age in order to study the effects on their willingness to help strangers in need. Boston University assistant professor of marketing Daniella Kupor and Google researcher Bella Rozenkrants, who both received their PhDs from Stanford GSB, also worked on the project.

The research, described in a recent article in the *Journal of Consumer Psychology*, found that even in a culture obsessed with youthfulness, feeling older than one’s years actually may provide a vital benefit by promoting the sort of prosocial* behavior needed to cope with big problems such as poverty and disaster relief.

The effect of subjective age upon the social good is a phenomenon that seems deeply intertwined* with society’s conflicted attitudes about aging.

On one level, “we do not like getting old,” Huang notes. “Look at the amount of money that we spend on anti-aging creams and other products that are part of a multibillion-dollar industry devoted to keeping you young.”⁽¹⁾

Even as American culture ostensibly* preaches* respect for the elderly, older people often are perceived as less physically and intellectually competent. “There are many negative stereotypes of aging in our society,” Park says. “In Western societies, aging typically is associated (2) decline and illness. But aging is not as stigmatizing* in other parts of the world. So we asked ourselves, what are the unknown benefits of older age that we can leverage* for the greater good?”

But *being* old and *feeling* old aren’t the same thing, Park and Huang explain. Perception

of one's age isn't necessarily based upon your date of birth; instead, it tends to be fluid, varying from situation to situation and influenced by the actual age of the people around you.

"Social comparison can really shift how old you feel," Huang explains. "If I interact with students who are young millennials*, I feel older, which is a contrast to how I feel interacting with senior colleagues."

Additionally, subjective age even can be influenced by a person's memories or thoughts about the future. "If you're thinking about yourself back in college, when you could party for three days straight, you feel older," Huang says. "But if you think ahead and imagine your retirement, you might feel younger by comparison."

To gain insights about subjective age, the researchers ran experiments with participants between the ages of 18 and 60, both in the lab and in the field. "We shifted people's subjective age, by making them feel younger or older," Park explains. To utilize that effect, the researchers used techniques such as showing participants pictures of infants and elderly people and asking them to imagine interacting with them.

But Park and Huang also found that they could alter participants' perception of age by getting them to compare themselves to their memory of being 15 years old, or to how they envisioned* their 80-year-old selves.

"It's not just a social comparison that makes one feel older or younger," Park says. "We found that you can feel older by imagining yourself at a younger age," or vice-versa*.

"We wanted to make sure that we could shift their perception of subjective age," Huang explains. "Once we figured out that we could, we wanted to see what effect it had upon prosociality*."

In subsequent experiments, the researchers studied the effect of subjective age upon participants' willingness to help strangers—for example, by donating money to a nonprofit organization that promotes skin cancer prevention or provides guide dogs* to people who are blind, or by volunteering time to help build public parks and trails.

In one field study, researchers set up a stand at a Stanford sports event, just before Thanksgiving, and invited spectators to write thank-you cards to either family members or university staff members. In the (3), the researchers shifted participants' subjective age by informing them about the average age of others who had participated in the card-writing event. In another, they organized a food-bank donation drive at local farmers' markets. In some instances, they used teenage volunteers to collect the money, a ploy* to make participants feel older. In other instances, the volunteers were in their 50s, so that many of the donors might feel younger.

Across these studies, the researchers found that when participants perceived themselves as older, they were more willing to do things for others with whom they didn't have a personal connection, whether it was making donations, writing thank-you notes to strangers, or volunteering time for projects that would benefit people they'd never met.

"People are more likely to donate and volunteer if they feel older," Park notes. In the card-writing experiment, for example, "we found that when we told participants that the average age of other card-writers was 19, they felt older and wrote more notes to staff."

"We also found that when people are nudged* to feel older, they feel more responsibility," Huang says. "It's like the society is on our shoulders. We feel like we're expected to make this world better for the next generation."

Organizations involved in social causes might utilize the new insights about subjective age to optimize* their recruiting and fundraising* efforts. "If you want to create an older subjective age among the audience you're trying to reach, utilizing younger volunteers for recruiting might help," Huang says.

Subjective age might also be utilized to shape advertising and marketing of socially responsible and environmentally sustainable products, according to Park.

"I've also been thinking about how we can use this knowledge to encourage people to have more responsible behavior in the pandemic*, such as wearing a mask and getting vaccinated*," Park adds. "We live in a time when people need to show responsibility more than ever."

The findings also provide pushback* against the misconception that older people no longer play a pivotal* role in society. "We want to fight against the stereotype that being older makes you less productive," Huang says. "To the (4), for any organization whose revenue model is based on donations, their survival depends upon people feeling a sense of responsibility to others, and that often means relying upon people who subjectively feel older."

As Huang observes with a laugh, "As I get older, I find myself gravitating* toward ideas that explore the potential benefits to feeling older."

—From Steve Hawk, "Feel Old for Your Age? That's Actually a Good Thing — For Others," October 8, 2021. <https://www.gsb.stanford.edu/insights/feel-old-your-age-thats-actually-good-thing-others>

Notes: PhD 博士号	prosocial 向社会性の
intertwine 結び付く	ostensibly 表向きは
preach 説く	stigmatizing 汚名を着せる
leverage 活用する	millennial 新世紀(2000年)世代
envision 想像する	vice-versa 逆もまた同様に
prosociality 向社会性	guide dog 盲導犬
ploy 策略	nudge 動かす
optimize 最大限に利用する	fundraising 寄付金集め
pandemic 感染症の大流行	vaccinate 接種をする
pushback 抵抗	pivotal 極めて重要な
gravitating 引き付けられる	

問1 本文中の空所 (1) ~ (4) に入る適切なものを(A)~(E)から一つ選び、記号で答えなさい。

- (1) (A) charge (B) virtue (C) place (D) favor (E) need
 (2) (A) on (B) by (C) with (D) in (E) from
 (3) (A) light (B) way (C) future (D) process (E) works
 (4) (A) opposition (B) effect (C) end (D) point (E) contrary

問2 Park は自分自身の生い立ちからどのような知的関心を持つようになったのかを述べなさい。

問3 Park らの共同研究について以下の問いに答えなさい。

- 1) この研究の目的を述べなさい。
- 2) この研究から導かれた考察を述べなさい。

問4 Park が下線部(1)と述べた具体例を本文中から示しなさい。

問5 Park は年を取ることと年齢への感じ方の関係をどのように説明しているのか述べなさい。

問6 下線部(2)で示された実験群について以下の問いに答えなさい。

- 1) この実験群から導かれた考察を二点述べなさい。
- 2) 筆者はこれらの研究結果が何を示唆すると考えているのか述べなさい。

IV システム工学研究者である川上浩司さんは「不便益」という概念を提唱し、「不便だからこそ、いいことがある。」と主張しています。解答の中で「不便益」を英訳し、あなたが考える「不便益」の具体例とその理由を 100～110 語の英文で述べなさい。なお、文末に使用した語数を記すこと。

