問題訂正

外国語(英語)

〔Ⅱ〕4ページ 資料1の4行目

(誤) Crane

(正) Crain

〔 I 〕 Read the following passage and grasp the main ideas. Then, summarize each paragraph within 60 characters (including punctuation marks) in Japanese.

The language used in media both reflects a culture's view of the world and influences how people within the culture think and act. "Hate speech" can lead to violence and destruction, creating an environment in which conflict thrives. On the other hand, "peace speech" can characterize peaceful cultures and help to generate or sustain peace. However, the function and reality of peace speech have not been well studied.

In a new study, Larry Liebovitch and colleagues used highly respected peace indices(注1) to capture levels of peace within 18 countries classified as high-peace, intermediate-peace, or low-peace. The indices provided a comprehensive evaluation based on various factors, such as political stability, crime rates, and social welfare. The researchers then collected 723,574 media articles originating from these countries; all articles were from local sources and published online in English. This large data set provided a robust basis for analysis.

The researchers analyzed the text for patterns and frequencies of specific words. The results showed that lower-peace countries were characterized by a higher prevalence of words related to government, order, control, and fear (e.g., government, state, law, security, and court). Meanwhile, higher-peace countries were characterized by an increased prevalence of words related to optimism for the future and fun (e.g., time, likes, home, beliefs, and games).

The researchers point out that their data were biased in that all the sources were in English, which means that their method is more reliable in evaluating countries where English is a more common language for news communication. Cultural differences in language usage and expression could affect the results, highlighting the need for further research in other languages.

Despite the limitations, the researchers conclude that the data serve as a good starting point to further explore the linguistic differences between lower-peace and

higher-peace cultures. They suggest that understanding these differences can help develop strategies for promoting peace through the media. The researchers state that they used computers to find the words in local news media that best indicate the level of peace in a country. They found that in less peaceful countries, news media focus on government and social control, while in more peaceful countries, the focus is on personal preferences and everyday activities. High-peace countries evidenced a much higher level of diversity of terms than low-peace countries.

(Adapted from *Phys.org*, November 1, 2023)

(注１) indices 指数

〔Ⅱ〕 Read the following two passages about moon landings and answer the questions.

資料 1

The Odysseus moon landing has been a success. Despite technical issues nearly causing a delay, Odysseus reached the surface of the moon at approximately 6:23 p.m. ET(注 1). "We can confirm without a doubt the equipment is on the moon," Dr. Tim Crane said on the NASA broadcast. "Odysseus has a new home." High-resolution photos of the moon landing are expected to be released at a later time, according to the agency.

Intuitive Machines' lander, named Odysseus, launched last week from NASA's Kennedy Space Center in Florida and entered lunar(注 2) orbit on Wednesday. It is the first commercial landing in U.S. history. This landing marked the first by a U.S.-built spacecraft in more than 50 years. As well as commercial cargo, the lander is carrying five NASA instruments, including a radio beacon(注 3) meant to transmit precise geolocation(注 4) and cameras that capture how the surface of the moon changes from interactions with the engine plume(注 5) of the spacecraft. Odysseus will have seven days before darkness descends on the landing site, which will prevent the spacecraft's solar panels from gathering energy from sunlight. Intuitive Machines was one of several companies approved by NASA under Commercial Lunar Payload(注 6) Services (CLPS) contracts to build private lunar landers that the federal space agency, among others, would use to send instruments into space.

This is the third attempt to land on the moon this year. In early January, the Peregrine lunar lander, built by Astrobotic, developed a critical fuel leak, forcing it to return to Earth and burn upon re-entry(注 7). Meanwhile, Japan launched a rocket to the moon in September 2023 and landed on January 19, becoming the fifth country to do so. However, the lunar lander landed upside down and could not deploy its solar panels.

"There's reduced gravity, there's very little atmosphere, a lot of dust, and so the engineers have to speculate how a spacecraft would behave in that type of environment, right? And it doesn't exist here on Earth," Regina Blue, NASA's CLPS deputy program

manager, told ABC News, explaining why it is so difficult to land on the moon. "So they have to spend lots of hours testing and testing and doing more testing, and even that, getting into that environment there is a good amount of unpredictability, so that makes it very, very hard," she continued.

These robotic missions are important to explore the moon as NASA and the Canadian Space Agency prepare to send four astronauts to fly around the moon in the upcoming Artemis II mission in 2025. If the mission is successful, Artemis III—a moon landing—is scheduled for 2026.

(Adapted from an article by Gina Sunseri, Mary Kekatos, and Leah Sarnoff in *ABC News*, February 23, 2024)

(注１) ET　アメリカ東部時間
(注２) lunar　月の
(注３) a radio beacon　無線標識装置
(注４) geolocation　位置情報
(注５) engine plume　エンジンの噴煙
(注６) Payload　貨物
(注７) re-entry　大気圏への再突入

資料 2

An American company has made history by becoming the first commercial outfit to put a spacecraft on the Moon. Houston-based Intuitive Machines landed its Odysseus robot near the lunar south pole. It took some minutes for controllers to establish that the craft was down, but eventually a signal was received. "What we can confirm, without a doubt, is our equipment is on the surface of the Moon and we are transmitting," flight director Tim Crain announced. Staff at the company cheered and clapped at the news. (A)

It was an important moment, not just for the commercial exploitation of space but for the US space programme in general. Intuitive Machines has broken the United States' half-century absence from the Moon's surface. (B) You have to go back to the last Apollo mission in 1972 for an occasion when American hardware landed gently in the lunar soil. The US space agency NASA had purchased room on Odysseus for six scientific instruments, and its administrator Bill Nelson was quick to add his congratulations to Intuitive Machines for a mission he described as a "triumph." "The US has returned to the Moon," he said. "Today, for the first time in the history of humanity, a commercial company—an American company—launched and led the voyage up there. And today is the day that shows the power and promise of NASA's commercial partnerships."

Controllers had to deal with an almost mission-stopping technical problem even before the descent began. Odysseus' ranging lasers, which were supposed to calculate the craft's altitude and speed, weren't working properly. Fortunately, there were some experimental lasers from NASA on board, and engineers were able to patch these across to the navigation computers.

Odysseus touched down at 23:23 GMT(注 1). (　　), there was no signal at all from the robot. There were plenty of nerves as the minutes ticked by, but eventually a communications link was made, albeit a faint one. This led to some concerns about the status of the lander. Within a couple of hours, however, Intuitive Machines was reporting that Odysseus was standing upright and sending back data, including pictures.

The targeted landing site was a cratered terrain(注 2) next to a 5 km-high mountain complex known as Malapert, and it is the southernmost point on the Moon ever visited by a spacecraft, at 80 degrees South. It is on the shortlist of locations where NASA is considering sending astronauts later this decade as part of its Artemis programme. There are some deep craters in this region that never see any sunlight—they're permanently in shadow—and scientists think frozen water could be inside them. "The ice is really important because if we can actually take advantage of that ice on the surface of the Moon, that's less material we have to bring with us," explained Lori Glaze, NASA's director of planetary science. "We could use that ice to convert it to water—drinkable drinking water—and we can extract oxygen and hydrogen(注 3) for fuel and for breathing for the astronauts. So it really helps us in human exploration."

NASA's six payloads on board Odysseus are a mix of technology demonstration and applied science. A key investigation will be one looking at the behaviour of lunar dust(C), which the Apollo astronauts found to be a serious nuisance(注 4), scratching and clogging their equipment. The agency's scientists want to understand better how the dust is kicked up by landing craft to hang just above the surface before then settling back down.

The six commercial payloads on board include a student camera system from Embry-Riddle Aeronautical University, which should have been deployed from Odysseus when it was still 30 m above the lunar surface. This system was designed to take selfie images(注 5) as the robot set itself down. American artist Jeff Koons has also attached a box to the side of the lander that contains 125 small stainless steel balls to represent the Moon's different phases through a month.

Prior to Intuitive Machines' success, only government space agencies had put spacecraft down softly on the Moon—the US, the Soviet Union, China, India and Japan. In January, another American company, Astrobotic, had a go. Its Peregrine lander developed technical problems(D) en route to the Moon and gave up the opportunity of a touchdown. The robot was brought back to burn up in Earth's atmosphere.

(Adapted from an article by Jonathan Amos in *BBC*, February 23, 2024)

（注１）　GMT　グリニッジ標準時

（注２）　a cratered terrain　クレーター状の土地

（注３）　hydrogen　水素

（注４）　nuisance　厄介なもの

（注５）　selfie images　自撮り画像

問 1　アルテミスⅢのミッションで宇宙飛行士の月面着陸が計画されていることが資料 1 に記されています。その着陸の候補地の一つがどこにあるか説明している文が資料 2 にあります。もっとも詳しく説明している一文の最初の 3 単語を抜き出しなさい。

問 2　下線部 (A) ともっとも近い意味で用いられている 1 単語を資料 1 から抜き出しなさい。

問 3　下線部 (B) と同じ内容のことが書かれている一文が資料 1 にあります。その一文の最初の 3 単語を抜き出しなさい。

問 4　資料 2 の第 4 段落にある空欄を補うのにもっともふさわしい語句を下の(1)～(4)の中から一つ選び，番号で答えなさい。

(1) For instance

(2) In the end

(3) In short

(4) At first

問 5　月面に氷があった場合，それは具体的にどのように活用できると書かれていますか。60 字以内の日本語で答えなさい。句読点も字数に含めます。

問 6　下線部 (C) が引き起こす問題を防ぐために，NASA の科学者たちは具体的に何をしたいのか。50 字以内の日本語で答えなさい。句読点も字数に含めます。

問 7　下線部(D)の問題の一つとして資料1で何が挙げられていますか。10字以内の日本語で答えなさい。

問 8　資料の内容として正しいものを下の(1)～(4)の中から一つ選び，番号で答えなさい。

(1)　イントゥーイティヴ・マシーンズ社は，NASAが民間の月着陸船を製造することを承認した唯一の会社である。

(2)　月面着陸が難しい理由は，月は重力が小さく，大気の気密性が高く，塵が多いためである。

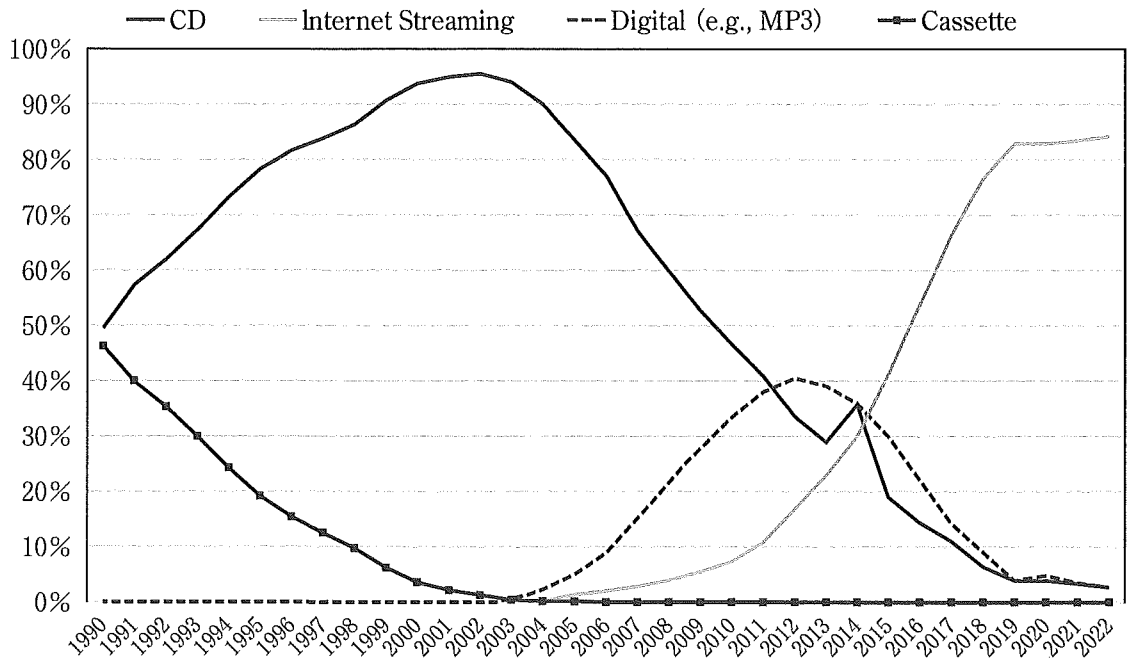
(3)　日本の月着陸船は，正常に着陸したが，写真を含むデータを地球に送信することはできなかった。

(4)　ジェフ・クーンズが月着陸船の側面に取りつけた箱には，月の満ち欠けを表す125個の小さなステンレスボールが入っている。

〔Ⅲ〕 The future of work will likely involve changes in workplace hours, combining work and play, education, equality, and increasing reliance on AI and automation. Write your opinion, with supporting reasons, about two of these changes in the future of work in about 100 English words. Write the number of words that you used in the brackets at the top. (Do not include punctuation marks in your word count.)

〔Ⅳ〕 The following graph shows trends in the format shares of recorded music sales in the US annually from 1990 to 2022. Describe and analyze these trends in about 100 English words. Write the number of words that you used in the brackets at the top. (Do not include punctuation marks in your word count.)

US Music Sales (%) by Format Share, 1990 to 2022




(This graph is based on data provided by "Animated Chart of the Day: Recorded Music Sales by Format Share, 1973 to 2022.")