

The most recent iteration of the immersive theater experience *Sleep No More*, which premiered in New York City in 2011, transforms its performance space—a five-story warehouse—into a 1930s-era hotel. Audience members, who wander through the labyrinthine venue at their own pace and follow the actors as they play out simultaneous, interweaving narrative loops, confront the impossibility of experiencing the production in its entirety. The play’s refusal of narrative coherence thus hinges on the sense of spatial fragmentation that the venue’s immense and intricate layout generates.

What does the text most strongly suggest about *Sleep No More*’s use of its performance space?

- A. The choice of a New York City venue likely enabled the play’s creators to experiment with the use of theatrical space in a way that venues from earlier productions could not.
- B. Audience members likely find the experience of the play disappointing because they generally cannot make their way through the entire venue.
- C. The production’s dependence on a particular performance environment would likely make it difficult to reproduce exactly in a different theatrical space.
- D. Audience members who navigate the space according to a recommended itinerary will likely have a better grasp of the play’s narrative than audience members who depart from that itinerary.

The following text is adapted from María Cristina Mena's 1914 short story "The Vine-Leaf."

It is a saying in the capital of Mexico that Dr. Malsufrido carries more family secrets under his hat than any archbishop. The doctor's hat is, appropriately enough, uncommonly capacious, rising very high, and sinking so low that it seems to be supported by his ears and eyebrows, and it has a furry look, as if it had been brushed the wrong way, which is perhaps what happens to it if it is ever brushed at all. When the doctor takes it off, the family secrets do not fly out like a flock of parrots, but remain nicely bottled up beneath a dome of old and highly polished ivory.

Based on the text, how do people in the capital of Mexico most likely regard Dr. Malsufrido?

- A. Many have come to tolerate him despite his disheveled appearance.
- B. Few feel concerned that he will divulge their confidences.
- C. Some dislike how freely he discusses his own family.
- D. Most would be unimpressed by him were it not for his professional expertise.

The following text is adapted from Countee Cullen's 1926 poem "Thoughts in a Zoo."

They in their cruel traps, and we in ours,
Survey each other's rage, and pass the hours
Commiserating each the other's woe,
To mitigate his own pain's fiery glow.
Man could but little proffer in exchange
Save that his cages have a larger range.
That lion with his lordly, untamed heart
Has in some man his human counterpart,
Some lofty soul in dreams and visions wrapped,
But in the stifling flesh securely trapped.

Based on the text, what challenge do humans sometimes experience?

- A. They cannot effectively tame certain wild animals because of a lack of compassion.
- B. They cannot focus on setting attainable goals because of a lack of motivation.
- C. They quickly become frustrated when faced with difficult tasks because of a lack of self-control.
- D. They have aspirations that cannot be fulfilled because of certain limitations.

In superfluorescence, electrical charges known as dipoles emit light in synchronized bursts so intense that they are visible to the eye. Until recently, this phenomenon has only been observed at extremely cold temperatures because dipoles cannot synchronize at higher temperatures. But in a study, Melike Biliroglu and colleagues observed superfluorescence at room temperature in thin films made of perovskite and other similarly crystalline materials; the researchers propose that the formation of shock-absorbing quasiparticles called polarons in the material protects dipoles from thermal interference.

Based on the text, how are polarons believed to be involved in the superfluorescence observed in Biliroglu and colleagues' study?

- A. Polarons enable superfluorescent bursts to cross from one crystalline material to another.
- B. Polarons allow for the dipoles to synchronize despite higher temperatures.
- C. Polarons accelerate the dipoles' release of superfluorescent bursts.
- D. Polarons decrease the intensity of the superfluorescent burst.

Paleontologist Lucas E. Fiorelli and colleagues have reported the discovery at a mine in Brazil of several egg clutches, partially preserved single eggs, and egg shells from the Late Cretaceous period. The researchers have concluded that the area was once a nesting and breeding site for titanosaurs, a group of sauropod dinosaurs. The finding is significant given the previous lack of known nesting sites in northern regions of South America, which led many paleontologists to assume that titanosaurs migrated south to lay eggs.

What does the text most strongly suggest about the site discovered by the researchers?

- A. It is the earliest known example of a titanosaur nesting and breeding site.
- B. It was very difficult to excavate given that it was discovered in a mine.
- C. It may have been occupied by other sauropods in addition to titanosaurs.
- D. It is farther north than any other nesting site discovered in South America.

Several scholars have argued that conditions in England in the late ninth through early eleventh centuries—namely, burgeoning literacy amid running conflicts between England’s Anglo-Saxon kingdoms and Danish invaders—were especially conducive to the production of the Old English epic poem *Beowulf*, and they have dated the poem’s composition accordingly. It is not inconceivable that *Beowulf* emerged from such a context, but privileging contextual fit over the linguistic evidence of an eighth- or even seventh-century composition requires a level of justification that thus far has not been presented.

Which choice best states the main idea of the text?

- A. Although there are some grounds for believing that *Beowulf* was composed between the late ninth and early eleventh centuries, advocates for that view tend to rely on evidence that has been called into question by advocates for an earlier date.
- B. Although several scholars have dated *Beowulf* to the late ninth through early eleventh centuries, others have argued that doing so privileges a controversial interpretation of the social conditions of the period.
- C. Although *Beowulf* fits well with the historical context of England in the late ninth through early eleventh centuries, it fits equally well with the historical context of England in the seventh and eighth centuries.
- D. Although the claim of a late ninth- through early eleventh-century composition date for *Beowulf* has some plausibility, advocates for the claim have not compellingly addressed evidence suggesting an earlier date.

For centuries, the widespread acknowledgment of the involvement of the cerebellum—a dense brain structure in vertebrates—in coordinating motor control in humans has hindered recognition of other possible functions of the structure. Neuroscience research from the last two decades now suggests that the cerebellum regulates emotion and social behavior, and recent research by Ilaria Carta and colleagues has identified a pathway connecting the cerebellum to a center for motivation and reward processing known as the ventral tegmental area (VTA).

Which choice best states the main idea of the text?

- A. The recent verification of a pathway between the VTA and the cerebellum confirms the cerebellum's long-suspected role in motor coordination.
- B. Recent advances in the field of neuroscience have challenged widely accepted claims about the function of a pathway connecting the VTA and the cerebellum.
- C. The cerebellum has primarily been thought to regulate motor functioning, but in recent years neuroscience researchers have been uncovering additional functions.
- D. Technological limitations have historically hindered the study of the cerebellum, but the recent development of new technologies has led to greater insights into its functions.

Modern dog breeds are largely the result of 160 years of owners crossbreeding certain dogs in order to select for particular physical appearances. Owners often say that some breeds are also more likely than others to have particular personality traits—basset hounds are affectionate; boxers are easy to train—but Kathleen Morrill and colleagues found through a combination of owner surveys and DNA sequencing of 2,000 dogs that while physical traits are predictably heritable among purebred dogs, behavior varies widely among dogs of the same breed.

Which choice best states the main idea of the text?

- A. Dog breeds would not exist without many years of human intervention in dogs' reproduction.
- B. Research fails to confirm a commonly held belief about dog breeds and behavior.
- C. The dog breeds most popular among owners have often changed over the past 160 years.
- D. A study of dog breeds is notable for its usage of both opinion surveys and DNA sequencing.

Algae living within the tissues of corals play a critical role in keeping corals, and the marine ecosystems they are part of, thriving. Some coral species appear brown in color when healthy due to the algae colonies living in their tissues. In the event of an environmental stressor, the algae can die or be expelled, causing the corals to appear white. To recover the algae, the bleached corals then begin to produce bright colors, which block intense sunlight, encouraging the light-sensitive algae to recolonize the corals.

What does the text most strongly suggest about corals that produce bright colors?

- A. These corals have likely been subjected to stressful environmental conditions.
- B. These corals are likely more vulnerable to exposure from intense sunlight than white corals are.
- C. These corals have likely recovered from an environmental event without the assistance of algae colonies.
- D. These corals are more likely to survive without algae colonies than brown corals are.

Having written the impassioned call to arms “Letter to the Spanish Americans” in 1791, Peruvian intellectual Juan Pablo Viscardo y Guzmán is often considered a forerunner for the independence movements in Latin America. But Viscardo’s role in history would have remained insignificant were it not for Venezuelan revolutionary Francisco de Miranda, who was handed the unpublished letter after Viscardo’s death. Miranda not only helped circulate the letter, but his edits and footnotes to the text position Miranda as a central figure in the text’s creation.

Which choice best states the main idea of the text?

- A. The original authorship of “Letter to the Spanish Americans” is disputed by contemporary historians.
- B. The majority of the most eloquently stated arguments in “Letter to the Spanish Americans” were written by Miranda.
- C. Miranda played a crucial role in influencing the content and distribution of “Letter to the Spanish Americans.”
- D. “Letter to the Spanish Americans” persuaded many people in Latin America to pursue national independence.

In a paper about p-i-n planar perovskite solar cells (one of several perovskite cell architectures designed to collect and store solar power), Lyndsey McMillon-Brown et al. describe a method for fabricating the cell's electronic transport layer (ETL) using a spray coating. Conventional ETL fabrication is accomplished using a solution of nanoparticles. The process can result in a loss of up to 80% of the solution, increasing the cost of manufacturing at scale—an issue that may be obviated by spray coating fabrication, which the researchers describe as “highly reproducible, concise, and practical.”

What does the text most strongly suggest about conventional ETL fabrication?

- A. It is less suitable for manufacturing large volumes of planar p-i-n perovskite solar cells than an alternative fabrication method may be.
- B. It is more expensive when manufacturing at scale than are processes for fabricating ETLs used in other perovskite solar cell architectures.
- C. It typically entails a greater loss of nanoparticle solution than do other established approaches for ETL fabrication.
- D. It is somewhat imprecise and therefore limits the potential effectiveness of p-i-n planar perovskite solar cells at capturing and storing solar power.

Disco remains one of the most ridiculed popular music genres of the late twentieth century. But as scholars have argued, the genre is far less superficial than many people believe. Take the case of disco icon Donna Summer: she may have been associated with popular songs about love and heartbreak (subjects hardly unique to disco, by the way), but like many Black women singers before her, much of her music also reflects concerns about community and identity. These concerns are present in many of the genre's greatest songs, and they generally don't require much digging to reveal.

What does the text most strongly suggest about the disco genre?

- A. It has been unjustly ignored by most scholars despite the importance of the themes addressed by many of the genre's songs.
- B. It evolved over time from a superficial genre focused on romance to a genre focused on more serious concerns.
- C. It has been unfairly dismissed for the inclusion of subject matter that is also found in other musical genres.
- D. It gave rise to a Black women's musical tradition that has endured even though the genre itself faded in the late twentieth century.

In 2019, 20 previously unknown moons were confirmed to be orbiting Saturn. Three of the moons have prograde orbits (orbiting in the direction the planet spins), and the other 17 have retrograde orbits (orbiting in the opposite direction of the planet's spin). All but one of the 20 moons are thought to be remnants of bodies that orbited Saturn until they broke apart in collisions. Although the one exceptional moon orbits in the same direction as the planet's spin, its orbit is highly eccentric compared to the rest, which may suggest that it has a different origin than the other 19 moons.

Based on the text, which choice best describes the moon with the eccentric orbit?

- A. It doesn't have a retrograde orbit, but it likely has the same origin as the moons with retrograde orbits.
- B. Its orbit is so tilted with respect to the other moons' orbits that it's neither prograde nor retrograde.
- C. It has a prograde orbit that is likely the result of having collided with another body orbiting Saturn.
- D. It has a prograde orbit and may not be a remnant of an earlier body that orbited Saturn.

In a study of new technology adoption, Davit Marikyan et al. examined negative disconfirmation (which occurs when experiences fall short of one's expectations) to determine whether it could lead to positive outcomes for users. The team focused on established users of "smart home" technology, which presents inherent utilization challenges but tends to attract users with high expectations, often leading to feelings of dissonance. The researchers found that many users employed cognitive mechanisms to mitigate those feelings, ultimately reversing their initial sense of disappointment.

Which choice best states the main idea of the text?

- A. Research suggests that most users of smart home technology will not achieve a feeling of satisfaction given the utilization challenges of such technology.
- B. Although most smart home technology is aimed at meeting or exceeding users' high expectations, those expectations in general remain poorly understood.
- C. Research suggests that users with high expectations for a new technology can feel content with that technology even after experiencing negative disconfirmation.
- D. Although negative disconfirmation has often been studied, little is known about the cognitive mechanisms shaping users' reactions to it in the context of new technology adoption.

Optical tweezers are specialized scientific tools—particularly useful in biology and medicine—that use high-powered beams of light to trap and manipulate minuscule particles for study. Use of the tool has led to several scientific and medical breakthroughs over the last few decades, but the particles are often under prolonged exposure to the intense heat of the light beams. To overcome the risk of overheating, and thereby damage, researchers sometimes attach nano-sized glass beads to particles, allowing the light to focus on the beads instead of the particles.

Based on the text, what is one advantage of attaching glass beads to particles when using optical tweezers?

- A. It decreases the time it takes for the optical tweezers to locate and capture the particles.
- B. It facilitates the maneuvering of particles without directly heating the particles themselves.
- C. It allows researchers to use weaker light beams to manipulate particles.
- D. It adds a material to which particles can transfer any heat absorbed from the optical tweezers' light beam.

Some animal-behavior studies involve observing wild animals in their natural habitat, and some involve capturing wild animals and observing them in a laboratory. Each approach has advantages over the other. In wild studies, researchers can more easily presume that the animals are behaving normally, and in lab studies, researchers can more easily control factors that might affect the results. But if, for example, the results from a wild study and a lab study of Western scrub-jays (*Apelocoma californica*) contradict each other, one or both of the studies must have failed to account for some factor that was relevant to the birds' behavior.

Which choice best states the main idea of the text?

- A. When the results of a natural-habitat study and those from a lab study of a wild animal such as the Western scrub-jay conflict, the study in the natural habitat is more likely than the lab study to have accurate results.
- B. Studying wild animals such as the Western scrub-jay in both their natural habitat and lab settings is likely to yield conflicting results that researchers cannot fully resolve.
- C. Wild animals such as the Western scrub-jay can be effectively studied in their natural habitat and in the lab, but each approach has drawbacks that could affect the accuracy of the findings.
- D. Differing results between natural-habitat and lab studies of wild animals such as the Western scrub-jay are a strong indication that both of the studies had design flaws that affected the accuracy of their results.