

Exercise 26

Authorities in California required drivers to use their headlights on a certain road during the daytime as well as at night and found that annual accident rates on the road fell 15 percent from the previous level. They concluded that applying the daytime rule statewide would lead to a similar reduction in accidents.

1. Which of the following, if true, most strengthens the authorities' argument?

- (A) Because an alternate route became available, the volume of traffic on the test road decreased during the test period.
- (B) Drivers were informed of the requirement to use their headlights on the test road by means of a series of three conspicuous signs in each direction of travel.
- (C) Under certain conditions, among them fog and heavy rain, most drivers in California already use their headlights during the daytime.
- (D) Full-scale application of the daytime rule would cause headlight bulbs to burn out sooner than they currently do and thus to require more frequent replacement.
- (E) The test road was selected to include a great variety of the sorts of road conditions that drivers in California are likely to encounter.

It has long been known that during an El Nino, two conditions exist: (1) unusually warm water extends along the eastern Pacific, principally along the coasts of Ecuador and Peru, and (2) winds blow from the west into the warmer air rising over the warm water in the east. These winds tend to create a feedback mechanism by driving the warmer surface water into a "pile" that blocks the normal upwelling of deeper, cold water in the east and further warms the eastern water, thus strengthening the wind still more. The contribution of the recent model is to show that the winds of an El Nino, which raise sea level in the east, simultaneously send a signal to the west lowering sea level. According to the model, that signal is generated as a negative Rossby wave, a wave of depressed, or negative, sea level, that moves westward parallel to the

equator at 25 to 85 kilometers per day.
(158 words)

2. According to the passage, which of the following features is characteristic of an El Nino?

- (A) Cold coastal water near Peru
- (B) Winds blowing from the west
- (C) Random occurrence
- (D) Worldwide effects
- (E) Short duration

For the following question, consider each of the choices separately and select all that apply
3. It can be inferred from the passage that which of the following would result fairly immediately from the cessation of the winds of an El Nino?

- A Negative Rossby waves would cease to be generated in the eastern Pacific.
- B The sea level in the eastern Pacific would fall.
- C The surface water in the eastern Pacific would again be cooled by being mixed with deep water.

阅读 1:

Q1 E:

I. 在一条路上的实验性结果可作为依据推广到全州, 可加强这个论断的选项必然是, 这条路的选择在全州看来, 极具代表性;

阅读 2:

Q2 B

Q3 ABC

译文:

最近取得显著成功的一套数学模型对厄尔尼诺现象的预言使研究者激动不已——厄尔尼诺就是南美太平洋沿岸定期出现的暖洋流。早在 20 多年以前 Jacobb Bjerknes 就已经指出风可能会在东太平洋赤道海域造成周期性异常的暖水冷水流。但是, 直到此模型发明出来之前, 没有人能够解释条件为何会周期性变动。其答案应能在海中寻找, 至少如果这一关于海洋活动和大气活动的关系的模式是正确的话。

人们早就知道在厄尔尼诺过程中, 两个条件存在: 1) 不正常的暖水流经太平洋东岸, 特别是厄瓜多尔和秘鲁沿海。2) 风从西流向东部由较暖水中升起的较暖空气中。这些风形成了一种反应机制, 即通过将较暖水在表层汇成一个“水堆”而阻止了通常状况下的深层冷水的上涌并进一步使东部水域变暖, 从而使暖风更加剧烈。此模型的贡献在于显示了厄尔尼诺现象中的风使东海平面升高, 同时向西部低海平面区发送一个信号。此模型显示, 该信号可称作负的

Rossby 波(简称 R 波),此波低于海平面,平行于赤道西移,速度为 25~85 公里/天。花了数月的时间横穿太平洋,R 波抵达了太平洋海盆的西端,这里在模型中模拟为平滑的边壁(海岸线),但实际上包括相当不规则的岛屿链,如菲律宾和印尼这些国家。

当这些波碰到了西海岸,它们即被反射,模型预测 R 波将被分裂为许多沿岸的 Kelvin 波(简称 K 波),K 波有着相同的负波信号。它们最终流向赤道,然后沿赤道方向以每天 250 公里的速度折向东流。当足够而带有充足水量的 K 波从西太平洋折返时,它们的负波信号就抵消了上文提过的反馈机制,使海平面升高,并开始使该系统向相反的冷模式发展。这就使风向逐渐变化,并将最终向西传送正的 R 波,该波又会以正的 K 波形式折返,如此循环,最后又开始一个新的暖周期。

重要背景:

厄尔尼诺和反厄尔尼诺:引用南美洲秘鲁沿岸居民对海水温度变化的习惯叫法,科学家们定义:赤道中东太平洋地区的表层海水温度与多年平均值比较偏高连续六个月超过 0.5℃,就称为一次厄尔尼诺现象。反之,这个海域的表层海水温度与多年平均值比较连续六个月偏低 0.5℃以上,称为一次反厄尔尼诺现象,也可以叫作拉尼娜现象。厄尔尼诺和拉尼娜均为西班牙语,前者意为“圣婴男童”,后者为“圣婴女童”,所以也有人称二者为“一对孪生兄妹”。

厄尔尼诺和拉尼娜现象对气候影响极大。厄尔尼诺现象使西太平洋副热带高压明显增强,强大而稳定的副高西侧偏南气流将大量暖湿空气输向我国大陆,遇到北方冷空气南下,在长江流域形成了稳定的多雨带,造成南方的连续性降雨,导致洪涝灾害。我国 1931 年、1954 年、1998 年长江流域几次全流域大洪水,都是发生在厄尔尼诺现象之后。

由于大气环流以及副高的变化,拉尼娜现象发生期间,影响我国的夏季风明显增强,这会将大量的暖湿空气带到我国内陆,使我国北方地区降水增多。主要表现为汛期主要雨带北移,热带风暴(台风)发生次数较常年偏多,另外还将影响我国黄海、渤海的冰情,使之偏重。

但二现象也不是只带来灾难。厄尔尼诺使我国冬季较暖,有利于农作物的越冬和种子的出芽。拉尼娜现象使我国北方地区降水增多,有利于农业发展和水资源的补充。

Q2 定位文章首句的 two conditions exist, B 选项对应 2)的说法;

Q3

A 对应文章最后一句, the winds simultaneously send a signal which is generated as a negative Rossby wave. 风停则这个 wave 停, A 正确;

C 对应文章第二句,风 blocks the normal upwelling of deeper, cold water in the east and further warms the eastern water. 风停,冷水就上来了,表层水会变冷;

B 定位基本没有疑问,提到 sea level 就是最后一句的前半部分, 'the winds which raise sea level in the east, simultaneously sends a signal to the west lowering sea level' 这里的 east 应该是 east, 这样正好形成一个对比,风使 east 的 sea level 高 vs. west 的 sea level 低

In a recent study, David Cressy examines two central questions concerning English immigration to New England in the 1630's: what kinds of people immigrated and why? Cressy finds that most adult immigrants were skilled in

farming or crafts, were literate, and were organized in families. Each of these characteristics sharply distinguishes the 21,000 people who left for New England in the 1630's from most of the approximately 377,000 English people who had immigrating, to America by 1700.

With respect to their reasons for immigrating, Cressy does not deny the frequently noted fact that some of the immigrants of the 1630's, most notably the organizers and clergy, advanced religious explanations for departure, but he finds that such explanations usually assumed primacy only in retrospect. When he moves beyond the principal actors, he finds that religious explanations were less frequently offered and he concludes that most people immigrated because they were recruited by promises of material improvement.

(155 words)

4. According to the passage, Cressy would agree with which of the following statements about the organizers among the English immigrants to New England in the 1630's?

- I. Most of them were clergy.
- II. Some of them offered a religious explanation for their immigration.
- III. They did not offer any reasons for their immigration until some time after they had immigrated.
- IV. They were more likely than the average immigrant to be motivated by material considerations.

- (A) I only
- (B) II only
- (C) II and III only
- (D) I, III, and IV only
- (E) II, III, and IV only

5. The passage suggests that the majority of those English people who had immigrated to America by the late seventeenth century were

- (A) clergy
- (B) young children
- (C) organized in families
- (D) skilled in crafts
- (E) illiterate

Q4 B

Q5 E

Q10 C

译文:

在最近的一份研究中,David Cressy 对有关 17 世纪 30 年代英国人移居新英格兰的两个关键问题进行了分析:什么样的人在进行移民,以及为何移民?通过考查当时的文字记录、搬运清单以及海关记录,Cressy 发现,大多的成年移民具备熟练的农业和手工业技能,有文化,且以家庭为单位组织起来。这些特点中的每一个,都使 17 世纪 30 年代移民到新英格兰的 21000 人与至 1700 年移民到美国的约 377000 英国人中的绝大多数人鲜明地区分开来。

针对其移民原因,Cressy 并不否认这样一个经常被提到的事实,即 17 世纪 30 年代移民中的某些人,最明显的是那些组织者和神职人员,都用宗教原因来说明他们离英赴美的动机,但他发现这些解释一般来说仅在事后回顾中才重要。当他的研究越过这些主要行动者时,他发现宗教的解释并不普遍,他由此而得出结论,绝大多数移民者移民的原因,是物质改善的可能性所导致的。

I. 首句提出问题. 第一段剩下内容和第二段, 分别解释 **what kind of people immigrated** 和 **why**.

Q4 题干中两个点, **the organizers** 和 **immigrants to New England**. 选正确的说法:

- I. 错误 **organizers** 和 **clergy** 是两个类型的人, 文中是分开说的;
- II. 正确 对应文中 **most notably the organizers advanced religious explanation for departure**;
- III. 错误 **any** 太绝对, 做题总是要注意这些需要警觉的词;
- IV. 错误 说反了吧。

Q5 E. 文章首段第二句的那一些列 **characteristics** 取反。

Traditionally, pollination by wind has been viewed as a reproductive process marked by random events in which the vagaries of the wind are compensated for by the generation of vast quantities of pollen, so that the ultimate production of new seeds is assured at the expense of producing much more pollen than is actually used. Because the potential hazards pollen grains are subject to as they are transported over long distances are enormous, wind-pollinated plants have, in the view above, compensated for the ensuing loss of pollen through happenstance by virtue of producing an amount of pollen that is one to three orders of magnitude greater than the amount produced by species pollinated by insects.

However, a number of features that are characteristic of wind-pollinated plants reduce pollen waste. For example, many wind-pollinated species fail to release pollen when wind speeds are low or when humid conditions prevail. Recent studies suggest another way in

which species compensate for the inefficiency of wind pollination. These studies suggest that species frequently take advantage of the physics of pollen motion by generating specific aerodynamic environments within the immediate vicinity of their female reproductive organs. It is the morphology of these organs that dictates the pattern of airflow disturbances through which pollen must travel. The speed and direction of the airflow disturbances can combine with the physical properties of a species' pollen to produce a species-specific pattern of pollen collision on the surfaces of female reproductive organs. Provided that these surfaces are strategically located, the consequences of this combination can significantly increase the pollen-capture efficiency of a female reproductive organ.

A critical question that remains to be answered is whether the morphological attributes of the female reproductive organs of wind-pollinated species are evolutionary adaptations to wind pollination or are merely fortuitous. A complete resolution of the question is as yet impossible since adaptation must be evaluated for each species within its own unique functional context. However, it must be said that, while evidence of such evolutionary adaptations does exist in some species, one must be careful about attributing morphology to adaptation. For example, the spiral arrangement of scale-bract complexes on ovule-bearing pine cones, where the female reproductive organs of conifers are located, is important to the production of airflow patterns that spiral over the cone's surfaces, thereby passing airborne pollen from one scale to the next. However, these patterns cannot be viewed as an adaptation to wind pollination because the spiral arrangement occurs in a number of non-wind-pollinated plant lineages and is regarded as a characteristic of vascular plants, of which conifers are only one kind, as a whole. Therefore, the spiral arrangement is not likely to be the result of a direct adaptation to wind pollination.

(453 words)

6. The author of the passage is primarily concerned with discussing

- (A) the current debate on whether the morphological attributes of wind-pollinated plants are evolutionary adaptations
- (B) the kinds of airflow patterns that permit wind-

pollinated plants to capture pollen most efficiently

(C) the ways in which the reproductive processes of wind-pollinated plants are controlled by random events

(D) a recently proposed explanation of a way in which wind-pollinated plants reduce pollen waste

(E) a specific morphological attribute that permits one species of wind-pollinated plant to capture pollen

7. According to the passage, the "aerodynamic environments" mentioned in the second paragraph, when they are produced, are primarily determined by the

(A) presence of insects near the plant

(B) physical properties of the plant's pollen

(C) shape of the plant's female reproductive organs

(D) amount of pollen generated by the plant

(E) number of seeds produced by the plant

8. The passage suggests that the recent studies cited in the second paragraph have not done which of the following?

(A) Made any distinctions between different species of wind-pollinated plants.

(B) Considered the physical properties of the pollen that is produced by wind-pollinated plants.

(C) Indicated the general range within which plant-generated airflow disturbances are apt to occur.

(D) Included investigations of the physics of pollen motion and its relationship to the efficient capture of pollen by the female reproductive organs of wind-pollinated plants.

(E) Demonstrated that the morphological attributes of the female reproductive organs of wind-pollinated plants are usually evolutionary adaptations to wind pollination.

9. It can be inferred from the passage that the claim that the spiral arrangement of scale-bract complexes on an ovule-bearing pine cone is an adaptation to wind pollination would be more convincing if which of the following were true?

- (A) Such an arrangement occurred only in wind-pollinated plants.
- (B) Such an arrangement occurred in vascular plants as a whole.
- (C) Such an arrangement could be shown to be beneficial to pollen release.
- (D) The number of bracts could be shown to have increased over time.
- (E) The airflow patterns over the cone's surfaces could be shown to be produced by such arrangements.

译文:

传统上,风媒被认为是一个随机性的繁殖过程。在该过程中风向、风力的不确定性被一代代花粉的庞大数量所弥补,所以最终要想产生种子,要由大量多于实际需要的花粉数量来保证。因为这些花粉颗粒要在长途传送中遇到的潜在危险是巨大的,所以风媒植物在传统观点中,为补偿这一由机遇性的传粉引起的损失而释放大量花粉,比虫媒植物多1至3个数量级。

然而,风媒植物的许多自身特征也能减少花粉损失。例如,风速较慢或天气潮湿时,很多风媒植物不释放花粉。最近研究又显示了另外一种补偿风媒传粉低效的方法。这些研究表明,有些种类经常通过在其雌性器官周围创造特殊的空气动力环境来充分利用花粉运动的机理。这些器官的形态结构决定了花粉在其周围运动的气流扰动(airflow disturbance)的形式。气流扰动的速度方向与花粉的物理特性共同创造了各品种独特的花粉着落的方式。如果是在雌蕊表面的特殊位置着落,那么这种着落的结果能够大大提高雌蕊捕捉到花粉的效率。

有一亟待回答的问题是,上述风媒传粉植物雌蕊的形态特性是因为进化适应风媒授粉呢,还是仅仅是偶然的结果。这一问题至今无法解答。因为只有对每个品种的独特功能结构做检验,才能验证适应性。然而,必须指出,尽管存在某些物种进化适应的证据,但人们把形态特征归于适应性还应谨慎。例如,带有雌蕊的松球的螺旋形鳞苞复合体,对于决定气流扰动的产生是十分重要的。气流扰动是气流从松球表面螺旋式上升,并将空气中花粉从一个鳞苞传到另一个鳞苞。然而,这一扰动不能被看作是对风媒传粉的适应。因为,螺旋式排列的组织也存在于一部分非风媒植物中,并被视为维管植物的特性之一,针叶树就是其中之一。所以,螺旋式排列不大可能是风媒传粉所带来的直接适应性结果。

重点词汇:

pollination [ˌpɒlɪˈneɪʃən] n. (植物的) 传粉, 授粉

random [ˈrændəm] a. 任意的, 随机的

vagary [ˈveɪɡəri] n. 异想天开; 反复无常(的行为); 古怪; 难以预测的变化

order of magnitude 【物】数量级

aerodynamic environment 空气动力学环境

vicinity [ˌvɪsɪnɪti] n. 附近, 邻近

morphology [məˈfɒlədʒi] n. 形态(学), 形体(学)

dictate [ˈdɪkteɪt] v. 命令, 支配

pattern of airflow disturbance 气流干扰模式

morphological attributes 形态特征(性)

fortuitous [fɔːtʃjuːtəs] a. 偶然的; 幸运的

spiral [ˈspeɪərəl] a. 螺旋的; 盘旋的

该片结构为典型的观点对比型!

Traditionally, pollination by wind has been viewed as a reproductive process marked by random events in which the vagaries of the wind are compensated for by the generation of vast quantities of pollen, so that the

ultimate production of new seeds is assured at the expense of producing much more pollen than is actually used. **Because** the potential hazards pollen grains are subject to as they are transported over long distances are enormous, wind-pollinated plants have, in the view above, compensated for the ensuing loss of pollen through happenstance by virtue of producing an amount of pollen that is one to three orders of magnitude greater than the amount produced by species pollinated by insects.

However, a number of features that are characteristics of wind-pollinated plants reduce pollen waste. **For example**, many wind-pollinated species fail to release pollen when wind speeds are low or when humid conditions prevail. Recent studies suggest **another** way in which species compensate for the inefficiency of wind-pollination.

通过上面文章首段、二段我们已经标记好的重点内容（Traditionally 和 viewed as 表明了传统观点的提出，而 because 的出现标志着对老观点的因果解释和说明，however 和 for example 的出现都表明二段首句是一个重要的观点，而 another 的出现表明转折后的观点的表现可以包括两个方面），我们可以清楚地知道，这篇文章出现了两个观点：一个观点认为风媒植物为了确保授粉的成功一定要通过大量的浪费来实现；而另一个观点认为风媒植物为了确保授粉的成功其实可以通过一些特点来实现并减少浪费。所以这两个观点是一种补充关系。而下面的主旨题目要正确一定要出现 focus: wind-pollinated and pollen waste。另外一定要强调转折后的观点，即减少浪费。

文章结构：首段，旧观点，特征词 **traditionally**；第二段，**however** 引导的新观点，**a number of features reduce pollen waste. for example...recent studies...**例证之；第三段，对第二段中的 **morphological attribute** 展开，讨论其是否为 **evolutionary adaptation** 的结果。

Q6 主题题，找新观点，二段首句的改写，对应 **D**。错选 **A**，是因为没有理清楚最后两段的关系，最后一段是针对第二段的一个细节 **topic** 展开讨论；

主题题型 1：

将主题句与各选项对应：

- A. 目前关于风媒传粉的形态特点是否是进化适应的争论。“形态特征”文中细节，犯了主题题型忌讳。
- B. 使风媒传粉植物捕获花粉更为有效的气流扰动的种类。“气流扰动”，同上。
- C. 风媒传粉植物的繁殖方式受控于某些随机途径。此为第一段老观点。
- D. 正确。最近提出的一项关于风媒传粉植物减少传粉损失途径的解释。看该选项几乎和二段首句一模一样。
- E. 使风媒植物能够捕获花粉的一种特殊的形态特点。错误同 A。

Q7 根据‘aerodynamic environments’和‘determine’定位‘aerodynamic environments’那一句及其后面一句 - the morphology of these organs that dictates the pattern of airflow disturbance. 对比选项，morphology 对应 shape, dictate 对应 determine, the pattern of airflow disturbance 对应 aerodynamic environments;

Q8 E 错误，错在‘evolutionary adaptation’;

Q9 文中最后一段，However, these patterns cannot be viewed as an adaptation because... 内容取非，对应 **A**。

Isadora Duncan's masterly writings on the dance reveal the depth of her determination to create a lyric form of the art which was free of characterization, storytelling, and the theatrical exhibition of skills. She wished to discard the traditional methods and established vocabularies of such dance forms as ballet and to explore the internal sources of human expressiveness. She shunned bodily ornamentation and strove to use only the natural movements of her body, undistorted by acrobatic exaggeration and stimulated only by internal compulsion. In her recitals Duncan danced to the music of Beethoven, Wagner, and Gluck, among others, but, contrary to popular belief, she made no attempt to visualize or to interpret the music; rather, she simply relied on it to provide the inspiration for expressing inner feelings through movement. (130 words)

10. The author implies that Duncan relied on music in her recitals in order to

- (A) interpret musical works solely by means of natural body movements
- (B) foster the illusion that music serves as an inspiration for the dance
- (C) inspire the expression of inner feeling when she danced
- (D) validate the public belief that music inspires the expression of feeling through movement
- (E) counter the public belief that she made no attempt to visualize music

译文:

伊莎多拉·邓肯关于舞蹈的高超著作揭示了她想创造一种新型抒情艺术的决心之深,该艺术抛弃了人物塑造、故事情节和戏剧性的技巧表现。她想要丢掉传统的方法和在类似芭蕾舞这样的艺术中已确立的舞蹈语言,而想要开掘人类情感表达的内在源泉。她不用过多的形体雕琢动作而只借诸于自然形体动作,不受一些杂技性夸张动作的影响而只被内心的冲动所激发。在其演出中,邓肯使用贝多芬、瓦格纳、格鲁克等人的音乐来伴奏。但是,和公众的看法相反,她并不想图解或阐明这些音乐;相反,她只是想通过这些音乐来提供通过动作表达内在情绪的灵感。然而,她并不把这种应用当作理想状态,相反,她坚信有朝一日她终将彻底地抛弃音乐。这一天始终没有到来。

II. Q10 最后一句的 rather 部分, 对应选项 C.

重要背景:

邓肯(Isadora Duncan, 1877~1927):美国女舞蹈家,编导,教师,现代舞的先驱。从小就具有舞蹈志趣,并表现出对僵化、刻板的古典芭蕾的反感。她立志把自己的舞蹈建立在自然的节奏和动作之上,去解释和表演音乐家的作品。21岁以后去英国谋生,潜心研究古代雕塑和绘画艺术,从中找到了自认为理想的舞蹈表现方式:身着长衫,赤脚,动作酷似树木摇曳或海浪翻腾。

邓肯认为,舞蹈艺术来源于自然,人体动作的原动力来自于大自然的波浪运动:海、风、地球的运动永远处在同一的持久的和谐之中。她认为在自然中寻找最美的形体并发现能表现这些形体内在精神的动作,就是舞蹈的任务。她的美学思想可以归结为一句话:美即自然。邓肯认为芭蕾违反万有引力定律和个人的自然意志。它的每一种姿势都是一种终止,没有一种动作、姿态或节奏是可以连续或发展的。

邓肯对古典音乐非常推崇,本文中也提到此点。她曾根据一些名曲创作了《马赛曲》、《斯拉夫进行曲》、《国际歌》和《第六交响曲》(柴科夫斯基)等舞蹈。

邓肯给当时的欧洲舞坛带来了清新之风,广受好评。1921年应邀去苏联讲学,同时在德国、法国设有舞蹈学校。1922年,与苏联诗人叶赛宁结婚,后又分手。1927年因车祸在法国逝世。

邓肯毕生从事舞蹈的改革与创新,她的实践和理论对当时和后来的舞蹈艺术发展都有重大影响。

文中涉及到结构的分析来自 JudyHan817