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托 福
网络课堂

新托福突破口
综合阅读+满分范文（下）



新托福突破口（1-33+纸质版 4、5）综合作文阅读、

听力原文（文本）全集+满分范文（下）

综合写作是作文部分，必不可少的一部分。但是在此之前，我们很多考友都将这一部分给忽略了，我们总是将独立作文放在了第一位，但是实际上，综合作文也是占到了作文总分 30 分里面的 50% 的分值。我们很多考友都是在分数出来之后，才发现综合作文的 limited 或者 fair 极大的影响了自己的分数。

其实我们之所以综合作文分数不高，很大程度上是受我们的听力实力的影响，换句话说，当我们很多考友的听力分数只有 15 分上下的时候，我们对于综合作文的听力妥妥的是束手无策，而且很多考友还感觉自己都听懂了，那也只能说明你听懂了大意，但是听力里面要的是每一个细节！请注意，是每一个细节！

因此，你就需要今天的，《新托福突破口 TPO（1-33+纸质版 4、5）综合作文阅读、听力原文（文本）全集+满分范文》包含 2 个部分，分别是 TPO1-30 综合作文部分的阅读和听力文本全集，与 1 篇综合作文的满分作文，以及满分作文的解析。力图给各位考友一个写作的目标，也就是给自己一个提高的方向。毕竟，如果自己的综合作文分数如果可以很给力的话，就已经搞定了 15 分的分数，可以极大地缓解独立作文的压力。至于很多考友不知道纸质版 TPO 为何物，其实很简答，纸质版 TPO 就是 ETS 在中国大陆出版的一本真题集，一共只有 5 套，前 3 套与 TPO 现有的内容重复，但是第四套和第五套是全新的试题。每每提到的纸质版 4、5 套就指的是这两套题。

那么如何使用这个文件呢？

首先，就是在自己做模考之后，可以根据这里面的听力的文本，来检验自己的听力内容是否抓的足够好，尤其是要看写的够不够全！很多时候，我们的综合作文之所以分低，就是因为听力写的不全！

第二点，也可以用于很多考友在考前来做跟读，因为很多考友，都是在感叹自己的口语实力不够，那么做跟读，仔细地来模仿 ETS 官方素材，是一个很好的提高自己口语的方式。毕竟口语最终考的，是口语本身说的是否足够流畅，要想在考试的时候说的很流畅，就是要在平时张口多说，只有多说，我们才能够做到足够的流利。

第三点，熟悉托福考试的专业词汇。因为很多考友现在之所以在听力考试里面不够给力，是因为对于里面的专业词汇不够熟悉。毕竟在考试的时候，如果核心词汇都不懂的话，那么在听力部分只能是束手就擒了。因此，各位考友可以通过这份材料，来熟悉托福作文之中的专业词汇。

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TPO21

Reading

Genetic modification, a process used to change an organism's genes and hence its characteristics, is now being used to improve trees through genetic modification. It is possible to create trees that produce more fruit, grow faster, or withstand adverse conditions. Planting genetically modified trees on a large scale promises to bring a number of benefits.

First, genetically modified trees are designed to be hardier than nature trees; that is, they are more likely to survive than their unmodified counterparts. In Hawaii, for example, a new pest-resistant species of papaya trees has been developed in response to ring spot virus infections that have repeatedly damaged the native papaya tree population. Planting the genetically modified papayas has largely put an end to the ringspot problem.

Moreover, genetically modified trees promise to bring a number of economic benefits to those who grow them. Genetically modified trees tend to grow faster, give greater yields of food, fruit, or other products and be hardier. This allows tree farmer to get faster and greater returns on their farming investment and save on pesticides as well.

Finally, the use of genetically modified trees can prevent overexploitation of wild trees. Because of the growing demand for firewood and building timber, many forests around the world are being cut down faster than they can be replaced. Introducing genetically modified trees, designed for fast growth and high yield in given geographic conditions, would satisfy the demand for wood in many of those areas and save the endangered native trees, which often include unique or rare species.

Listening

Sure, there are some benefits to plant genetically modified trees, but, are these trees as really great as they first sound? When you examine the subject firstly, there are some serious problems and costs associated with genetically modified trees.

First, genetically modified trees may be resistant to one particular condition. But that doesn't necessarily ensure their survival. You see, a typical non modified trees' population is genetically diverse. That means that for most threatening conditions, or climate, whatever, there will be at least some individual trees of any given species of tree that are resistant. So even if most of one kind of trees are killed, those few resistant trees will survive and ensure the survival of that species of tree. But genetically modified trees are genetically much more

uniform. So if they're exposed to an environmental challenge they have not been designed for, they all die. So if the climate changes, the genetically modified trees will likely to be completely wiped out.

Now as to the second point, they're hidden costs associated with genetically modified trees. You see, the company that genetically modify the tree can charge tree farmers more for its seeds than un-genetically modified trees would cost. Also, as you've grown the tree, you can't just collect the seeds and plant the new tree for free. By law, you have to pay the company every time you plant.

And finally, genetically modified trees might actually cause even more damage to the local wild trees. You see, genetically modified trees often grow more aggressively than natural trees do. And, genetically modified trees are typically planted among natural trees. As a result, the genetically modified trees outcompete the native trees for resources, sunlight, soil, nutrients, and water, eventually crowding out the natural trees.

TPO22

Reading

Ethanol fuel, made from plants such as corn and sugar cane, has been advocated by some people as an alternative to gasoline in the United States. However, many critics argue that ethanol is not a good replacement for gasoline for several reasons.

First, the increased use of ethanol fuel would not help to solve one of the biggest environmental problems caused by gasoline use: global warming. Like gasoline, ethanol releases carbon dioxide into the atmosphere when it is burned for fuel and carbon dioxide is greenhouse gas: it helps trap heat in the atmosphere. Thus, ethanol offers no environmental advantage over gasoline.

Second, the production of significant amounts of ethanol would dramatically reduce the amount of plants available for uses other fuel. For example, much of the corn now grown in the United States is used to feed farm animals such as cows and chickens. It is estimated that if ethanol were used to satisfy just 10 percent of the fuel needs in the United States, more than 60 percent of the corn currently grown in the United States would have to be used to produce ethanol. If most of the corn were used to produce ethanol, a substantial source of food for

animals would disappear.

Third, ethanol fuel will never be able to compete with gasoline on price.

Although the prices of ethanol and gasoline for the consumer are currently about the same, this is only because of the help in the form of tax subsidies given to ethanol producers by the United States government. These tax subsidies have cost the United States government over \$11 billion in the past 30 years. If the United States government were to stop helping producers in this way, the price of ethanol would increase greatly.

Listening

Ethanol actually is a good alternative to gasoline, although you just read three reasons why it's not a good alternative, not one of these three reasons is convincing.

First, the increased use of Ethanol fuel will not add to global warming. It's true that, when Ethanol is burned, it releases carbon dioxide into the atmosphere, but as you read, Ethanol is often made from plants such as corn. Well, the process of growing the plants counteracts this release of carbon dioxide. Let me explain. Every growing plant absorbs carbon dioxide from the air as part of its nutrition. So growing plants for Ethanol production actually removes carbon dioxide from the

atmosphere.

Second, large scale production of Ethanol doesn't have to reduce the sources of food for animals. That's because we can produce Ethanol using cellulose, cellulose is the main component of plants' cell walls, and you'll find most cellulose in those parts of plants that are not eaten by animals. So, since we can produce Ethanol from the plant parts that aren't eaten, the amount of animal feed that is available will not be reduced.

Third, in the future, Ethanol will be able to compete with gasoline in terms of price. It's true that government subsidies make Ethanol cheaper than it would normally be, but this support won't always be needed. Once enough people start buying Ethanol, Ethanol producers will increase their production of Ethanol. Generally, increased production of products leads to a drop in its price. So the price of Ethanol will go down as more of it becomes available. Studies show that, if Ethanol production could be three times greater than it is now, the cost of producing a unit of Ethanol will drop by forty percent.

TPO23

Populations of the yellow cedar, a species of tree that is common in northwestern North America, have been steadily declining for more than a century now, since about 1880. Scientists have advanced several hypotheses explain this decline.

One hypothesis is that the yellow cedar decline may be caused by insect parasites, specifically the cedar bark beetle. This beetle is known to attack cedar trees; the beetle larvae eat the wood. There have been recorded instances of sustained beetle attacks overwhelming and killing yellow cedars, so this insect is a good candidate for the cause of the tree's decline.

A second hypothesis attributes the decline to brown bears. Bears sometimes claw at the cedars in order to eat the tree bark, which has a high sugar content. In fact, the cedar bark can contain as much sugar as the wild berries that are a staple of the bears' diet. Although the bears' clawing is unlikely to destroy trees by itself, their aggressive feeding habits may critically weaken enough trees to be responsible for the decline.

The third hypothesis states that gradual changes of climate may be to blame.

Over the last hundred years, the patterns of seasonal as well as day-to-day temperatures have changed in northwestern North America. These changes have affected the root systems of the yellow cedar trees: the fine surface roots now start growing in the late winter rather than in the early spring. The change in the timing of root growth may have significant consequences. Growing roots are sensitive and are therefore likely to suffer damage from partial freezing on cold winter nights. This frozen root damage may be capable of undermining the health of the whole tree, eventually killing it.

Listening

Unfortunately, we still don't know what's killing the yellow cedar, none of the explanations discussed in the reading is adequate.

First, the cedar bark beetle. Well, the problem with this explanation is that healthy yellow cedars are generally much more resistant to insect infestation than other tree species. For example, the bark and leaves of yellow cedar are saturated with powerful chemicals that are poisonous to insects. So, healthy cedars are unlikely to suffer from insect damage. So, how can we explain those dead cedars that were infested with beetles. In those cases, the beetles attack trees that were already damaged or sick, and would've probably died anyway. So, the beetles are not the fundamental cause responsible for the decline of yellow cedars.

Second, although bears damage some trees, there' re not the cause of the overall population decline. Yellow cedar population' s been declining all across the northwestern coast of North America both on the mainland and on islands just off the coast. There were no bears on the islands, yet the islands cedars are still in decline. Since the decline occurs with and without bears, the bears cannot be responsible.

And finally, the theory about roots suffering from frost damage, well, the reading passage forgot to take one factor into account. Many more trees are dying at lower elevations where it is warm than at higher elevations where it is cold. If freezing damage were responsible for the decline, we could expect to see more trees dying in the cold weather of higher elevations. Instead, more trees are dying in the relative warmth of the lower elevations. So, although the climate change may have made the cedar roots more sensitive than it used to be, this isn' t what' s killing them.

TPO24

Reading

Animal fossils usually provide very little opportunity to study the actual animal tissues, because in fossils the animals' living tissues have been largely replaced by minerals. Thus, scientists were very excited recently when it appeared that a 70-million-year-old fossil of *Tyrannosaurus rex* (T. rex), a dinosaur, might still contain remains of the actual tissues of the animal. The discovery was made when researchers deliberately broke open the T. rex' s leg bone, thereby exposing its insides to reveal materials that seem to be remains of blood vessels, red blood cells, and collagen matrix.

First, the breaking of the fossilized leg bone revealed many small branching channels inside, which probably correspond to hollows in the bones where blood vessels were once located. The exciting finding was the presence of a soft, flexible organic substance inside the channels. This soft substance may very well represent the remains of the actual blood vessels of T. rex.

Second, microscopic examination of the various parts of the inner bone revealed the presence of spheres that could be the remains of red blood cells. Tests showed that the spheres contained iron-a material vital to the role of red blood cells in transporting oxygen to tissues. Moreover, the spheres had dark red centers (substances with iron tend to be reddish in color) and were also about the size of

red blood cells.

Third, scientists performed a test on the dinosaur leg bone that showed that it contained collagen. Collagen is a fibrous protein that is a main component of living bone tissue, in which it forms a so-called collagen matrix. Collagen (or its chemical derivatives) is exactly the kind of biochemical material that one would expect to find in association with bone tissue.

Listening

As much as we would like to have the remains of actual dinosaur tissue, there are sound reasons for being skeptical of the identifications made in the reading.

First, the soft, flexible substance inside the bone channels isn't necessarily the remains of blood vessels. It is much more likely to be something else. Like what? You might say. Well, long after an organism is died, bacteria sometimes colonize hollows, empty areas in bones, like the channels that once held blood vessels. When bacteria lived inside bones, they often leave behind traces of organic material. What the researchers in the reading are identifying as blood vessels might just be traces of soft and moist residue left by bacteria colonies.

All right. What about the iron-filled spheres? Well, the problem is that scientists found identical reddish spheres in fossils of other animals found in the same place.

That includes fossils of primitive animals that did not have any red blood cells when they were alive. Clearly, if these spheres appear in organisms that did not have any red blood cells, then the spheres cannot be the remains of red blood cells. The spheres probably have a very different origin. They are probably just pieces of reddish mineral.

Third, the collagen. The problem is that we have never found collagen in animal remains that are older than one hundred thousand years. Collagen probably cannot last longer than that. Finding collagen from an animal that lived seventy million years ago would really contradict our ideas about how long collagen can last. It is just too improbable. The most likely explanation for the presence of collagen is that it doesn't come from the T.rex, but from another much more recent source. For example, human skin contains collagen, so the collagen may have come from the skin of the researchers who are handling the bone.

TP025

Reading

In 1938 an archaeologist in Iraq acquired a set of clay jars that had been excavated two years earlier by villagers constructing a railroad line. The vessel was about 2,200 years old. Each clay jar contained a copper cylinder surrounding an iron rod. The archaeologist proposed that vessels were ancient electric batteries and even demonstrated that they can produce a small electric current when filled with some liquids. However, it is not likely that the vessels were actually used as electric batteries in ancient times.

First of all, if the vessels were used as batteries, they would probably have been attached to some electricity conductors such as metal wires. But there is no evidence that any metal wires were located near the vessels. All that has been excavated are the vessels themselves.

Second, the copper cylinders inside the jars look exactly like copper cylinders discovered in the ruins of Seleucia, an ancient city located nearby. We know that the copper cylinders from Seleucia were used for holding scrolls of sacred texts, not for generating electricity. Since the cylinders found with the jars have the same shape, it is very likely they were used for holding scrolls as well. That no scrolls were found inside the jars can be explained by the fact that the scrolls simply disintegrated over the centuries.

Finally, what could ancient people have done with the electricity that the vessels were supposed to have generated? They had no devices that relied on electricity. As batteries, the vessels would have been completely useless to them.

Listening

Your reading says that these vessels were not used as batteries in ancient times, but the arguments used in the reading are not convincing. The battery explanation could very well be correct.

First, about the absence of wires or other conductors. Remember, vessels were discovered by local people, not archaeologists. These people might have found other material located near the jars. But since they were not trained archaeologists, they may not have recognized the importance of that material. So materials serving as wires or conductors might have been overlooked as uninteresting or even thrown away. We'll never know.

Second, it is true that the copper cylinders in the vessels are similar to the cylinders used to hold scrolls, but that does not really prove anything. It's possible that the copper cylinders were originally designed to preserve scrolls. And that some ancient inventor later discovered that if you use them together with iron rods and some liquid in a clay vessel, they will produce electricity. That's how the first ancient battery could have been born. In other words, the copper cylinders could have been originally used for one purpose, but then adapted for another purpose.

Finally, there's the question of the possible uses of the battery in the ancient world. Well, the battery could produce a mild shock or tingling sensation when someone touched it. This could very well have been interpreted as evidence of some invisible power. You can easily see how people could convince others that they had magical powers through the use of the battery. Also, the battery could have been used for healing. Modern medicine uses mild electric current to stimulate muscles and relieve aches and pains. Ancient doctors may have used the batteries for the same purpose.

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TP026

Reading

The zebra mussel, a freshwater shellfish native to Eastern Europe, has long been spreading out from its original habitats and has now reached parts of North America. There are reasons to believe that this invasion cannot be stopped and that it poses a serious threat to freshwater fish populations in all of North America.

First, the history of the zebra mussel's spread suggests that the invasion might be unstoppable. It is a prime example of an invasion made possible by human transportation. From the zebra mussel's original habitats in Eastern Europe, ships helped spread it out along new canals built to connect Europe's waterways. The mussel can attach itself to a ship's bottom or can survive in the water—called "ballast water"—that the ship needs to take on to properly balance its cargo. By the early nineteenth century, the mussel had spread to the whole of Europe. It was later carried to the east coast of North America in the ballast water of ships traveling from Europe. The way ships have spread the zebra mussel in the past strongly suggests that the species will soon colonize all of North America.

Moreover, once zebra mussels are carried to a new habitat, they can dominate it. They are a hardy species that does well under a variety of conditions, and they

have a high rate of reproduction. Most important, however, zebra mussels often have no predators in their new habitats, and species without natural predators are likely to dominate their habitats.

Finally, zebra mussels are likely to cause a decline in the overall fish population in habitats where they become dominant. The mussels are plankton eaters, which means that they compete for food with many freshwater fish species.

Listening

Narrator

Now listen to part of a lecture on the topic you just read about.

Professor

Contrary to what you just read, there are ways to control the zebra mussel's spread. What's more, it is not so clear that the mussel is a serious threat to fish populations.

True, the spread of zebra mussels couldn't be controlled in the past, but that's because people didn't have enough knowledge. In fact, there are effective ways to stop ships from carrying the mussels to new locations. Here's an example. The way zebra mussels usually travel across the ocean is that a ship takes on some fresh "ballast water" in Europe and then empties that water into American waterways when it arrives. Full of zebra mussels, but the ship can be required to empty out

the freshwater and refill with ocean water while still out in the ocean. Salt water will kill the mussels.

Second, it's true that zebra mussels often don't have predators in their new habitats, but that's only in the beginning. What's been happening in Europe is that local aquatic birds sooner or later notice there's a new food source around and change their habits to exploit it. They switch from whatever they were eating before to eating zebra mussels. And birds can eat a lot of mussels. So zebra mussels aren't so likely to dominate their new habitats after all.

Finally, even in habitats where zebra mussels become dominant, is the overall fish population likely to decrease. It's true that zebra mussels may have a negative impact on fish that eat plankton. But on other fish, they can have a positive impact. For example, the mussels generate nutrients that are eaten by fish that feed near the bottom of the lake or river. So bottom-feeding fish populations may increase, even if plankton-eating fish population decrease.

TPO27

Reading

The little ice age was a period of unusually cold temperature in many parts of the world that lasted from about the year 1350 until 1900CE. There were unusually harsh winters, and glaciers grew larger in many areas. Scientist have long wondered what caused the Little Ice Age. Several possible causes have been proposed.

First, the cooling may have been caused by disrupting of ocean currents. Before the Little Ice Age, there was a period of unusually warm weather during which glaciers melted. These melted glaciers sent a large amount of cold freshwater into the Gulf Stream, a large ocean current that strongly affects Earth's climate. Some scientists believe that this freshwater was enough to temporarily disrupt the Gulf Stream. Such a disruption could have caused the Little Ice Age.

Second, volcanic eruption could have caused the Little Ice Age. When volcanoes erupt, they send dark clouds of dust and sulfur gas into the atmosphere. These clouds, which can spread over great areas, block some sunlight from reaching Earth's surface. This can decrease the global temperatures. Scientists know of several volcanic eruption that took place during the Little Ice Age.

Third, substantial decreases in human populations may have contributed indirectly to the cooling of the climate. For a variety of reason(disease, warfare, social disruption), the human population just before the Little Ice Age and during the early

part of it was lower than it had been in a long time. Forest trees started growing on fields that were no longer used for agriculture. Since trees absorb carbon dioxide, a greenhouse gas, they decrease the greenhouse effect that keeps Earth warm. With more forest trees carbon dioxide, earth became cooler.

Listening

Unfortunately, the arguments of the reading passage are a little out of date. Scientists now have new information that shows that none of the ideas the reading passage discusses could account for the Little Ice Age.

First, about the Gulf Stream. Scientists now know that disrupting the Gulf Stream would cause cooling only in Europe and North America, but the Little Ice Age also affected the Southern hemisphere, in places like New Zealand and Southern Africa for example. Since the disruption of the Gulf Stream cannot explain why these southern areas became colder, it cannot explain the Little Ice Age.

Second, the volcanoes theory. It's true that if volcanic eruptions put enough dust into the atmosphere, the result can be a cooler climate. But large amounts of volcanic dust in the atmosphere would have also produced striking visual effect that people would have noticed at the time. For example, Dramatically colorful Sunsets or snow being grey or brown instead of white. But there are almost no reports of anything like that routinely happening during the Little Ice Age. So it seems that the volcanic eruptions during that period were simply not strong enough to release

the large amounts of dust needed to lower global temperatures.

Third, about forests on farmland stopping the warming greenhouse effect by removing carbon dioxide. There just was not enough time for this effect to work. The human population grew back to previous levels fairly quickly, which meant that forests were soon being cut down again to clear fields for the crops needed to feed the growing population. As a result, we know that the forests mentioned in the reading passage were not there long enough to cause the long—term global cooling of the climate.

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TPO28

Narrator

Now listen to part of a lecture on the topic you just read about.

Professor

There's no solid evidence that [Robert Peary](#) reached the North Pole. The arguments cited in the reading selection are not convincing.

First, it is true that the National Geographic Society committee declared that Peary had indeed reached the North Pole, but the committee was not completely objective. In fact, the committee was composed of Peary's close friends who had contributed large sums of money to fund Peary's trip. Moreover, the investigation lasted only two days. And according to Peary himself, the committee did not examine his records carefully. So the committee's conclusions seem biased and therefore are not trustworthy.

Second, the speed issue. Tom Avery's journey was different from Peary's in important ways. For example, Avery's sled was similar to Peary's sled, but Avery carried much less weight than Peary did, because Avery did not transport his food on the sled. Avery's food was dropped along the way by airplane. Moreover, Avery

encountered highly favorable weather conditions, unlike Peary who travelled in very unfavorable conditions. So Avery's speedy trip was too different from Peary's to provide support for Peary's claims.

Third, the photographs do not prove anything. The techniques scientists use to determine the Sun's position depend on measuring the shadows in the photographs very precisely. Without a precise measurement of the shadows, we cannot establish the Sun's exact position. Now, Peary's pictures were photographed a hundred years ago using a primitive camera that took fuzzy, slightly unfocused photographs. Moreover, the photos have become faded and worn over time. As a result, the shadows in Peary's photographs look blurred and faded. Those shadows cannot be used to calculate the position of the Sun with great accuracy. So we cannot be confident the photos were really taken at the North Pole.

TPO29

Narrator

Now listen to part of a lecture on the topic you just read about.

Professor

The hypothesis that the Edmontosaur migrated every winter is not convincing.

First, the Edmontosaur did not have to migrate to find food. One hundred million years ago, the summer temperatures in the North Slope area were warmer than they are today. And remember, in arctic regions like the North Slope, the Sun shines 24 hours a day at the peak of the summer. The warm temperatures and extensive daylight created incredibly good growing conditions for plants, so much vegetation was produced during the summer that when the vegetation died as the winter came, there was a lot of nutritious dead vegetation around in the winter. The Edmontosaur could have easily lived on the dead plant matter during the winter.

Second, just because Edmontosaurs lived in herds doesn't mean they migrated. Animals live in herds for many other reasons. Living in herds, for example, provides animals with extra protection from predators. Having extra protection is useful even for the animals that live in the same area the whole year round. A

modern example of this is the Roosevelt elk—a large plant-eater. Roosevelt elks live in the forests of the western United States. They live in herds but they do not migrate.

Third, although adult Edmontosaurs were capable of migrating long distances, what about Edmontosaurs that were not yet adults? Juvenile Edmontosaurs were not physically capable of travelling the great distances required to reach warmer territories and would have slowed the herd so much that the herd never would have made it to its destination. The herd could not have left the juveniles behind because the juveniles would not have survived on their own. So the whole herd had to stay where they were and survive on the cold North Slope.

TPO30

Narrator

Now listen to part of a lecture on the topic you just read about.

Professor

The claims that the burning mirror would have been impractical and technologically impossible are unconvincing.

First, the Greeks did not need to form a single sheet of copper to make a large, burning mirror. An experiment has shown that dozens of small individually flat pieces of polished copper could be arranged into a parabolic shape and form a large, burning mirror. The Greek mathematicians know the properties of the parabola and so could have directed the assembly of small mirror pieces into the parabolic shape.

Second, about how long it would take to set a ship on fire with a burning mirror. The experiment the reading selection mentions assumes that the burning mirror was used to set the wood of the boat on fire, that's what takes ten minutes. But Roman boats were not made just of wood. There were other materials involved as well. For example, to seal the spaces between wooden boards and make them waterproof, the ancient boat-builders used a sticky substance called pitch. Pitch catches fire very quickly. An experiment showed that pitch could be set on fire by a burning mirror in seconds. And once the pitch was burning, the fire would spread

to the wood even if the ship was moving. So a burning mirror could have worked quickly enough to be an effective weapon.

Third, why bother with a burning mirror instead of flaming arrows? Well, Roman soldiers were familiar with flaming arrows and would have been watching for them and were ready to put out the fires they might cause. But you cannot see the burning rays from a mirror; you just see the mirror. But then suddenly and magically a fire starts at some unobserved place on the ship that would have been much more surprising and therefore much more effective than a flame arrow.

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TPO 31

Reading

A fossil skeleton of a dinosaur called *Sinosauropteryx*, preserved in volcanic ash, was discovered in Liaoning, China, in 1996. Interestingly, the fossil included a pattern of fine lines surrounding the skeletal bones. Some paleontologists interpret the lines as evidence that *Sinosauropteryx* was a feathered dinosaur, citing several reasons.

First, the critics points out that the fine lines may not even represent functional structures of a living dinosaur, but rather structures that were formed after the animal's death. After the animal died and was buried in volcanic ash, its skin may have decomposed into fibers. The skin fibers then became preserved as lines in fossils; the lines were misinterpreted as evidence of feathers.

Second, even if the fine lines are remains of real structures of a *Sinosauropteryx*, scientists cannot tell with certainty what part of the dinosaur's anatomy the structures were. Many dinosaurs had frills, ornamental fan-shaped structures growing out of some parts of their bodies. Some of the critics argue that the lines surrounding the skeleton are much more likely to be fossilized remains of frills than remains of feathers.

A third objection is based on the fact that the usual functions of feathers are to

help animals fly or regulate their internal temperature. However, the structures represented by the lines in the *Sinosauropteryx* fossil were mostly located along the backbone and the tail of the animal. This would have made the structures quite useless for flight and of very limited use in thermoregulation. This suggests that the lines do not represent feathers.

Narrator

Now listen to part of a lecture on the topic you just read about.

Professor

The evidence that the lines in the *Sinosauropteryx* fossil represent feathers is very strong. The arguments of the critics are unconvincing.

First, it is unlikely that the lines are a result of the decomposition of the dinosaur's skin, because we don't see any such decomposition in the fossils of other animals buried at the same site. In fact, the fossils of many other animals buried at the site show evidence that their functional skin structures have been beautifully preserved in volcanic ash. The well-preserved condition of the other fossils makes it likely that the *Sinosauropteryx*'s lines are also well-preserved functional structures, possibly feathers, and that they are not fibers caused by decomposition.

Second, the idea that the lines represent frills... well, there is an important chemical difference between feathers and frills. Feathers contain a great deal of a

protein called Beta-keratin. Frills, on the other hand, do not contain beta-keratin.

Our chemical analyses suggest that the Sinosauropteryx structures did contain beta-keratin. So that indicates that the structures were feathers, not frills.

Third, feathers can be used for other functions than flight and thermoregulation. Think of a bird, like peacock, for example. The peacock has long, colorful feathers in its tail. And it displays its tail in order to attract a mate. That's a distinct function of feathers called the display function. Recently, we have been able to do analyses on the Sinosauropteryx structures that show us that the structures were colorful. They were orange and white. The fact that they were colorful strongly supports the idea that they were feathers that this dinosaur use for display.

TPO 32

Listening

Quackers are certainly a very strange phenomenon. Experts still debate what the source of the sounds was. No one can be sure exactly what caused them. But these experts cite certain problems with all of the theories that you just read about. Here are a few of the arguments that they make. This transcript is written by QQ 519626928 (ladybird).

First, the idea that the sounds are caused by Orca whales seems plausible at first but is ultimately highly unlikely. It's true that there were Orca populations in the general areas that the Russian submarines were patrolling. But Orca whales mostly live near the surface of the water. The submarines typically remain deep in the ocean and should not have been able to hear the whale sounds from near the surface. Also, the Orca whales would have been detected by the Russian sonar if they were nearby.

Giant squid may be a better candidate but one critical fact speaks against the squid theory as well. Russian submarines first detected quacker sound in the 1960s and reports of them continued for about two decades. But the sounds disappeared entirely by the 1980s. However, as far as we know, squid have always lived in the ocean where the submarines were patrolling and continue to live there today. If

these were squid sounds, there would be no reason to suddenly start hearing them in one decade and then suddenly stop hearing them twenty years later.

Third, the idea that the quackers were caused by a secret submarine from another country does not hold up. The sources of the sounds appeared to move around and change direction very quickly. Submarines cannot move or change direction that quickly. Also, all submarines make some engine noise. But no such noise accompanied the quackers. Even today, we don't have technology to build submarines that are that fast and have engines that are that silent.

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TPO 33

Listening

None of the three theories presented in the reading passage are very convincing.

First, the stone balls as hunting weapons, common Neolithic weapons such as arrowheads and hand axes generally show signs of wear, so we should expect that if the stone balls had been used as weapons for hunting or fighting, they too would show signs of that use. Many of the stone balls would be cracked or have pieces broken off. However, the surfaces of the balls are generally well preserved, showing little or no wear or damage.

Second, the carved stone balls maybe remarkably uniform in size, but their masses vary too considerably to have been used as uniform weights. This is because the stone balls were made of different types of stone including sandstone, green stone and quartzite. Each type of stone has a different density. Some types of stone are heavier than others just as a handful of feathers weighs less than a handful of rocks. Two balls of the same size are different weights depending on the type of stone they are made of. Therefore, the balls could not have been used as a primitive weighing system.

Third, it's unlikely that the main purpose of the balls was as some kind of social marker. A couple of facts are inconsistent with this theory. For one thing,

while some of the balls are carved with intricate patterns, many others have markings that are extremely simple, too simple to make the balls look like status symbols. Furthermore, we know that in Neolithic Britain, when someone died, particularly a high-ranking person, they were usually buried with their possessions. However, none of the carved stone balls have been actually found in tombs or graves. That makes it unlikely that the balls were personal possessions that marked a person's status within the community.



纸质版 TPO4

听力原文:

Narrator

Now listen to part of a lecture on the topic you just read about.

Professor

Many people think that if you want to go into business for yourself, it's best to buy a franchise. But recently a study looked closely at franchises, and some of the findings call that idea into question.

One interesting point was that many franchise contracts force franchise owners to . . . to buy very specific goods and services, and those goods and services tend to be overpriced. In other words, even though there are equivalent goods and services available on the market, uh, that are considerably cheaper, the owners aren't allowed to buy them.

Another point was about advertising. When you buy a franchise, you agree to pay up to six percent of your sum total in sales-that's quite a lot of money. One thing you're supposed to get in return for this money is that the company does the advertising for you. But the company doesn't advertise your business. What gets advertised is the company's brand, the company's products, which are sold by many other businesses in many other places. It turns out, individual franchise owners mostly get very little benefit-much less than they would get by spending even half

that money to advertise their own business directly.

Finally, the biggest issue: security. Starting a franchise is not the most secure option out there. True, it's less risky than starting an independent business. But there's a third option that the passage didn't talk about. You can buy an already existing independent business from a previous owner. And the study showed that independent businesses bought from previous owners have twice as much chance of success during the first four years as franchises.



纸质版 TPO5

听力原文:

Narrator

Now listen to part of a lecture on the topic you just read about.

Professor

Even if computerized smart cars meet all the technological expectations set for them, it's not clear that they'd produce the benefits some have predicted.

Smart cars will still get into some accidents. After all, even the most technologically advanced devices fail occasionally. And since the smart car technology will allow cars to be more tightly packed together on the roads, these accidents will be pileups that involve many more cars and so be much worse than accidents that occur today. Overall, there is little reason to believe that smart cars will save lives or reduce the number of injuries in automobile accidents.

Second, let's talk about the potential to increase highway speeds and therefore decrease commuting time. Well, history has consistently shown that when some driving convenience is introduced, more and more people decide to drive because they expect an easier driving experience. But then the increased number of drivers in the case of smart cars of the future would not decrease commuting time. This is because the traffic congestion caused by the additional cars on the road would not allow the drivers to take advantage of the smart cars' potential for higher speeds.

And finally, it's not reasonable to expect that smart cars will save drivers money.

The global positioning technology required to direct smart cars to their desired destinations is very expensive, and smart cars will need other costly technologies too, such as sensors that control how far a smart car stays behind the car in front of it. Moreover, the advanced technology of smart cars will make repairs to them more expensive than repairs on conventional automobiles. These new expenses will more than offset the expected savings on the repair and replacement of traditional mechanical car parts.

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