

新托福阅读材料:

Timing is everything for sharks that smell in stereo

To follow the scent trail left by their prey across the ocean, sharks swim in the direction of the nostril that sniffed the odor first, scientists have found. Their research challenges the classic notion that sharks orient themselves based on the differences between odor concentration received at each nostril.

Shark prey—whether living, injured or dead—leaves behind swirling odor plumes that break apart with distance. The latest work, published online June 10 in *Current Biology*, suggests that when a shark moves into a patch of odor, the smell hits one nostril before the other—and that tells the shark to turn either left or right. By moving from side to side from one patch to another, the animal maintains contact with the odor plume as it tracks its prey, says Jayne Gardiner at the University of South Florida in Tampa, co-author of the study.

Ocean odors mix chaotically, so for sharks to steer using odor concentration, they would need to compare the average concentration at the two nostrils over a period of several minutes to determine the prey's direction. They would then have to reposition themselves and start again—a slow process. But by using timing cues, says Gardiner, sharks receive directionality in under a second.

Squid marinade

The study centered around lab studies of eight smooth dogfish (*Mustelus canis*), a small gray-brown shark. To recreate prey odor, Gardiner marinated squid—what she calls “junk food for dogfish”—in 50 liters of seawater. She fitted the sharks with headgear consisting of two tubes delivering this squid marinade to one nostril and then the other. She found that for delays between 0.1 and 0.5 seconds, the sharks turned toward the side receiving the first stimulus. If there was no time lag or if the lag was a second or longer, the sharks were equally likely to turn in either direction.

In addition to timing delays, Gardiner delivered varying concentrations of squid sauce to the sharks' nostrils. This was Gardiner's update of a 25-year-old experiment involving similar headgear on bonnethead sharks (*Sphyrna tiburo*). Gardiner delivered diluted squid essence to one nostril 0.5 seconds before delivering the full-strength squid broth to the other nostril. The animals turned towards the side receiving the first, albeit weaker, stimulus. “It was timing every time,” Gardiner says.

“The previous dogma has always been that sharks orient towards odor by detecting greater concentration on one side of the head over the other,” says shark sensory biologist Stephen Kajiura from Florida Atlantic University in Boca Raton. “In this study, timing seems to trump concentration. It's an exciting alternative way of looking at how we understand shark processing.”

Speedy hammerheads

The results of this study may also have implications for the evolution of other shark species. For example, according to anecdotal evidence, hammerhead sharks seem to swim faster towards their prey than many other sharks—suggesting that they might have a better sense of smell. The swimming speed of sharks as they track prey may be limited by the spacing of their nostrils. If they move into an odor patch at a given angle, a faster shark will experience a shorter interval between the odor hitting the two nostrils, and if they swim too fast, the brain may not detect a time difference at all. Because the nostrils on hammerheads are more widely spaced than on pointy-nosed

sharks, if the two animals swim into an odor patch at the same angle, the hammerhead will experience a longer time delay, making it capable of receiving a directional cue while swimming faster and from a smaller angle of attack.

Gardiner admits that better olfaction can't explain all of a shark's characteristics. The winghead shark (*Eusphyra blochii*), which has one of the widest nostril separations, isn't the most recently evolved shark. Rather, sharks have regressed from wider heads to narrower ones.

According to Kajiura, shark olfaction has been overlooked for decades. His lab examined the legendary ability of sharks to smell a drop of blood from miles away. Their as yet unpublished results do not support the myth--sharks probably aren't any better at detecting odor than any other fish. "With these new batches of information, maybe we can finally lay some myths to rest after decades of misinformation," he says.

新托福阅读材料: Technology in Tourism

新兴科学技术已经越来越多的渗透到了我们生活中的方方面面。事实上,早在1988年澳大利亚布里斯班的世博会主题就是“科技时代的休闲生活”。

As a tourism business you cannot ignore technology. If you do, within a few years it's likely that you won't be in business any more.

Tourism has consistently been the highest performing category of online sales - and it continues to grow dramatically. In 2003 ordinary consumers in Europe spent 12.5 billion - billion - Euros (? 9 billion) online on holidays. By 2006 this had more than doubled, rising to 26.9 billion Euros (? 20 billion).

Why do customers use the internet?

There are a number of reasons consumers like using the internet to buy holidays, travel and related products. This is what customers themselves say:

1. "It's easy." Customers can keep on searching for exactly what they want just by clicking. No waiting for brochures or making phone calls. No feeling committed because they've spoken to a human. If the tourism product - or the other things to do and see in the area - aren't right, they just move on. For international customers particularly, the internet lowers barriers: they can take their time over descriptions, do online currency conversions and check their travel arrangements before committing.

2. "It's 24 hour." Customers can search and book when it suits them, all from the comfort of their own home, with a mug of coffee or a glass of wine.

3. "The whole party can get involved." There's no dragging the kids to the travel agents, or tearing pages out of a brochure to send to Aunty Jean. Groups of friends in different places can all look at the same thing, at the same time, making it easy to confer.

4. "You can see what you're getting." In the past, a holiday was one of those things you couldn't try before you buy. Now you can look at lots of pictures and, importantly, read reviews of people who've been there before. This comfort factor - of seeing what you're going to get and being reassured by recommendations - is a major driver in turning browsers to bookers.

5. "You can plan all the different elements." Day to day life has never been busier. When people take a break they want to feel they've got the most out of it. The internet gives them the power to research where they are going to stay, where they might eat, the places they might visit, the opening times, prices and routes. Even if they don't

book it all in advance, this power to 'visualise' their stay is another key driver in actually making the purchase.

6. "You can get a good deal." Tourism consumers are no different to any other, they want the right product, at the right price. This doesn't mean they want the cheapest - most customers are prepared to pay, within their budget, for the right quality and service - but they do want to feel reassured they aren't paying over the odds. The internet easily allows them to compare prices and feel confident they are getting the right deal.

新托福阅读材料: WorldCup:ProliferationOfFlags

6月11日,四年一度的世界杯终于在全世界亿万球迷的关注下拉开大幕,在接下来一个月的时间里,我们一起来关注足球关注世界杯吧,同学们在复习托福的同时可以劳逸结合,看看世界杯的比赛,感受一下来自南非的激情喔。

They flutter on cars and vans, are draped from the windows of homes and pubs, and flag bunting bedecks the streets.

Even David Cameron has announced the red-and-white St George's cross is to fly above Downing Street for the duration of the World Cup.

Chris Deegan, of Turtle and Pearce - one of the UK's oldest flag manufacturers - has noticed a big upsurge in demand for St George flags, mainly from companies who want to fly the national colours over their corporate HQs. Among recent orders are flags for the Ritz and Claridges hotels.

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While the twin-packs of flags for car windows are imported "by the container load" from China, his George flags are made from Admiralty-approved cloth and individually sewn from seven separate pieces - and are priced accordingly.

Among those splashing out hundreds is James Yeoman, landlord of the Willow Tree in Winchester, who has draped a floor-to-ceiling St George's flag over the pub entrance, with a slit in the middle for customers to walk through. It will stay in place until England is out of the World Cup.

"It's always good to show your support for England - we just wanted to be bigger and better," says Mr Yeoman.

Whatever the size, the sentiments remain the same, says Chris Deegan. "It's about showing which team you support, and also a statement of national pride."

新托福阅读材料:

PolicetargetdomesticviolenceduringWorldCupfever

2010年南非世界杯已然拉开大幕,世界各国球迷们欢欣鼓舞。但是,各国的警察们却陷入了繁忙之中,这是为什么呢?请看下文:

Police forces across the north-east of England have teamed up to tackle domestic violence during this year's World Cup.

Cleveland, Northumbria and Durham police's "Kick off" campaign promotes helplines and raises awareness.

According to the police, national research shows a link between alcohol consumption and domestic violence.

Police said there was a "tendency for domestic violence to increase" during high profile sporting events.

The three forces are using the tournament to target offenders and highlight victim support.

Bloodied football

Cleveland police said "hard-hitting" posters showing a bloodied football and detailing contact numbers would be put up in shops, community centres and doctor's surgeries throughout the coming weeks.

Adverts highlighting the campaign will also be on the radio and the back of buses across the region.

Leaflets, containing advice and contact numbers for victims and perpetrators, will be distributed, particularly to shops and businesses that sell alcohol.

The leaflet will also contain a World Cup fixture chart to encourage football fans to take one.

Abuser warning

Chief Constable of Cleveland Police Sean Price said: "We want to encourage victims who have suffered domestic abuse to come forward and access the specialist support that they need."

Northumbria Police Temporary Chief Constable Sue Sim said: "We already know that alcohol can be a factor in domestic violence but what should be a celebration for the country shouldn't become a time of misery for some.

"We're hoping this campaign will serve as a warning to potential abusers."

Durham Constabulary Assistant Chief Constable Michael Banks said: "We recognise there is a tendency for incidents of domestic abuse to increase during high-profile sporting events such as the World Cup."

新托福阅读材料:

Mother's Pregnancy Weight Linked to Child's Obesity

有些人的肥胖确实是天生的, 据专家研究显示, 母亲在怀孕期间的体重与后代的肥胖有直接的联系。看来为了孩子的将来, 母亲在怀孕时千万不能胡吃海喝, 适量补充营养才是真理。

More than 26 percent of American adults were obese as of 2009—compared with less than 20 percent in 2000, according to a new report from the U.S. Centers for Disease Control and Prevention. And the number of U.S. states with more than 30 percent of their population topping a body mass index (BMI) of 30 tripled between 2007 and 2009. With this accelerating epidemic, researchers are looking for clues beyond daily diet and exercise to explain our propensity for extra poundage—and many are finding evidence in the very first stages of life.

A growing number of analyses have found a convincing link among a heavier mother-to-be, increases in her baby's birth weight, and the child's later risk of obesity. In many past observational studies, however, basic genetics or environmental factors could be blamed for this association.

A new study of 513,501 mothers and 1,164,750 of their children born across 15 years aimed to take genetics out of the equation by assessing maternal and infant weight only for those women who had more than one child. "By making comparisons of two or more infants

born to the same mother, we were able to factor out the role of genetics," says David Ludwig, an associate professor of pediatrics, director of the Obesity Program at Children's Hospital Boston and co-author of the new study.

Women who gained more than 24 kilograms during a pregnancy (which occurred in about 12 percent of pregnancies) added an average of 147.4 additional grams to their baby's birth weight than those who gained about 7.5 to 10 kilograms. In other terms, pregnant women who gained 22.5 kilograms had double the risk of having an infant with a high birth weight compared with those who only gained about nine kilograms. And every kilogram gained during pregnancy increased a baby's weight by about 9.5 grams, according to the analysis, which published online August 4 in *The Lancet*.

Being heavier at birth increases the odds that an individual will be overweight or obese as a child—as well as an adult. And the excess weight has been linked to a range of chronic conditions, including asthma, diabetes and metabolic syndrome (a group of metabolic risk factors).

Although previous studies had correlated high BMI moms with heavier babies, "the direct effects of excessive weight gain on the fetus have never been conclusively demonstrated," notes Ludwig, who worked on the study with collaborator Janet Currie, a professor of economics at Columbia University.

The importance of grams

The ill effects of undernourishment on fetal development have been well documented. A pregnant woman who does not get ample calories for her and her fetus increases the risk the baby will have stunted physical growth, poor cognitive development, and be more susceptible to diseases. The health risks of too many calories, however, are just beginning to come to light.

To be sure, a heavier fetus will tilt the pregnant mother's scale slightly, and the amount of weight typically put on my moms gaining too much during pregnancy far exceeds the additional ounces their babies typically take on.

Nevertheless, although 0.2 kilogram of additional baby fat might not sound like much, in the context of a three- to 3.5-kilogram infant, every 0.03 kilogram changes the odds ratio, according to Ludwig.

Other research indicates that infant birth weight is also heavily determined by a woman's weight even before she becomes pregnant. A study published in June in the *European Journal of Pediatrics* reported that being overweight or obese before getting pregnant meant that a mother's future child was 1.4 times more likely to be overweight or obese by age four. "It means preconception health screening and intervention for overweight and obese [women] is extremely important," says Panagiota Kitsantas, an assistant professor of biostatistics and epidemiology at George Mason University's Department of Health Administration and Policy and lead author of the June paper.

Although her investigation did not specifically look at women with more than one child and thus could have been colored by other genetic and environmental factors, Kitsantas says that the results from her work and *The Lancet* report are complementary. "Both studies pointed to one direction: mothers' body weight affected their offspring's weight."

Underlying changes

Extra birth weight might not be the only change many of these infants face. Excessive maternal weight during pregnancy is also likely changing the metabolic and hormonal environment of the developing fetus, Ludwig says.

Even if an infant has a few extra ounces due to a mother's excessive gestational weight gain, "the infant developed in a metabolically abnormal intrauterine environment," Ludwig explains.

Excessive caloric intake by a pregnant woman can stimulate the overgrowth of fetal tissues, change hormonal balances, alter metabolic pathways, "and perhaps even structures in the brain that regulate appetite and metabolism," he says. And those changes might stay with an individual for life.

Many adults have a difficult time losing weight and keeping it off, and if the body is predisposed to putting on the pounds, fighting obesity on both individual and societal levels will be even more challenging.

Researchers are still working to understand just how some of these pathways and hormones can influence disease risk, primarily through animal studies in the lab. And until more chemical links are found, a direct cause-and-effect relationship cannot be established, Kitsantas notes.

She applauds the new work, noting that Ludwig and colleagues used apt statistical models to try to avoid confounding effects and excluded subjects with other risk factors such as gestational diabetes or extremely high birth weight. Kitsantas is not entirely convinced, however, that genetics can be erased from the picture, and asserts that more lab work remains to be done to parse out nature, nurture and nutrition.

Prepregnancy health

Not every baby born on the heavy side will battle obesity or related chronic diseases. But, Ludwig points out, "on a population basis, [increased birth weight] is shifting risk upward."

The amount of weight pregnant women are putting on has been growing—as has their prepregnancy weight in the past few decades, Ludwig notes. Alongside that trend are signs that average birth weight is also headed upward.

"If we don't stop the vicious cycle at some point, we'll just keep going and going," Kitsantas says. If female babies are born more prone to obesity, the likelihood of their gaining too much weight before or during pregnancy increases, thus putting their offspring at greater risk.

Even though the specific mechanisms at work remain poorly understood and there is still not enough evidence to draw a cause-and-effect conclusion between maternal weight and a child's risk for obesity, Kitsantas says that is not reason enough to delay action. "We really have to jump in based on the findings we have to create specific interventions to fix the problem."

Ludwig acknowledges that the challenge of getting Americans to stay fit is great but says that changing the habits of mothers-to-be might be a little easier. "Women tend to be especially motivated during pregnancy because it's not just their health [that is] at stake—it's their children's," he notes. "Almost every mother instinctively wants to give their children a healthy start in life."

And, along with physical activity, food quality is just as important as quantity, he says. "The higher quality of diet consumed, the easier it is to maintain a health body weight," says Ludwig, who has been working on a new study comparing the effects of two different diets on maternal and infant health. "The best time to begin obesity prevention efforts for the next generation is actually prior to birth," he says.

Kitsantas extends that recommendation, suggesting that all women of childbearing age establish healthy lifestyle habits and healthy weights: "The sooner the better,"

she says.

新托福阅读材料: Exploding star' viewed in 3D'

在智利用大望远镜观看距离地球168,000光年的超新星爆炸会是怎样的景象呢? 科学家又有怎样的发现呢? 我们一起来看看吧。

Astronomers have for the first time obtained a 3D view of the aftermath of a star exploding (which is known as a supernova).

The team used the Very Large Telescope in Chile to study the supernova 1987A, which lies 168,000 light-years away.

The results show the original blast was very powerful and concentrated in one particular direction.

Seen in 1987, it was the first supernova visible with the naked eye to have been observed for some 383 years.

The 3-D view shows the explosion was stronger and faster in some directions than others, leading to an irregular shape with some parts stretching further out into space.

This phenomenon was predicted by some of the most recent computer models of supernovae, which found that large-scale instabilities take place during the explosion.

The observations of SN 1987A were made using the SINFONI instrument on the European Southern Observatory's (ESO) Very Large Telescope (VLT) in Chile.

The first material to be ejected from the explosion travelled at 100 million km per hour, which is about 100,000 times faster than a passenger jet.

Even at this incredible speed it has taken 10 years to reach a previously existing ring of gas and dust puffed out by the star while it was dying.

The images also show another wave of material is travelling ten times more slowly and is being heated by radioactive elements created in the explosion.

The research is to be published in the academic journal Astronomy and Astrophysics.

新托福阅读材料: Whale fossil stuck in Egypt customs wrangle

四千万年前还是一片汪洋大海的地区如今是什么样子呢? 答案是一片沙漠。很少有人能想到, 如今黄沙遍野的上埃及地区曾充满海水, 曾是鲸鱼的乐园。

Its name in Arabic is Wadi Hitan but it is known as the Valley of the Whales.

For years palaeontologists have been unearthing a remarkable collection of whale fossils, all the more surprising because the area is now inland desert in upper Egypt.

It is believed that about 40 million years ago the area was submerged in water, part of the Tethys Sea. As the sea retreated north to the Mediterranean it left a series of unique rock formations and also a cornucopia of fossils.

One of the most exceptional finds was a 37 million-year-old whale from the species *Basilosaurus isis*, unearthed by a team led by Prof Philip Gingerich of the University of Michigan in the United States.

But now it has become the subject of a bizarre customs wrangle at Cairo airport.

Prof Gingerich explained that this was the only complete specimen from this species of whale.

It provides evidence of how whales evolved from being land-based creatures to go back into the sea - a reverse of the usual evolutionary process.

Basilosaurus isis retained tiny feet, a useless reminder of its evolution from land animal to sea-dweller.

The limbs are human sized, even though the creature is 15m-16m long.

For the past two years Prof Gingerich and his team have been painstakingly reassembling the skeleton back in Michigan. It is now being returned to Egypt for a new museum, planned for the Valley of the Whales.

But according to the Egyptian media the whale skeleton is stuck at Cairo airport. Customs agents are demanding a \$40,000 fee.

It is not clear how they came to that figure as prehistoric fossils have no agreed market value.

In any case the Egyptian authorities who are importing the fossil are refusing to pay.

A senior official from the ministry of tourism has warned that the issue needs to be resolved speedily, otherwise it could cause a "big scandal" for Egypt, he said.

Prof Gingerich joked that it had taken two-and-a-half years to be allowed to export the fossil to the United States, and it could take another two-and-a-half years to get it back.

新托福阅读材料: NewWordsEnterTheLexicon

世界杯上,来自世界各地的顶级足球运动员们带来了一场场精彩绝伦的比赛,而与此同时,许多新名词也诞生在世界杯赛场上,今天我们就来一起关注一下这些新名词的诞生吧。

In 2002, the word "metatarsal" suddenly entered the mainstream, such was the focus on David Beckham's broken foot. Four years later, the wives and girlfriends' ostentatious stint in Baden-Baden, Germany, brought the nickname Wag into common parlance.

Adrian Beard, author of the Language of Sport, says certain words tend to catch on because of cultural repetition and "playfulness" with language.

"The interesting thing about metatarsal is we had a specialist medical term being applied to a highly non-medical group of people. It got to the stage where Rooney and Beckham were almost defined by the term," he says.

It's hard to predict which words will spring from the South African tournament as language reacts to, rather than sets, the agenda.

"It will probably emerge - in terms of England coverage - from key figures in the team, who they are playing and where they are playing. But sometimes we get quite a creative blend of words. Because the World Cup is in South Africa, words from Afrikaans might come into play too."

But there is a huge repertoire for play, and not just with language.

"After all, who could predict the Mexican wave in 1986 or Johan Cruyff's famous turn in 1974?"

新托福阅读材料:

Obamasetsbattleplanonoilspillandenergyreform

WASHINGTON (Reuters) - President Barack Obama on Tuesday laid out what he called a battle plan to tackle the BP oil spill and exhorted Americans in warlike terms to embark on a mission to reduce their reliance on fossil fuels.

The president used the solemn setting of the Oval Office for a televised address to counter criticism he has not shown enough leadership in America's worst environmental crisis but offered few specifics on how he intended to get the job done.

Obama vowed that BP Plc would pay the price for its "recklessness" in the Gulf of

Mexico oil spill and sought to harness public outrage over the disaster to build momentum for his goals of a "greener" energy future.

"We will fight this spill with everything we've got for as long as it takes. We will make BP pay for the damage their company has caused," Obama said in a speech aimed at restoring confidence in his handling of the crisis before it further tarnishes his presidency.

Obama's stern message for BP was a centerpiece of his high-stakes speech on the oil spill, which threatens to distract from his domestic agenda of reducing nearly double-digit U.S. unemployment and reforming Wall Street.

How forcefully Obama responds to America's worst ecological disaster will have implications not only for the British energy giant but also for the future of U.S. offshore drilling and any hopes he has of reviving climate change legislation stalled in Congress.

Adding a fresh sense of urgency, a team of U.S. scientists on Tuesday raised their high-end estimate of the amount of crude oil flowing from the well by 50 percent, to a range of 35,000 to 60,000 barrels (1.47 million to 2.52 million gallons/5.57 million to 9.54 million liters) per day.

Obama spoke in a measured tone devoid of anger as he assured Americans the stricken Gulf region would recover. He predicted containment efforts should succeed in capturing up to 90 percent of the oil gushing from the well in coming weeks.

Obama also sought to rally them by casting his effort in the language of war. He described the onslaught of oil as a "siege" and warned the public to gird itself for the long haul. "Tonight I'd like to lay out for you what our battle plan is going forward," Obama said.

While urging Americans to "seize the moment" to break their addiction to fossil fuels, he spoke in mostly vague terms, offering no detailed prescription or timetable for passing comprehensive energy legislation.

"Now is the moment for this generation to embark on a national mission to unleash American innovation and seize control of our own destiny," he said.

Obama has made clear he supports a comprehensive energy bill that would reduce greenhouse gas emissions, and a senior administration official said the president still believed that putting a price on carbon pollution was essential.

But he stopped short of talking specifically about the climate change component in his speech, perhaps mindful of the political obstacles during a stuttering economic recovery.

"Basically, a non-event here. It was really backwards looking. When he talked about alternative energy, he talked about what he already did -- and not what he needed to do. I don't think it's going to do too much for the alternative energy sector tomorrow, that's for sure," said Ben Pang, an analyst at Caris & Company in San Francisco.

Obama's choice of the Oval Office setting underscored the gravity of the situation. Presidents in the past have used it to respond to national tragedies, as Ronald Reagan did after the 1986 explosion of the space shuttle Challenger and George W. Bush after the attacks of September 11, 2001.

ELECTION YEAR

Another crucial question is whether Obama can placate angry voters in a congressional election year when his Democratic party's grip on legislative power is at risk.

Opinion polls show most Americans believe Obama has been too detached in dealing with the crisis and has not been tough enough in dealing with BP.

Seeking to counter criticism that he has not shown enough leadership in the nearly two-month-old crisis, Obama took a hard line with BP but did not go as far as reiterating an earlier assertion that he was looking for an "ass to kick."

"Tomorrow, I will meet with the chairman of BP and inform him that he is to set aside whatever resources are required to compensate the workers and business owners who have been harmed as a result of his company's recklessness," he said.

"And this fund will not be controlled by BP. In order to ensure that all legitimate claims are paid out in a fair and timely manner, the account must and will be administered by an independent, third party."

Congressional leaders have called for the fund to start off with at least \$20 billion, a figure BP has not endorsed. Obama made no mention on how much money should be allocated.

Ahead of the televised speech, major oil company executives told a U.S. congressional hearing that BP had not adhered to industry standards in building its deep-sea well that blew out on April 20, unleashing a torrent of crude that has caused the biggest environmental disaster in U.S. history.

But their efforts to distance themselves from BP did not stop Democratic lawmakers from criticizing as "virtually worthless" industry plans to handle deepwater oil disasters.

Millions of gallons have poured into the Gulf, fouling 120 miles of U.S. coastline, imperiling multibillion-dollar fishing and tourism industries and killing birds, sea turtles and dolphins.

BP SHARES

During BP's congressional testimony, its U.S.-listed shares jumped and trading volumes spiked. They rose 4 percent at one point in afternoon trading before closing up 2.35 percent. They had plunged 9 percent on Monday. In London, shares of BP, which could face billions of dollars in damage claims from the spill, closed down 3.78 percent on Tuesday.

Rating agency Fitch smacked BP with a hefty six-notch downgrade on its debt rating. That puts BP's debt just two notches above junk, which would mean a significant boost in the company's cost of borrowing. BP has lost about half of its market value since the spill began two months ago.

Bank of America Merrill Lynch has ordered its traders not to enter into oil trades with BP that extend beyond June 2011, a market source familiar with the directive told Reuters.

Investors in solar energy company stocks might be disappointed that Obama offered few concrete plans on clean energy, after bidding the share up on Tuesday.

Ahead of his speech, Obama was in Florida finishing a two-day tour of Gulf communities hit by the 57-day-old spill.

It is a critical week for BP -- top executives including chairman Carl-Henric Svanberg are due to meet Obama at the White House on Wednesday.

"We share the president's goal of shutting off the well as quickly as possible, cleaning up the oil and mitigating the impact on the people and environment of the Gulf Coast," BP said in a statement after Obama's address.

"We look forward to meeting with President Obama tomorrow for a constructive discussion about how best to achieve these mutual goals," it said.

Chief Executive Tony Hayward, the public face of BP's response to the spill, is due to testify for the first time at a U.S. congressional hearing on Thursday.

新托福阅读材料: How We Fool Ourselves Over and Over

Sometimes we don't face that 800-pound gorilla in the room because we don't notice him in the first place. This is what researchers Christopher Chabris and Daniel Simons proved in an experiment done 10 years ago.

In a video two groups, one group with white tee shirts, the other black, move randomly in a room while passing a basketball. The viewer's task is to count how many passes the white-shirted members make. Halfway through the video, a woman dressed in a gorilla suit walks through the groups, stops, faces the camera, thumps her chest and walks off. Half of all viewers miss this. I did, and it left me unnerved.

Chabris and Simons have now written a book, "The Invisible Gorilla and Other Ways Our Intuitions Deceive Us" about all kinds of illusions we suffer from. We think we see things as they really are, but "our vivid visual experience belies a striking mental blindness," they write.

They cover the illusion of memory, how often our memories are born from our own embellished stories; the illusion of knowledge, we think we know much more than we actually do; the illusion of cause, we quickly assume correlation means causation.

Such overestimations have profound consequences: eyewitnesses sending innocents to prison; believing-wrongly-that vaccines cause autism simply because of a correlation; or thinking we can text while driving. If there's one thing we ought to take from watching the gorilla film it is that texting while driving is a ticking time bomb.

Perhaps the worst illusion of all, the failing that leads to others, is the illusion of confidence. We profoundly overestimate our ability to see things as they are. As the physicist Richard Feynman famously said: The first principle is you must not fool yourself, and you are the easiest person to fool.

新托福阅读材料: The secrets of Beckham's amazing tattoo

成名多年的英伦万人迷球星贝克汉姆一直是全球体育界、娱乐界关注的焦点人物,虽然此次没有作为队员参加南非世界杯,但小贝的出场仍吸引了众多观众的眼球。今天我们就一起来轻松一下,聊聊这位万人迷身上那些神秘的纹身吧。

David Beckham has had an unsightly 2ft-long tattoo etched over the entire surface of his right arm.

The marking, which he has showed off in its entirety for the first time, joins a clouds and cherub design over his shoulders with numerous other tattoos on his arm and wrist to make one continuous piece of 'artwork'.

Beckham revealed the design as he took his wife Victoria on a romantic break in Paris to celebrate her 33rd birthday - her last in England before the pair move to California.

The design was needled in two sittings by Manchester based tattoo artist Louis Malloy on Sunday 11th March and Tuesday 13th March, the day Beckham bid farewell to Manchester United fans.

It consists of two 'symbolic' pieces that reflect the 'deep turmoil he feels about going to LA' said a source close to the former England captain.

Most significant, said the source, are the words 'Pray For Me' inscribed on the

inside of his right wrist.

"This is how he feels about the massive move from being an English boy through and through, who has represented his country for many years and is now turning his back on England to embrace America," the source said.

The marking joins a clouds and cherub design over his shoulders with numerous other tattoos on his arm and wrist to make one continuous piece of 'artwork'

"The move was never an easy decision and it wasn't really David's, it was Victoria's from day one."

"The tattoo is not something Victoria wanted him to go ahead with as she felt it would not be a good start to their time in LA, but David was adamant that he would show his true feelings about the move and stop covering it up, even if it is rather cryptic," the source added.

The three words are inscribed next to another symbolic piece Beckham apparently wanted to reflect who he feels he has been for the past ten years - a Knight Templar, symbolised by a cross.

The Templar Knights, recognisable by their white mantle with distinct red cross, are for David the symbols of him and the England team.

He asked the tattoo artist to etch the Knight Templar on his arm as he "feels the knights were the best equipped, trained, and disciplined fighting units of the Crusades, just as he has always tried to be as a footballer representing his team of knights".

The main tattoo on the forearm is a giant angel sentinel, holding a flame in her hand so that her face is illuminated from below. The wings spread round Beckham's arm and merge with the existing tattoos

The second tattoo across his arm is a quote by the Roman Emperor Tiberius and also used by Caligula.

It reads: "Lets them hate (me) as long as they fear (me)."

It is written in English though Beckham originally wanted it written in Latin.

The reason he was advised not to do it in Latin is because the middle word would have been 'dum', which he is understood to have been adamant he did not want on his arm for fear of cruel jibes about his own intellect. The new tattoo's detail is difficult to make out, since it is merged with tattoos which were already there.

The end result is a rather unpretty mess.

Already on the arm are the words 'Perfectio In Spiritu' which means 'spiritual perfection', and the roman numerals VII - which relates to Beckham's No7 shirt.

Beckham's left arm carries wife Victoria's name in Hindi plus the words Ut Amem et Foveam (So that I love and cherish). On his back he has a huge angel in the shape of a cross and his three sons' names Romeo, Brooklyn and Cruz.

新托福阅读材料: AIDSresearcherclearedofmisconduct

Controversial researcher Peter Duesberg has been cleared of wrongdoing following formal complaints made after he and others published a paper arguing that there is "as yet no proof that HIV causes AIDS."

Duesberg, who is well known for denying the link between HIV and AIDS, escaped censure from the University of California, Berkeley, after an investigation upheld his academic freedom and found no clear evidence that he broke faculty rules in publishing the paper.

A letter dated May 28 from Sheldon Zedeck, vice-provost for academic affairs and

faculty welfare, to Duesberg effectively clears him of any wrongdoing. It states that there was "insufficient evidence" available to pursue any disciplinary action against him, although it stresses that the investigation was not concerned with the "accuracy or validity of the article."

Duesberg told Nature that he felt "officially exonerated" by the outcome but was disappointed that Berkeley had not dismissed the allegations sooner. "There was no basis for a misconduct charge," he says.

The professor of biochemistry and molecular biology, who won international acclaim for his work on cancer genes in the 1970s before focusing on AIDS, says that his detractors will now find it more difficult to make a case against him. "Now they will have to find something else ... maybe my parking permits," he suggests.

Contentious hypothesis

Berkeley launched an investigation last November, questioning whether Duesberg had violated the university's code of conduct when submitting an article to the journal *Medical Hypotheses*, which at the time did not peer review its papers.

The article argued that there is "as yet no proof that HIV causes AIDS" and described claims that the virus had killed millions as "unconfirmed." Duesberg had previously submitted the manuscript to the *Journal of Acquired Immune Deficiency Syndromes*, where one reviewer warned that he could face misconduct charges were the paper to be published.

The warning concerned the alleged cherry picking of results and the failure to declare a conflict of interest for co-author David Rasnick, previously an employee of Matthias Rath. Rath sells vitamin pills as remedies for AIDS. Rasnick has denied any conflict of interest and says that he has had no connection with Rath since 2006.

The paper's publication led to a storm of protest from scientists, and retrospective peer review later led to its being permanently withdrawn. The journal's editor was sacked and publisher Elsevier vowed to make changes to *Medical Hypotheses*, including introducing peer review.

Two formal complaints were also lodged with Berkeley, between them alleging that Duesberg had made false claims in the paper and accusing him of failing to declare Rasnick's alleged conflict of interest. One complaint came from Nathan Geffen, treasurer of the South Africa-based Treatment Action Campaign--which campaigns for the rights of people with HIV/AIDS. The other complainant has remained anonymous.

Geffen told Nature that he submitted his complaint because he believed Duesberg had behaved unethically. "I would like them to have taken action against him but I understand their position. I am willing to accept that this is a grey area in terms of their code," he says.

He adds that having "insufficient evidence" to proceed is not the same as exoneration. "This is anything but an exoneration."

Berkeley spokesman Robert Sanders confirmed that the investigation into Duesberg had now concluded.

"Academic freedom protects a professor's right to engage in scholarly research, even if it is controversial. The university relies on the scholarly peer-review process, rather than disciplinary procedures, for evaluating the value of scientific work," he says.

新托福阅读材料:

Will Satellites and Supercomputers Improve Bird Watching?

地球气候环境的变化和人类对地球资源的消耗使很多鸟类都面临生存危机，一些科学家正在逐渐探索和利用新技术手段以搜集信息，研究和保护鸟类。

Add space satellites and supercomputers to the list of birdwatching tools.

Scientists at Oak Ridge National Laboratory and Cornell University's Lab of Ornithology are combining those high-tech tools with a database of bird sightings contributed by birdwatchers to learn how climate change is affecting bird movement in the United States.

"The approach we're taking here is we're trying to bring together as much environmental data as we can to try to understand what influences the bird migration," said Bob Cook, a distinguished research scientist at ORNL involved with the effort. "We're trying to address a really important question with regard to climate change: How might climate change influence the migration patterns of birds?"

That includes information about rainfall, temperature and snow cover, as well as the start of spring greening and the composition of land cover -- forested, urbanized or grassland, for example.

The land cover information is drawn from a NASA satellite sensor, MODIS -- that's short for "Moderate Resolution Imaging Spectroradiometer". Bird sightings are taken from an online database run by Cornell and the National Audubon Society. Launched in 2003, E-bird allows "citizen scientists" to submit detailed reports via an Internet checklist.

Combining and analyzing all that data will require computing might provided by TeraGrid, a National Science Foundation-administered network of supercomputers.

Steve Kelling, director of information science at Cornell's ornithology lab, said the new project will allow scientists to link bird sightings to climate conditions.

Via the seven-year-old E-bird database -- which accepts observations recorded a century ago, as well as present-day bird sightings -- "we have really good information on the location where observations were made," Kelling said. "We can link those with other kinds of environmental observations, like land cover, type of climate, temperature, elevation and human demographic information."

Adding in the MODIS satellite data provides information about when spring greening begins and when fall starts, he said, two things that seem to be important environmental cues for bird migration.

Potential for a fatal mismatch

Eventually, the scientists would like to develop models that can forecast how future climate shifts might affect bird populations.

"We'd like to be able to shift the greening index to occur two weeks earlier or two weeks later and see if that influences the model's predictions of when birds will arrive at certain latitudes," Kelling said.

Climate change could produce a mismatch between a bird species' cue to migrate or nest and the availability of food, he noted, a phenomenon that's been observed with some species in Europe. For example, if the American Robin miscalculates spring and arrives before the insects it eats are ready, the birds could starve.

Several recent reports -- including two by the Interior Department and one from the National Audubon Society -- have found evidence that climate change is already altering bird habitat and migration patterns in the United States. Kelling said the advantage of the new project is harnessing the power of E-bird.

It's the only dataset that gives information about patterns of bird movement throughout the year, he said, noting that many other studies have relied on data collected through the Audubon's annual Christmas Bird Count or similar events.

In contrast, birders submitted 11 million individual bird sightings to E-bird between January 1 and July 31 of this year.

"It's just an immense amount of information," said Cook, whose work on the bird project is a proof of concept for a larger effort he's helping to direct, the Data Observation Network for Earth.

The five-year, NSF-funded program aims to help research scientists find new ways to visualize and explore large amounts of information.

新托福阅读材料: Porsche 918 Spyder hybrid supercar goes on sale

保时捷的跑车一直另全球各地许多车迷魂牵梦萦, 保时捷公司的每一项新产品的发布总能引来无数关注目光。日前, 该公司旗下的918 Spyder 混合动力跑车上市, 918 Spyder 的惊艳造型和超省油性能立刻让车迷们激动不已。

Porsche has decided to make a limited number of the new hybrid supercar it's been developing, called the 918 Spyder.

The car is powered by both a petrol engine and electric motor and will be based on a prototype unveiled at this year's Geneva car show.

It can go from 0-62mph in 3.2 seconds, has a top speed of 198mph and will be able to travel up to 16 miles on battery power alone.

The 918 Spyder will effectively replace the company's Carrera GT.

At more than \$400,000 it'll also be the company's most expensive car ever.

The board of Porsche only agreed to put the 918 Spyder into production if more than 1,000 people signed declarations of interest to buy one.

Nearly double that number put their names down.

Vital stats

One of the car's electric motors will drive the front wheels while the back wheels are powered by both petrol and the remaining electric motor.

The plug-in hybrid needs just under five litres of petrol for every 100 miles driven and emits 70g/km of CO₂.

The pair of 160kW electric motors will provide a combined 218bhp with the 3.4 litre V8 engine providing the remaining 500bhp.

The 918 Spyder is around the same length as the Boxster and Cayman but wider than both and weighs just under 1,500kg (3,300lb).

The body and shell are made from carbon-fibre-reinforced plastic.

Porsche says it completed a test lap of the Nürburgring in Germany in less than seven minutes and 30 seconds.

新托福阅读材料:

Cooling system fault hits International Space Station

人类对于宇宙探索的脚步从未停止过, 太空中辛勤工作着的众多卫星和宇宙空间站就是最好例证。当然, 这些卫星和空间站也会有“生病”的时候。

The crew of the International Space Station have been forced to reduce power after half the cooling system suddenly shut down over the weekend.

Nasa officials insisted the three Americans and three Russians aboard were not in danger.

Urgent spacewalk repairs are being discussed for this week.

Without thermal controls, temperatures on the ISS's Sun-facing side can soar to 121C (250F), plunging to minus 157C (-250F) on the dark side, Nasa says.

"There might be a comfortable spot somewhere in the middle of the station, but searching for it wouldn't be much fun," a statement on its website adds.

The station is now operating on a single string, the Associated Press reports, and has no safeguard in case of further cooling system failures.

Alarms sound

Trouble arose on Saturday night when one of the two ammonia-fed cooling loops shut down, triggering alarms throughout the ISS

The two ammonia lines ensure that all the station's electronic equipment does not overheat.

Astronaut Tracy Caldwell Dyson set in motion equipment shutdown procedures and, with crewmate Douglas Wheelock, installed a jumper cable to keep all the rooms cool.

The Global Positioning System circuit, several power converters and a set of devices that route commands to various pieces of equipment were switched off.

Two of the four gyroscopes - part of the space station's pointing and navigating system - were initially shut down but the crew installed a jumper cable to bring up a third gyroscope, leaving the station in a much more stable position, AP says.

Flight controllers tried to restart the disabled ammonia pump early on Sunday but the circuit breaker tripped again.

Any repairs later this week almost certainly will involve replacing the faulty ammonia pump, a difficult job that would require two spacewalks, AP adds.

"It's pretty clear that we're going to want to have a course of action to take as quickly as possible," Nasa spokesman Rob Navias said at the Johnson Space Center in Houston, Texas.

"This is not something we want to linger over."

Two spare pumps are stored on the outside of the station. Two of the Americans on board are already scheduled to conduct a spacewalk on Thursday for routine maintenance.

No space shuttle visits to the ISS are planned before November.

新托福阅读材料: Marssitemayhold' buriedlife'

人类一直都在茫茫太空中寻找着同伴,而火星属于类地行星,也就是类似地球的星球,它距离太阳近,体积和质量都较小,平均密度较大,表面温度较高,大小与地球差不多,也都是由岩石构成的。科学家认为其有孕育生命的可能,因此非常有研究价值。

Researchers have identified rocks that they say could contain the fossilised remains of life on early Mars.

The team made their discovery in the ancient rocks of Nili Fossae.

Their work has revealed that this trench on the dark side of Mars is a "dead ringer" for a region in Australia where some of the earliest evidence of life on Earth has been buried and preserved in mineral form.

They report the findings in the journal Earth and Planetary Science Letters.

The team, led by a scientist from the Search for Extraterrestrial Intelligence Institute (Seti) in California, believes that the same "hydrothermal" processes that preserved these markers of life on Earth could have taken place on Mars at Nili Fossae.

The rocks there are up to four billion years old, which means they have been around for three-quarters of the history of Mars.

When, in 2008, scientists first discovered carbonate in those rocks the Mars science community reacted with great excitement; carbonate had long been sought as definitive evidence that the Red planet was habitable – that life could have existed there.

新托福阅读材料: BustingTheMythThatOppositesAttract

“异性相吸”一直是被人们广泛接受和认可的一种现象, 但根据心理学家的最新研究表明, “异性相吸”可能只是个神话。

Back in college astronomy class, I sat behind a guy who wore a T-shirt with this on the back: The best thing about the opposite sex is just how opposite they are.

It's not just a rule in physics. There's a strong cultural expression: opposites attract. Think Harold and Maude, Pretty Woman, It Happened One Night—Hollywood has long known the lure of antitheses in love.

But real research busts this myth.

Psychologists map out such evidence in a new book: 50 Great Myths of Popular Psychology: Shattering Widespread Misconceptions about Human Behavior.

Psychologist Donn Byrne has found that we are twice as likely to be attracted to someone when we agree on six out of 10 issues than we are with someone who we only agree with on three out of 10 issues.

To be sure, the appeal of shared interests may be specific to long-term relationships.

A 2006 University of Pennsylvania study of speed dating found that daters said they wanted someone who had a similar background in education, religion, economic status and shared personality traits. Yet when they were in the midst of the one-minute date, they made choices based on more immediate cues like physical attraction. In the speed-dating environment—a bar surrounded by singles, under the pressure of a ticking clock—daters made choices based on short-term mating criteria that were more likely to lead to fast hook-ups, not necessarily long-lived love.

So if it's the long haul you're searching for, best look beyond the cute face and hot body, and see if you can carry the conversation beyond 60 seconds.

新托福阅读材料: WorldCup2010:Yourstories

关于世界杯, 各国球迷都有自己不得不说的故事, 今天我们就来看看新西兰球迷对于世界杯有什么看法吧。

Ed Strafford, Wellington, New Zealand

New Zealand is a wealthy Pacific nation, with agriculture as its main industry. The 'All Whites' will be competing in the finals for the first time in 28 years.

New Zealand's national sport is known to be rugby, but the World Cup has provided the opportunity to push and grow the game and have conversations about football.

A few years ago, local businessman Terry Serepisos invested millions of New Zealand dollars into the game, and in Wellington, you'll see more football shirts worn than rugby shirts.

New Zealand is changing culturally. There are more migrants from Africa and Asia who are not rugby fans but football fans, so that has also boosted the sport here.

Despite the time difference, I'll be watching the All Whites' games live at around

2am, and I will try to fit in as many 6.30am games as possible into my pre-work routines and be tactical in attending early meetings.

Other games will be recorded and highlights shows will be watched. I may take some annual leave, either for sleep recovery or to indulge and celebrate football!

If we can get a point in the tournament, it would be a major achievement for the country.

新托福阅读材料: Will the Oil Spill Kill Sperm Whales?

英国石油公司在美国墨西哥湾的漏油事故给无数生灵带来了灾难, 近期该海域一头抹香鲸的死亡或许也与此次事故有关。

The NOAA ship Pisces discovered a dead sperm whale on June 15—a possible victim of the ongoing oil spill in the Gulf of Mexico.

There are at least 1600 such sperm whales in the Gulf, according to marine biologist Thomas Shirley of Texas A&M University. Minus one.

The irony is that sperm whales can thank oil for their species survival. Kerosene refined from such petroleum helped displace the whale oil that lit lamps in the 19th century and led to the near extinction of many whale species.

Saving the whales has proven a benefit to the marine environment, including helping storage of the greenhouse gases produced by burning oil that are changing the global climate. Sperm whale poop helps fertilize algae, which in turn suck up carbon dioxide via photosynthesis.

Samples from the dead whale (pdf) will ultimately tell what killed this denizen of the deep. Those won't be handed off for testing until July 2 when the Pisces returns to port. And the tests take weeks.

Regardless, it is known that such sperm whales feed on deepwater squid that may be impacted by plumes of dispersed oil. The endangered whales have also been spotted surfacing into the slick. How the millions of liters of oil will impact sperm whales and other cetaceans is an ongoing, unintentional science experiment.