Unit1

Climate change

Multiple studies published in peer-reviewed journals show that 97% of scientists agree that the effects of climate change are due to human activity. Yet in a recent survey conducted by a research center, less than 50% of US adults agree with the scientific consensus. So is this half of the population justifiably skeptical or does the research support the experts? To help you decide for yourself, we've used the latest evidence to address the big questions.

同行评议期刊上刊发的多项研究表明，97%的科学家认为，气候变化的影响是由人类活动造成的。然而，某研究中心最近的一项调查显示，认同这一科学共识的美国成年人不足 50%。那么，另一半美国人的质疑是有根据的吗？还是研究结果支持专家们的结论？为了帮你作出自己的判断，我们用最新证据来回答一些重要问题。

Q1 Is there any evidence for global warming?

In short, yes. Since global temperature records began in the late 19th century, the planet's average surface temperature has risen by approximately 2.0°F (1.1°C), with 16 of the 17 hottest years on record occurring over the last 35 years. Eighty percent of this additional heat is absorbed by the world's oceans, the surface of which has increased in temperature by 0.13°F per decade since 1901 (NASA, n.d.).

问题 1 全球变暖是否有证据支持？

简单来说，有。自 19 世纪末有了全球温度记录以来，地球表面平均温度已上升约 2.0 华氏度（1.1 摄氏度）。在有记录的 17 个最热年份中，16 个出现在过去的 35 年里。在这些增加的热量中，有 80%被地球上的海洋吸收。自 1901 年以来，海洋表面温度每 10 年升高 0.13 华氏度（美国航空航天局，未注明日期）。

Q2 Hasn't the Earth's climate always fluctuated?

Yes. Changes in the Earth's climate are a natural and frequent phenomenon. Ice ages—driven by slow variations in the Earth's orbit that alter the distribution of the Sun's energy—have occurred, on average, every 100,000 years. These climatic events have led to mass extinction, the migration of populations, and dramatic changes in the landscape, so why is modern climate change such an issue? While ice ages are cyclical, the pace at which the planet has warmed since the end of the last ice age is unprecedented—making adaptation virtually impossible. According to the Royal Society, the increase in the Earth's temperature over the 7,000–18,000-year period since the end of the last ice age is approximately 4°C, 25% of which occurred in the last 200 years.

问题 2 地球气候不是一直在变化吗？

3 是的。地球气候变化是一种自然且频发的现象。地球轨道缓慢变化，改变了太阳的能量分布，受此影响，冰河期平均每十万年发生一次。这些气候事件导致了大灭绝、人口迁移和巨大的地貌变化。那么为什么现代气候变化成了一个大问题呢？虽然冰河期是周期性的，但自上一个冰河期结束后，全球变暖的速度是前所未有的——这使得适应气候变化几乎是不可能的。根据英国皇家学会的数据，在上一个冰河期结束后的 7000 至 18000 年间，地球升温约 4 摄氏度，升高温度中的 25%发生在过去 200 年中。

Q3 Is human activity the primary cause?

4 A blanket of greenhouse gases—carbon dioxide, water vapor, nitrous oxide, and methane—in the Earth's atmosphere absorb heat and warm the planet's surface, a natural phenomenon known as the greenhouse effect. Measurements of the atmosphere and air in ice indicate a 40% increase in CO2 levels in the 200-year period to 2012 (The Royal Society and the US National Academy of Sciences, 2014). This rapid increase is almost certainly a consequence of human activity. Over the last century, burning of finite resources such as coal and oil, deforestation for agriculture, and

industrial expansion have all greatly increased the concentration of CO2 in the Earth's atmosphere. Increased levels of other greenhouse gases are also directly attributable to human activity. The cultivation of domestic livestock and the expansion of landfills have increased levels of methane, while nitrous oxide is largely generated by soil cultivation. The bottom line is that while the greenhouse effect is a natural phenomenon, its expansion (and global warming by extension) is largely due to human activity.

问题 3 人类活动是主要原因吗？

4 地球大气中的大量温室气体（二氧化碳、水蒸气、氧化亚氮和甲烷），吸收热量并使地球表面变暖，这种自然现象被称为温室效应。对大气和冰中气体的测量表明，二氧化碳水平在 2012 年之前的 200 年间增加了 40%（英国皇家学会和美国国家科学院，2014）。几乎可以肯定这种快速增长是人类活动的结果。自上世纪以来，燃烧煤炭和石油等有限资源、砍伐森林以发展农业，以及工业扩张，都使得地球大气中的二氧化碳浓度大幅增加。其他温室气体的增加也可直接归因于人类活动。家畜养殖和废物填埋场扩建增加了甲烷含量，土壤耕作成为氧化亚氮的主要来源。归根结底，尽管温室效应是一种自然现象，但其不断加剧（乃至全球变暖），主要是由人类活动造成的。

Q4 How does climate change affect our oceans?

5 The Earth's oceans absorb about 80% of the additional heat generated by global warming. When water heats up, it expands, causing sea levels to rise. Over the past century, global sea levels have risen by four to eight inches (10 to 20 centimeters), and approximately 50% of this increase is directly attributable to thermal expansion. As with the greenhouse effect, this is a natural phenomenon. However, recent data suggests that over the past 20 years, sea levels have risen by 0.13 inches (3.3 millimeters) a year—roughly twice the speed of the preceding 80 years. Such a rapid increase can have devastating consequences for coastal inhabitants such as erosion, flooding, and soil contamination. Not only are sea levels rising, but the ocean's chemical composition is also changing. Carbon dioxide is not only released into the Earth's atmosphere, but also dissolved into our oceans, causing higher levels of acidity. Since the early 1800s, ocean acidity has increased by around 25%, depressing the metabolic rates of some species, lowering the immune responses of others, destabilizing marine ecosystems, and causing the bleaching, and possibly the eventual death, of the world's coral reefs.

问题 4 气候变化对我们的海洋有哪些影响？

5 全球变暖而增加的热量中，80%被地球上的海洋吸收。水受热膨胀，导致海平面上升。在过去的一个世纪里，全球海平面上升了 4 到 8 英寸（10 到 20 厘米），其中约一半是由热膨胀直接导致的。和温室效应一样，这是一种自然现象。然而，最近的数据表明，在过去 20 年里，海平面每年上升 0.13 英寸（3.3 毫米），速度大约是此前 80 年的两倍。如此迅速的增长可能给沿海居民带来毁灭性的后果，如海水侵蚀、洪水和土壤污染。不仅海平面在上升，海洋的化学成分也在变化。二氧化碳不仅被释放到地球大气中，也溶解到海水里，造成海洋酸度上升。自 19 世纪初以来，海洋酸度增加了约 25%，抑制了某些物种的代谢率，降低了其他物种的免疫反应，破坏了海洋生态系统，也造成全球珊瑚礁白化，甚至有可能最终死去。

Q5 How have the polar ice caps been affected?

6 Data from NASA's Gravity Recovery and Climate Experiment (n.d.) shows Greenland and Antarctica lost a combined 300 to 450 cubic kilometers of ice annually between 2002 and 2006. One hundred and eighteen billion metric tons of ice is lost from Antarctica alone each year. Over the past 20 years, Arctic sea ice has declined rapidly. Glaciers from the Andes to the Alps lose approximately 400 billion tons of ice every year. Events that typically happen in geologic time are happening in the human lifespan. The disappearance of Himalayan glaciers is forecast within the next two decades. Not only do global ice sheets help to counteract the greenhouse effect, but their disappearance is also a primary contributor to rising sea levels.

问题 5 极地冰盖受到了哪些影响？

6 美国航空航天局重力恢复和气候实验（未注明日期）的数据显示，2002 年至 2006 年间，格陵兰岛和南极洲每年共流失 300 至 450 立方千米的冰。仅南极洲每年就损失 1180 亿公吨冰。在过去 20 年中，北极海冰迅速减少。从安第斯山脉到阿尔卑斯山脉的冰川每年损失约 4000 亿吨冰。通常发生在地质时期的事件正发生在人类活动时期。喜马拉雅冰川预计将在未来二十年内消失。全球冰盖不仅有助于抵消温室效应，而且冰盖消失也是海平面上升的主要原因。

Q6 Can it be blamed for the rise in extreme weather events?

7 According to research conducted at the University of Illinois, a rise in sea level of 5–10 centimeters could double the frequency and intensity of coastal flooding, potentially having devastating effects on major global cities. In addition, rising temperatures have increased the amount of water vapor in the Earth's lower atmosphere, creating favorable conditions for more intense rain and snowstorms, both of which have been occurring with greater regularity in the US over the past 50 years. Other extreme weather events, such as drought, are caused by changes in planetary waves—patterns of wind that encircle the northern hemisphere from the tropics to the poles. Under certain temperature conditions, movement of the wave can be halted, effectively prolonging periods of hot weather that may result in drought. However, while scientists have long suspected these events are a direct result of increased emissions of greenhouse gases, their relative infrequency makes it difficult for the scientists to evaluate reliably and we therefore cannot conclusively state that climate change is the cause.

问题 6 极端天气愈发频繁，气候变化是否是罪魁祸首？

7 根据伊利诺伊大学的研究，海平面上升 5 到 10 厘米，会使沿海地区发生洪灾的频率和强度增加一倍，可能对全球主要城市产生毁灭性影响。此外，气温上升使得地球低层大气中的水蒸气含量增加，为更强的降雨和暴风雪创造了有利条件，在过去 50 年里，这两种天气在美国出现得更为频繁。其他极端天气事件，如干旱，是由行星波（环绕北半球的从热带到两极的气流活动模式）变化引起的。在某些温度条件下，行星波运动停止，有效地延长可能导致干旱的炎热天气周期。然而，尽管科学家们长期以来一直怀疑，温室气体排放量增加是导致极端天气的直接原因，但极端天气相对罕见，科学家们难以做出可靠评估，因此我们无法得出气候变化是罪魁祸首的结论。

Q7 Can we reverse the damage?

8 Unfortunately, no. Although the recent resolution reached in Paris is hugely significant, many claim it is too little, too late. Even if legislation were introduced to immediately stop the emission of greenhouse gases, the CO2 that has already been absorbed by the atmosphere and oceans would take thousands of years to be reabsorbed by deep ocean sediments. Sea levels would continue to rise, ice caps would continue to melt, and extreme weather would occur at an increasingly devastating rate. The damage to our planet is irreparable. The only question is: Can we adapt?

问题 7 我们能扭转损害吗？

8 很不幸，不能。尽管最近在巴黎达成的决议意义重大，但许多人认为这太微不足道、太迟了。即使有立法立即禁止温室气体排放，这些已经被大气和海洋吸收的二氧化碳也需要数千年才能被深海沉积物重新吸收。海平面将继续上升，冰盖将继续融化，极端天气将以愈发不可收拾的速度发生。我们无法弥补对地球的破坏。唯一的问题是：我们能适应吗？

1. Research suggests that our planet is warming at a(n) unprecedented pace.
研究表明我们的星球正在以史无前例速度变暖.

2. Your metabolic rate is the speed at which your body transforms food into energy.
你的新陈代谢速率是你的身体将食物转化为能量的速度。

2. The research team proposes a few key recommendations to counteract the declining of domestic demand.
研究小组提出了一些应对内需下降的关键建议。
4. A(n) thermal management system optimizes battery range in high and low temperatures, allowing the car to maintain optimal range capability.
一个热管理系统优化高温和低温下的电池续航里程，使汽车保持最佳续航能力。
5. By the 1920s, erosion from winds and weather had removed a large part of the land.
到了 20 年代，风和天气的侵蚀已经消失了很大一部分土地。
6. It's needless to say that the value of water, this finite and irreplaceable resource, is enormous.
不用说，水这种有限且不可替代的资源的价值是巨大的。
7. Experts say the spread of the virus in countries with little protection from vaccines could lead to more variants and prolong the pandemic.
专家表示，病毒在疫苗保护很少的国家传播可能会导致更多变异并延长大流行时间。
8. Many people are still skeptical about artificial intelligence getting adopted by financial institutions.
许多人仍然对金融机构采用人工智能持怀疑态度。

Unit2

The benefits of urbanization
城市化的好处
1 In 1950, the percentage of the world's population living in urban areas was 30%. By 2014, the figure had increased to 54% and it is predicted that, by 2050, two-thirds of us will be living in cities (World Urbanization Prospects, 2014). This means that in just 100 years, the number of urban dwellers will have more than doubled. The overwhelming majority of this urbanization is expected to occur in Asia and Africa, as people migrate to find work and housing, and gain improved access to healthcare and education. London went from a population of one million to eight million in over a century. Some Asian cities have done so in 50 years or less. While many are concerned that this surge in urban populations will lead to housing shortages and increased competition for employment, there are arguably many significant benefits in terms of development. In fact, history has shown that notable developments in a country cannot take place without urbanization. This essay will therefore argue that urbanization in developing countries should be actively encouraged.
1 1950 年，世界人口居住在城市地区的比例为 30%。 到 2014 年，这一数字已增至 54%，预计到 2050 年，三分之二的人将生活在城市（世界城市化展望，2014 年）。 这意味着在短短 100 年内，城市居民的数量将增加一倍以上。 随着人们迁移寻找工作和住房，并获得更好的医疗和教育机会，预计绝大多数城市化将发生在亚洲和非洲。 一个多世纪的时间里，伦敦人口从一百万增加到八百万。 一些亚洲城市在 50 年或更短的时间内就做到了这一点。 尽管许多人担心城市人口激增将导致住房短缺和就业竞争加剧，但在发展方面可以说有许多显着的好处。 事实上，历史表明，一个国家如果没有城市化就不可能取得显着的发展。 因此，本文认为应积极鼓励发展中国家的城市化。

2 Perhaps the biggest benefit of urbanization is a growth in productivity. Rosenthal and Strange (2004) estimated that cities can increase productivity by approximately 3%–8% if they double their population size—a significant number. This increase arises through economies of scale, as the growth in labor in the city allows firms to produce more output while their fixed costs remain largely the same. Essentially, more products are made with fewer resources. Transportation is also a key factor as firms are able to connect more easily and cheaply with each other when they are concentrated in clusters. These agglomeration economies, as they are known, are catalysts of economic growth.

2 也许城市化的最大好处是生产力的增长。 Rosenthal 和 Strange (2004) 估计，如果城市人口规模增加一倍，那么其生产力可提高大约 3%–8%——这是一个很大的数字。 这种增长是通过规模经济产生的，因为城市劳动力的增长使企业能够生产更多的产出，而其固定成本基本保持不变。 本质上，更多的产品是用更少的资源生产的。 交通也是一个关键因素，因为当企业集中在集群中时，它们能够更容易、更便宜地相互联系。 众所周知，这些集聚经济是经济增长的催化剂。

3 Another benefit of urbanization is, perhaps surprisingly, related to the environment. While this may seem counterintuitive, urban life is actually more environmentally friendly than rural life. Urban dwellers use notably less energy and fewer resources than those who live in rural areas. Buildings require less electrical heating than those in more remote places due to typically higher temperatures in urban areas and buildings which lock those temperatures in. Utility services can be offered more easily and affordably as people live in close proximity to each other. Similarly, public transportation is more viable in urban areas. It can be provided at a lower cost to a larger number of people and is more sustainable than private transportation. Public transportation has been proven to use less fuel for every passenger kilometer compared to private transportation (Chester et al., 2010). The more public transportation is used, the smaller a city's carbon footprint. In addition to this, when urban dwellers live close to their workplace and other important facilities including schools, hospitals, and shops, there is a greater tendency towards the use of non-polluting forms of transportation, such as bicycles. This contributes to the reduction of a city's carbon footprint even further, as well as the reduction of traffic congestion.

3 或许令人惊讶的是，城市化的另一个好处与环境有关。 虽然这似乎有悖常理，但城市生活实际上比农村生活更环保。 与农村地区居民相比，城市居民使用的能源和资源明显更少。 由于城市地区和建筑物的温度通常较高，因此与较偏远地区的建筑物相比，建筑物需要的电加热更少。由于人们居住得非常接近，因此可以更轻松、更经济地提供公用事业服务。 同样，公共交通在城市地区更为可行。 它可以以较低的成本为更多的人提供服务，并且比私人交通更具可持续性。 事实证明，与私人交通相比，公共交通每乘客公里使用的燃料更少（Chester 等，2010）。 使用公共交通越多，城市的碳足迹就越小。 除此之外，当城市居民居住的地方靠近工作场所和其他重要设施（包括学校、医院和商店）时，更倾向于使用无污染的交通方式，例如自行车。 这有助于进一步减少城市的碳足迹，并减少交通拥堵。

4 The final key advantage of urbanization is an increase in innovation. Areas of high density are known to inspire residents, entrepreneurs, and businesses to innovate more as they strive to enhance urban life. This includes local residents who work together to create better spaces for themselves and their communities, often regenerating neglected areas. Entrepreneurs look to invest in new technological innovations that create a greener environment by reducing carbon emissions, improving air quality, or developing more advanced, eco-friendly transportation systems. People within businesses

innovate to improve systems or create new products with a view to both improving people's lives and making a larger profit. The sharing economy is one example of innovation that can be profitable and beneficial to people's lives and the environment. There are now companies which encourage people to share homes when they are not using them, share cars so they do not have to own one, and donate unwanted goods to those in need of them. Some local governments have schemes that allow private individuals or companies to use their facilities when empty (e.g. a school gym), to reduce spare capacity as much as possible.

4 城市化的最后一个关键优势是创新的增加。 众所周知，高密度地区能够激发居民、企业家和企业在努力改善城市生活的同时进行更多创新。 这包括当地居民共同努力为自己和社区创造更好的空间，经常重建被忽视的地区。 企业家希望投资新技术创新，通过减少碳排放、改善空气质量或开发更先进、环保的交通系统来创造更绿色的环境。 企业内部的人们通过创新来改进系统或创造新产品，以改善人们的生活并赚取更大的利润。 共享经济是一种可以盈利并有益于人们的生活和环境的创新例子。 现在有些公司鼓励人们在不使用房屋时共享房屋，共享汽车，这样他们就不必拥有一辆汽车，并向有需要的人捐赠不需要的物品。 一些地方政府制定了计划，允许私人或公司在空置时使用其设施（例如学校体育馆），以尽可能减少闲置产能。

5 To conclude, while urbanization in substantial numbers may bring challenges, it also provides significant opportunities. Increased productivity, greater innovation, and the ability to reduce our impact on the environment are three such cases in point. As no country has ever reached middle or high income status without urbanization, it is evident that urbanization must be encouraged to allow developing countries the opportunity to derive the same benefits as developed countries, i.e. an improved standard of living. Urbanization results in progress and a decrease in poverty levels (Global Monitoring Report, 2013). Through higher productivity, people will receive higher wages and housing will become more affordable. Governments will be able to collect more taxation and therefore afford to provide better education and healthcare. Social mobility will increase for all; something that no one can deny is a desirable goal.

5 总而言之，虽然大量城市化可能带来挑战，但也提供了重大机遇。 提高生产率、加强创新以及减少对环境影响的能力就是三个这样的例子。 由于没有城市化，任何国家都无法达到中等或高收入水平，因此显然必须鼓励城市化，让发展中国家有机会获得与发达国家相同的利益，即提高生活水平。 城市化带来进步并降低贫困水平（全球监测报告，2013 年）。 通过更高的产品

1. Some critics argue that urbanization has led to traffic congestion, higher levels of pollution, and poor living standards.

1. 一些批评者认为，城市化导致交通拥堵、污染加剧和生活水平下降。

2. Successful urban expansion relies on the careful regeneration of neglected areas.

2. 成功的城市扩张依赖于被忽视地区的精心重建。

3. In a bid to reduce carbon emissions, many councils are turning to green housing projects.

3. 为了减少碳排放，许多议会正在转向绿色住房项目。

4. Foreign direct investment serves as a(n) catalyst for the city's economic growth.

4. 外商直接投资是城市经济增长的催化剂。

5. Donating to charity is a great way to get rid of unwanted things when you're moving.

5. 向慈善机构捐款是搬家时扔掉不需要的东西的好方法。

6. Research suggests that walkable park proximity displays a stronger negative association with obesity.

6. 研究表明，靠近步行公园与肥胖有更强的负相关性。

7. It is important to learn about the causes of electrical equipment failure in schools and the significance of preventative maintenance.

7、了解学校电气设备故障的原因和预防性维护的意义很重要。

Unit3

Born criminal?

天生就是罪犯？

1 In his 1885 publication, Criminologia: Studio sul Delitto, Sulle sue Cause e sui Mezzi di Repressione, Italian lawyer Raffaele Garofalo argued that scientific study was the only way to understand the criminal mind. He named this new field "criminology" and since its inception, theorists have struggled to answer one fundamental question—are we born criminal?

1 意大利律师拉斐尔·加洛法洛 (Raffaele Garofalo) 在其 1885 年出版的《犯罪学：犯罪分子工作室、苏勒起诉镇压的原因》中指出，科学研究是了解犯罪心理的唯一途径。 他将这一新领域命名为“犯罪学”，自其诞生以来，理论家们一直在努力回答一个基本问题：我们生来就有罪吗？

2 Cesare Lombroso—often referred to as the father of criminology—rejected the classical belief that crime was a personality trait of human nature. Instead, he developed a theory of anthropological criminology stating not only that criminality was inherited, but that criminals could be identified by a series of prominent physical defects which confirmed their atavistic and savage nature. In his most influential work, L'uomo Delinquente, Lombroso argued that thieves could be identified by their expressive faces, manual dexterity, and small wandering eyes, while murderers had cold glass-like stares, bloodshot eyes, and big hawk-like noses. Female criminals tended to be shorter, more wrinkled, and had darker hair and smaller skulls than "normal" women. The notion that physical appearance was innately bound to a propensity toward criminality was furthered by William Sheldon in Atlas of Men (1954), in which he proposed a taxonomy for categorizing the human physique. Sheldon argued that humans could be categorized into three broad types—ectomorph, mesomorph, and endomorph—then scored within these categories to determine mental characteristics. Those with a muscular physique and athletic appearance showed greater criminal tendencies than tall, thinner people who he believed to be more intellectual. While superficially compelling, no evidence has been found to substantiate these theories, and they have since been widely discredited.

2 塞萨尔·龙勃罗梭（Cesare Lombroso）——通常被称为犯罪学之父——拒绝接受犯罪是人性的一种人格特征的经典信念。 相反，他发展了一种人类学犯罪学理论，指出犯罪行为不仅是遗传的，而且可以通过一系列显着的身体缺陷来识别罪犯，这些缺陷证实了他们的返祖和野蛮本质。 隆勃罗梭在他最有影响力的著作《犯罪嫌疑人》中指出，小偷可以通过富有表现力的面孔、灵巧的双手和游移的小眼睛来识别，而杀人犯则拥有冰冷的玻璃般的目光、充血的眼睛和鹰一样的大鼻子。 与“正常”女性相比，女性罪犯往往身材矮小、皱纹较多、头发颜色更深、

头骨更小。 威廉·谢尔顿（William Sheldon）在《人类地图集》（Atlas of Men，1954）中进一步提出了“外貌与犯罪倾向天生相关”这一观点，他在书中提出了一种对人类体格进行分类的分类法。 谢尔顿认为，人类可以分为三大类——外胚型、中胚型和内胚型——然后在这些类别中进行评分以确定心理特征。 那些肌肉发达、外表健壮的人比那些他认为更聪明、又高又瘦的人表现出更大的犯罪倾向。 虽然表面上令人信服，但尚未找到证据来证实这些理论，因此它们已被广泛质疑。

3 Other early theorists laid the foundations for the most prominent school of thought in the 50s and 60s—"labeling theory," which hypothesizes that negative labels given to individuals by society actually promote deviant behavior. The origins of this theory can be traced back to Edwin M. Lemert, a sociology professor at the University of California. In Social Pathology: A Systematic Approach to the Theory of Sociopathic Behavior (1951), Lemert introduced the concept of "primary and secondary deviance." "Primary deviance" refers to an initial act that deviates from social norms—say getting caught for a minor traffic offense or taking stationery from work. Those that commit these acts are usually reprimanded and feel guilty enough not to replicate them. However, some go on to commit further, repeated or more serious acts—secondary deviance—and are labeled as criminals. Howard Becker further developed this notion in his 1963 publication, Outsiders, claiming that while society labels people as criminals to justify its condemnation, the deviants themselves use the label to justify their criminal behavior. Essentially, they commit further criminal offenses because it's simply "who they are." Critics of labeling theory argue that while the label may encourage later criminal behavior, it fails to consider the influence of genetic or environmental factors that must have led to the initial crime.

3 其他早期理论家为 50 年代和 60 年代最著名的学派“标签理论”奠定了基础，该学派假设社会赋予个人的负面标签实际上会促进越轨行为。 这一理论的起源可以追溯到加州大学社会学教授埃德温·M·莱默特(Edwin M. Lemert)。在《社会病理学：反社会行为理论的系统方法》（1951）中，莱默特引入了“主要和次要偏差”的概念。 “主要越轨行为”是指最初的违反社会规范的行为，例如因轻微交通违法行为而被抓，或者从工作中拿走文具。 那些犯下这些行为的人通常会受到谴责，并感到内疚，不会再重复这些行为。 然而，有些人继续实施进一步的、重复的或更严重的行为——二次越轨——并被贴上犯罪分子的标签。霍华德·贝克尔 (Howard Becker) 在他 1963 年出版的《局外人》(Outsiders) 中进一步发展了这一概念，声称虽然社会将人们贴上罪犯的标签以证明其谴责是正当的，但越轨者本身却使用这个标签来为他们的犯罪行为辩护。从本质上讲，他们犯下进一步的刑事犯罪，因为这只是“他们是谁”。 标签理论的批评者认为，虽然标签可能鼓励后来的犯罪行为，但它没有考虑导致最初犯罪的遗传或环境因素的影响。

4 Perhaps the most influential study is "The Cambridge Study in Delinquent Development" (2013), which has been following the development of 411 males since 1961. Over the 50-year period that has elapsed since the start of the study, psychologists have interviewed the test subjects nine times, moving from a focus on their school attendance, to employment and fatherhood. It was found that a significant number of delinquent youths had criminal fathers. Under 10% of children from non-offending fathers went on to become chronic offenders, whereas just under 40% of the offspring of criminal fathers went on to regularly offend. While this data, and other studies like it, strongly imply that criminal parents are likely to produce criminal offspring, it remains unclear whether this intergenerational deviance is genetically determined or largely due to the environment in which we are raised.

4 也许最有影响力的研究是“剑桥青少年犯罪发展研究”（2013 年），该研究自 1961 年以来一直在跟踪 411 名男性的发展情况。自该研究开始以来的 50 年里，心理学家采访了 测试对象九次，从关注他们的入学率，转向关注就业和父亲身份。 研究发现，相当多的犯罪青少年都有犯罪的父亲。 父亲没有犯罪的孩子中，只有不到 10% 的孩子会成为长期犯罪者，而父亲犯罪的孩子中，只有不到 40% 的孩子会经常犯罪。 虽然这些数据和其他类似的研究强烈暗示犯罪父母可能会产生犯罪后代，但目前尚不清楚这种代际偏差是由基因决定的还是很大程度上是由于我们成长的环境造成的。

5 Various studies have also found a correlation between intelligence and crime. Moffitt et al. (1981) found that men with a lower IQ went on to commit two or more crimes by the age of twenty. Denno (1994) also tested the intelligence of nearly 1,000 children at different points in their life and found a consistent negative correlation between IQ and criminal behavior. However, others, such as Menard and Morse (1984) have claimed that the association is too weak to be considered statistically significant. Yet regardless of the extent to which intelligence affects propensity toward criminal behavior, it does appear to be a factor, which raises another question—are we born intelligent, and by extension, law-abiding? Researchers at the University of Queensland found that only up to a maximum of 40% of intelligence is inherited and the rest is determined by environmental factors. If this is true, both nature and nurture have a role to play in the development of criminal tendencies.

5 多项研究还发现智力与犯罪之间存在相关性。 莫菲特等人。 (1981) 发现智商较低的男性在二十岁时继续犯下两次或两次以上的罪行。 Denno（1994）还测试了近 1000 名处于不同人生阶段的儿童的智力，发现智商与犯罪行为之间始终存在负相关关系。 然而，其他人，如 Menard 和 Morse (1984) 则声称这种关联太弱，不足以被认为具有统计显着性。 然而，无论智力在多大程度上影响犯罪行为的倾向，它似乎确实是一个因素，这引发了另一个问题——我们生来就聪明，并且守法吗？ 昆士兰大学的研究人员发现，最多只有 40%的智力是遗传的，其余的则由环境因素决定。 如果这是真的，那么先天和后天都会在犯罪倾向的发展中发挥作用。

6 One area of research that tests this hypothesis compares the behavior of identical (monozygotic) twins—those sharing an identical genetic makeup—to that of fraternal (dizygotic) twins, who share, on average, 50% of the same genes. A literature review on studies into identical twins and criminal behavior found that 60% exhibited criminal behavior concurrently, whereas only one third of non-identical twins had similarly related behavior. In "The Minnesota Twin Family Study" (2002), researchers are currently comparing monozygotic and dizygotic twins who were both raised together with those separated at birth. The study has found remarkable similarities in those raised apart—strongly suggesting that genetics, not upbringing, determines behavior and personality. However, critics of the genetic connection argue that poor research methodology and design have distorted the findings leaving us with little conclusive proof that crime is genetically determined.

6 检验这一假设的一个研究领域将同卵（同卵）双胞胎（具有相同基因构成的双胞胎）与异卵（异卵）双胞胎的行为进行了比较，异卵双胞胎平均拥有 50% 的相同基因。 一项关于同卵双胞胎和犯罪行为研究的文献综述发现，60% 的双胞胎同时表现出犯罪行为，而只有三分之一的异卵双胞胎有类似的相关行为。 在“明尼苏达双胞胎家庭研究”（2002）中，研究人员目前正在比较一起抚养的同卵双胞胎和出生时分开的双胞胎。 这项研究发现，那些分开长大的人之间存在显着的相似之处，这强烈表明，决定行为和个性的是基因，而不是成长经历。 然而，基因联系的批评者认为，糟糕的研究方法和设计扭曲了研究结果，使我们几乎没有确凿的证据证明犯罪是由基因决定的。

7 So are we born criminal? While research strongly indicates a certain level of genetic predisposition toward criminality, it's clear that upbringing plays an integral role in the development of criminal tendencies. To blame our genes for criminal behavior willfully ignores a broader societal responsibility to ensure that the environment in which we're raised doesn't promote criminal behavior.

7 那么我们生来就有罪吗？ 虽然研究强烈表明一定程度的犯罪遗传倾向，但很明显，成长过程在犯罪倾向的发展中起着不可或缺的作用。 将犯罪行为归咎于我们的基因，故意忽视了更广泛的社会责任，即确保我们成长的环境不会助长犯罪行为。

1. Up to now, unfortunately, no scientific evidence has been found to substantiate the theory.

1. 不幸的是，到目前为止，还没有找到科学证据来证实这一理论。

2. According to the experiment instructions, as soon as the 15 seconds' rest has elapsed, students must start the next exercise.

2. 根据实验说明，15 秒休息结束后，学生必须开始下一个练习。

3. In particular the young people who deviate from society's values must be brought back into line.

3. 特别是那些偏离社会价值观的年轻人必须重新回归正轨。

4. The current study aims to investigate the possible influence of parental factors on offspring gambling behavior.

4.本研究旨在探讨父母因素对后代赌博行为的可能影响。

5. It is the moral duty of all citizens to abide by traffic rules for their own and others' safety.

5. 为了自己和他人的安全，遵守交通规则是所有公民的道德义务

6. The decision to take two or more drugs concurrently must be made under the guidance of a doctor.

6.同时服用两种或两种以上药物必须在医生指导下决定。

7. In scientific research, the statistics to prove or disprove a(n) hypothesis will take years to collect.

7. 在科学研究中，证明或反驳假设的统计数据需要数年时间才能收集。

8. The theorist claims that society plays a(n) integral role in the development of criminal tendencies.

8. 理论家声称社会在犯罪倾向的发展中发挥着不可或缺的作用。

Unit4

Rust Belt dystopia

铁锈地带反乌托邦

1 The Rust Belt is a region of the US that stretches from the Great Lakes to the upper Midwest States. Although once known for its booming industry, over the past three decades the area has come to be characterized by economic decline, population loss, and urban decay. Regeneration of this region has become a staple policy of presidential candidates, often dictating the implementation of country-, state-, and city-wide initiatives. This paper will evaluate the benefits and challenges of three such initiatives: increased tourism, economic restructuring, and smart decline. The factory belt decline

1 铁锈地带是指美国境内从五大湖延伸到中西部北部各州的地区。尽管该地区曾一度以其蓬勃发展的工业而闻名，但在过去三十年里，逐渐被打上了经济下滑、人口减少和城市衰退的标签。多位总统候选人将重振铁锈地带作为一项最重要的竞选政策，这些政策常常涉及国家、州、市层面实施计划。本文将评估其中三种计划的优势和挑战，即：发展旅游业、经济转型和精明收缩。

2 In the first half of the 20th century, the Rust Belt was the industrial heartland of the country, and business was booming. Transportation links to the eastern states made this area attractive to automobile companies, steel and coal mining companies, and manufacturers of materials for heavy industry. These in turn attracted employees, including many migrant workers from Eastern Europe. By the middle of the 20th century the industrial landscape was changing. Companies began to move manufacturing bases southwest, drawn by the promise of cheaper labor and less unionization. Automation forced thousands out of work and free trade agreements curtailed demand as the subsequent globalization and foreign monetary policies meant that coal and steel were cheaper to import than to produce domestically. Lee Ohanian (2014) also believes that, as domestic companies had faced little to no competition, they had had no incentive to expand productivity and were simply unable to compete with their international counterparts. The fallout of these changes reached far and wide in Rust Belt communities as manufacturing was such an integral part of their economies. The area now had a much smaller share of manufacturing jobs in the country. This resulted in a decline in both population and the economy which, in turn, produced a heavy reliance on social security and a deficit in government spending. Regeneration initiatives

工厂带衰落

2 20 世纪上半叶，铁锈地带是美国的工业腹地，产业蓬勃发展。该地区与东部各州交通相连，引来了汽车公司、钢铁和煤矿开采公司以及重工业材料制造商，也由此吸引了很多劳动力，包括许多来自东欧的移民工人。到 20 世纪中叶，工业格局开始发生变化。西南地区展现出劳动力更廉价和工会组织更少的趋势，受此吸引，很多公司开始将制造基地搬迁至此。自动化迫使成千上万的人失去工作，自由贸易协定抑制了需求，因为随之而来的全球化和外汇政策意味着进口煤炭和钢铁比在国内生产更加便宜。李·尼瓦安（2014）还认为，国内企业由于很少甚至从未面对过竞争，已经失去了扩大生产力的动力，因而根本无法与国际同行竞争。由于制造业在该地区经济中占有不可或缺的地位，这些变化给铁锈地区带来了深远而广泛的影响。由此，该地区制造业的就业岗位在全国范围内所占份额比之前要小得多。这导致了人口减少和经济下滑，进而造成了对社会保障的严重依赖和政府支出赤字。

Tourism

3 "Tourism constitutes a major portion of most urban economies today, and the industry is a top priority of elected officials" (Cowan, 2016). However, tourist attractions must be managed carefully to ensure they are of benefit. Rogerson (2002, as cited in Eyles, 2008) believes that if tourist attractions are not managed in the long term, they will not be sustainable or contribute to a positive image—an attraction in decline could actually be detrimental to an area. He suggests that, in order to create a successful tourist industry, planners must, in consultation with local citizens, develop "a total tourism portfolio" highlighting natural features such as waterfronts and urban parks, buildings of interest, and promotion of local culture. The portfolio must enhance the lives of inhabitants as well as visitors, and create a positive image of the area to both build a brand and instill a sense of pride in local people.

重振计划

旅游业

3 “旅游业是当今大多数城市经济的重要组成部分，发展旅游业是当选官员的首要任务”（科旺，2016），但是，旅游景点必须谨慎管理，方能确保带来收益。罗杰森（2002，引自艾尔斯，2008）认为，如果旅游景点得不到长期管理，也就无法持续发展，无益于树立正面形象；衰退中的旅游景点实际上可能对当地不利。他建议，为了成功开发旅游业，规划者必须与当地居民协商，制定”一揽子旅游整体规划”，凸显当地自然特色，如滨水区和城市公园，或突出名胜建筑和地方文化推介。整体规划必须改善居民和游客的生活，树立正面的本地形象，从而打造品牌，也为当地人民带来自豪感。

4 Another consideration when using tourism as a means to local economic growth is wages. While a well-designed tourist portfolio can attract wealth to the area, employment in the tourism industry tends to be low, especially compared to traditional manufacturing jobs and especially in urban areas (Lacher & Oh, 2011). This impacts on both the economy and on people's standard of living. Economic restructuring

4 利用旅游业促进当地经济增长需要考虑的另一个问题是工资。虽然精心设计的旅游规划能为当地吸引财富，但旅游业提供的就业岗位往往较少，尤其是与传统制造业提供的就业岗位相比，而且是在城市里（拉切尔和奥，2011）。这对经济和人民生活水平都有影响。

5 Some experts suggest that greater stability can be achieved through the production of "new knowledge, innovations, and cutting edge technologies or [being] a light, flexible manufacturer" (Siddiqui, 2013), implying that diversification is vital for the continued importance of industry in the region.

经济转型

5 有些专家认为，通过产出”新知识、新发明和尖端技术，或者[成为]轻巧、灵活的制造商”（西迪基，2013），可以实现更大的稳定性，这意味着，多样化对于工业长期在该地区处于重要地位至关重要。

6 However, diversification requires investment, and while tax reductions, incentive payments, and no-interest loans may tempt businesses back to the area, they can also be costly to local tax payers. One company moved its operations to Cleveland after being promised $93.5 million in state incentives over 15 years. This worked out as $53,429 for each of its 1,750 jobs (Beyerlein, 2012). Such jobs are often in the service industry, meaning they are low-paid with few benefits and may not enhance the local economy significantly. Smart decline

6 然而，多样化需要投资，而且虽然减税、激励金和无息贷款可能会吸引一些企业回迁，但对当地纳税人来说负担可不小。有一家企业获得了州政府 15 年内提供 9350 万美元激励金的承诺，将其业务迁至克利夫兰市。这相当于该企业的 1750 个工作岗位中的每个岗位获得 53429 美元补贴（拜尔莱因，2012）。这样的岗位通常是在服务业，意味着岗位薪酬低、福利少，对当地经济的促进作用可能不太显著。

7 Most Rust Belt cities, such as Detroit and St. Louis, continue to pursue growth policies, yet there is a school of thought that reducing the size of the city would be more effective. Known as "smart decline," this approach "focuses on strategies that improve the lives of existing residents rather than exhaust city resources through hopeless efforts to increase population" (Heins, 2012). Indeed, Lee and Newman (2017) cited a US government survey that found cities with declining populations allocated the majority of their property funding to the care of vacant buildings.

精明收缩

7 铁锈地带的大多数城市继续寻求扩张政策，如底特律和圣路易斯，但有一种学派认为，缩减城市规模会更为有效。这种被称为”精明收缩”的方法，”注重的策略是改善现有居民的生活，而不是通过枉费心力增加人口，耗竭城市资源”（海因斯，2012）。事实上，李与纽曼（2017）曾引用过美国政府的一项调查，该调查发现，人口正在减少的城市将其大部分房地产资金用于维护空置的建筑物。

8 By disposing of unwanted buildings and unused facilities, the funding could be used elsewhere. However, smart decline has not been implemented in sufficient breadth to conclusively prove its efficacy in regenerating a region. Hackworth (2016) examined 269 neighborhoods in 49 cities where buildings had been demolished. He found that, in fact, the demolition resulted in increased housing loss without "market rebound or a decrease in social marginality." Conclusion

8 通过处置废弃建筑物和闲置设施，资金可被用于其他地方。不过，精明收缩的实施范围尚不够广泛，因此无法确凿地证明它对某个地区的重振效果。哈克沃思（2016）曾调查了 49 个城市中已拆除建筑物的 269 个街区。他发现，事实上，拆除建筑除了导致房屋日益减少，并未带来”市场反弹或社会边缘化程度的下降”。

9 None of the three approaches examined in this paper has been fully able to revitalize the Rust Belt. Both tourism and diversified manufacturing have resulted in lower-paid work and a heavy burden on city finances, although some towns and cities have survived as a result. Smart decline is untested in practice, but it should not be disregarded due to its potential benefits in theory. Towns and cities in the Rust Belt may well benefit from a two-pronged approach, using tourism and commerce to improve the local economy in order to increase the standard of living for the existing population without trying to return to population sizes of the past.

结论

9 本文考察的三种方法均无法完全重振铁锈地带。尽管一些乡镇和城市得以幸存，但旅游业和多样化制造业所带来的是低薪工作和沉重的城市财政负担。精明收缩未经实践检验，但理论上具有潜在益处，不应受到忽视。利用旅游业和商业改善当地经济，以提高现有人口的生活水平，同时不要试图恢复过去的人口规模，这种双管齐下的方法对铁锈地带的城市乡镇很可能大有裨益。、

1. Stepping back and letting kids solve problems on their own can hone (提高) their executive function skills, and help to instill a strong sense of self-agency and confidence.

1.退后一步，让孩子自己解决问题可以磨练他们的执行功能技能，并有助于灌输强烈的自我代理感和自信。

2. What gets in, what stays out and what gets in but in the wrong place are staple issues to consider when editors review reference books.

2. 编辑者审阅参考书时要考虑的主要问题是哪些内容可以进入、哪些内容不能进入以及哪些内容进入错误的位置。

3. Ideally, the government can curtail inflation by raising the level of output and taking out the excess money in circulation in the economy.

3. 理想情况下，政府可以通过提高产出水平并消除经济中流通的过剩货币来抑制通货膨胀。

4. More money is allocated to fund farmers amid a surge in the prices of seeds and fertilizers in spring.
4.在春季种子和化肥价格飙升的情况下，增加资金用于资助农民。
5. Businesses that disregard older workers could face a labor and skill shortage as there are too few younger candidates to replace them.
5. 忽视老年工人的企业可能会面临劳动力和技能短缺，因为年轻的候选人太少而无法替代他们
6. In the case of a new medicine, testing for both safety and efficacy is required before it can be introduced to clinical practice.
6. 对于新药，在引入临床实践之前需要进行安全性和有效性测试。
7. Health and safety experts were called in over fears that the old office building could collapse and demolish surrounding buildings.
7. 由于担心旧办公楼可能倒塌，健康和安全专家被请来。
拆除周围的建筑物。
8. The rebounding economy after the banking crisis has motivated many people to work in megacities.
9. 银行业危机后经济的反弹促使许多人到大城市工作。

Unit5

The oldest energy source
最古老的能源
1 When tasked with listing renewable forms of energy, people tend to mention solar or wind. Few bring up geothermal, and fewer still raise the oldest renewable form of all—biomass. Since our ancestors discovered the controlled use of fire, biomass has played a prominent role in global energy production and has recently been heralded as the answer to our ever-diminishing fossil fuel supply. Yet critics argue it has a hugely detrimental impact on the environment. So what is biomass energy and what does the research say about it?
1 要是列举可再生能源，人们往往会提到太阳能或风能。很少有人提到地热，更不用说最古老的可再生能源——生物质了。自我们的祖先发现并掌握用火以来，生物质就在全球能源生产中发挥着突出的作用，近来还被公开誉为解决化石燃料供应不断减少这一问题的答案。然而，批评人士认为，使用生物质对环境有着极其有害的影响。那么，什么是生物质能？关于生物质能的研究表明了什么？
2 Biomass is any organic, decomposable matter that can be either used as a fuel in the production of heat or electricity, or converted into liquid fuel substitutes for gasoline and diesel. Broadly speaking, biomass can be divided into four distinct categories—wood and agricultural products such as logs, sawdust, and agricultural waste; solid waste (i.e. garbage); landfill gas (i.e. methane); and liquid fuels such as biodiesel and ethanol, which are produced from crops such as wheat, corn, sugar beet, and sugar cane. As biomass is derived from living, or recently living, plants and animals that can be replaced in a relatively short period of time, it is generally considered to be a renewable source of energy.
2 生物质是指任何可分解的有机物质。这些有机物质既可作为生产热能或电能的燃料，也可被转化为用来替代汽油和柴油的液体燃料。广义上讲，生物质可分为四大类：木材和农产品，如原木、锯末和农业废弃物；固体废物（即垃圾）；填埋后产生的气体（即甲烷）；液体生物燃料，

如生物柴油和乙醇等。其中液体生物燃料是从小麦、玉米、甜菜和甘蔗等作物中制取的。由于生物质来源于活的或死去不久的动植物体，它们可以在相对较短的时间内被替代，因此通常被认为是一种可再生能源。

3 Although the production process varies slightly depending on the type of biomass used, it is in essence not dissimilar to that of a traditional coal-fired power station. Biomass—typically wood chips or pellets—is burned in a combustion chamber in place of coal to boil water. This produces high-pressure steam that is passed through a turbine, causing it to rotate. This in turn powers a generator which creates electricity. A transformer then increases the voltage of the electricity before distributing it to homes and businesses. Methane captured from the anaerobic digestion of animal waste or collected from landfills can also be used as a fuel during the initial stages of the process. Since this is a relatively simplistic process that is modeled on existing technology, there has been a significant growth in the number of biomass power plants around the world. However, the adverse environmental impact should not be underestimated.

3 尽管生产过程因生物质类型不同而略有不同，但其本质上与传统的燃煤发电站并无差异。生物质——通常为木屑或颗粒——取代煤炭，在燃烧室中燃烧，将水烧沸。水沸腾后产生高压蒸汽，蒸汽通过涡轮并带动涡轮旋转，从而带动发电机工作，产生电力。随后经过变压器升压，电力被输送到家庭和企业。从动物粪便厌氧分解中捕获的甲烷，或者从垃圾填埋场收集的甲烷，也可以用作该过程初始阶段的燃料。由于该过程以现有技术为蓝本，相对简单，因此世界各地的生物质发电厂数量有了显著增长。但是，我们不应低估它对环境的不利影响。

4 During the process of photosynthesis, plants harness radiant energy from the sun in order to convert water and carbon dioxide (CO2) into oxygen and carbohydrates. As the amount of CO2 released into the atmosphere when biomass is burned is equal to the amount captured during photosynthesis, proponents of bioenergy claim that it is a carbon-neutral source of energy. However, this is debatable for several reasons. Firstly, biomass can help to minimize carbon emissions if fast-growing crops such as willow are cultivated on unproductive land. However, cutting down forests for energy releases CO2 that otherwise would have been captured, and it can take centuries to re-establish these forests and pay off this carbon debt. Secondly, proponents fail to take into account that harvesting and transporting biomass over great distances generates hazardous air pollutants which are not offset during the process. While the effects of burning biomass can be mitigated to a certain extent by choosing to burn biomass that is less polluting, it is highly doubtful that it can ever be classed as truly carbon-neutral.

4 在光合作用过程中，植物利用太阳辐射能将水和二氧化碳转化为氧气和碳水化合物。由于生物质燃烧时释放到大气中的二氧化碳等量于光合作用过程中吸收的二氧化碳，生物能源的支持者认为，生物质是一种“碳中性”能源。然而这种说法存在争议，原因有以下几点。首先，如果是在贫瘠的土地上种植柳树等速生树种，生物质有助于减少碳排放。但是为了获取能源而砍伐森林会释放出原本可以吸收的二氧化碳，而恢复这些森林并偿还碳债务可能需要几个世纪。其次，支持者没有考虑到，对生物质进行远距离收获和运输作业的过程中会产生无法被抵消的有害空气污染物。虽然可以选择污染较少的生物质从而将其燃烧产生的影响降低到一定程度，但仍然很难将生物质归类为真正的“碳中性”能源。

5 The other primary use of biomass is the production of liquid fuels such as biodiesel and ethanol from crops high in cellulose, such as wheat, corn, and sugar cane. These "energy crops" are predominantly inedible and, as they are cultivated on an industrial scale, are associated with the same environmental concerns as any other mass agricultural practice—namely, the pollution of water

and soil from pest control, the excessive use of water, and the erosion of soil. In addition, since the production of energy crops has required large-scale deforestation in many areas, it has also directly contributed to increased levels of greenhouse gases. Furthermore, since energy crops are hugely profitable, farmers are now dedicating more land to their production than food crops. With close to a billion people suffering from food shortages, we can scarcely afford to allocate more land to the energy sector. In fact, the IEEP (2012) forecasts that the increased demand for energy crops could raise the prices of vital foodstuffs such as oilseeds, vegetable oil, and maize by as much as 20 to 30 percent—a change that would disproportionately affect the poorest members of society. Furthermore, many small farmers have been forced off their land as large biofuel companies attempt to satisfy the growing demand for energy crop production.

5 生物质的另一个主要用途是，利用小麦、玉米和甘蔗等纤维素含量高的作物生产生物柴油和乙醇等液体生物燃料。这些“能源作物”大多不可食用，而且因为被大规模工业化栽培，它们与任何其他的大规模农业生产活动一样，会引发环境问题，也就是因病虫害防治造成的水污染和土壤污染、过度用水和土壤侵蚀。此外，由于生产能源作物需要在许多地区大规模砍伐森林，这也直接导致了温室气体增加。不仅如此，因为种植能源作物利润丰厚，农民把越来越多的土地用于种植能源作物而不是粮食作物。鉴于近 10 亿人正饱受粮食短缺之苦，我们无法承担将更多的土地划拨给能源部门的后果。事实上，欧洲环境政策研究所（2012）预测，能源作物的需求增加，可能会使油籽、植物油和玉米等重要食品的价格上涨 20%至 30%，这一变化将对社会上最贫困的群体产生极大的影响。而且，由于大型生物燃料公司试图满足能源作物生产不断增长的需求，许多小农被迫离开了他们的土地。

6 In conclusion, if fast-growing biomass is cultivated on unproductive land or harnesses otherwise waste products, it is arguably a renewable alternative to fossil fuels. However, proponents of the carbon-neutral theory fail to take into account the length of time it takes to pay off the carbon debt of mass deforestation, and the hazardous pollutants emitted during harvest and transportation. In addition, a greater emphasis on energy crop production has diverted vital foodstuffs from a rapidly expanding global population and taken away the livelihood of many small farmers. While it is vital that we find a sustainable alternative to fossil fuels, a process that has such a potentially devastating impact on both the environment and the poor is not the answer.

6 总之，如果快速增长的生物质是由贫瘠的土地所产生，或者能够利用其他废弃物生产能源，我们或许可以把生物质视为化石燃料的可再生替代品。然而，碳中和理论的支持者们既没有考虑到偿还大规模砍伐森林而累积的碳债务所需的时间，也没有考虑到生物质收获和运输作业过程中排放的有害污染物。此外，人们对能源作物的生产更加重视，使得这些关键的食品来源更少地用于满足快速增长的全球人口对粮食的需求，而且导致很多小农户被夺去了赖以生存的土地。因此，虽然找到化石燃料的可持续替代品极为重要，但鉴于生物质能源对环境和贫困人群都有潜在的灾难性影响，它并不是解决这个问题的答案。

1. Propontents of biomass argue that the production of energy through biomass offers a sustainable form of energy and reduces the emission of greenhouse gases.

1. 生物质的支持者认为，通过生物质生产能源提供了一种可持续的能源形式，并减少了温室气体的排放。

2. Some people argue that the adverse effects of the biomass industry far outweigh the potential benefit.

2、有人认为生物质产业的不利影响远远大于潜在的好处。

3. The city of Curitiba (库里蒂巴) in Brazil has been heralded as one of the first eco-cities (生态城市).

3. 巴西库里蒂巴市被誉为首批生态城市之一。

4. Biomass is arguably an efficient way to utilize inedible agricultural waste.

4. 生物质可以说是利用不可食用农业废物的有效方法。

5. Solar energy is an alternative energy source that involves harnessing the radiant light energy emitted by the Sun and converting it into thermal or electrical energy.

5. 太阳能是一种替代能源，涉及利用太阳发出的辐射光能并将其转化为热能或电能。

6. New plants cannot be built unless the added emissions are offset by reductions in pollution from existing facilities in the area.

6. 除非增加的排放量被该地区现有设施的污染减少所抵消，否则不能建造新工厂。

7. Steam turbines use high-pressure steam to turn generators at incredibly high speeds, so they rotate much faster than either wind or water turbines.

7. 蒸汽轮机使用高压蒸汽以令人难以置信的高速度转动发电机，因此它们旋转速度比风力涡轮机或水轮机快得多。