A Designed Universe
被设计出来的宇宙

Since Darwin's Origin of Species (1859), many have felt "survival of the fittest" is the source of apparent design in nature rather than God. Yet recently serious objections have been raised against the ability of evolution to explain either the origin of life or its diversity. (1) Consequently, the force of design as evidence for a supernatural alternative is strengthened.

自从达尔文的《物种起源》（1859）一书问世以来，许多人把大自然中明显存在的设计的原因归咎于"适者生存"，而不是上帝。然而最近出现了一些非常严肃的观点，认为进化论既没有能力解释生命起源，也无法解释生命的多样性。(1) 因此，设计是超自然的选项的证据，这个论点的说服力得到加强。

In any case, biological evolution can hardly explain design in the nonliving part of nature. And it is just here that recent advances in science have uncovered far more evidence of design than was known in Darwin's time or even in the 1970s. Let us consider some of this evidence.

无论如何，生物进化论几乎无法解释自然界无生命物中为何存在着设计。正是在这个领域，最近的科学发展揭示了更多设计的证据，远比达尔文时代甚至1970年代人们所知道的证据为多。让我们来看看其中的一些证据。

The Right Chemistry
最合宜的化学

All life on earth depends on the cooperation of many complex biochemicals, each containing thousands or even millions of atoms. These include DNA and RNA, which store and transmit information by which living cells operate; and proteins, which provide structural material and speed up chemical reactions so that plants and animals can respond quickly to external changes. These molecules are enormously complex and detailed structures carrying on particular, specialized tasks. Such organization presents a serious challenge to the idea that life arose by chance rather than design, but that is not our subject here. (2)

地球上所有的生命都依赖多重复杂的生物化学物质之间的彼此合作，这每一种生物化学物质都包含着数以千计甚至百万计的微粒。这其中包含DNA（去氧核糖核酸）和RNA（核糖核酸），它们存储并传递信息，靠着这些信息，活细胞才能运作；这其中也包含蛋白质，它的功能是提供结构性材料，加速化学反应，使得植物和动物对外在的变化作出快速的反应。这些分子非常复杂，并具有详尽的结构来从事具体的专门的使命。这类组织结构对生命出自随机而非设计这一观点提出严肃的挑战，但这不是我们此处要谈的主题。(2)

On a much simpler level, such chemicals as carbon, phosphorus and water suggest that life didn't just happen. Carbon is the only element in existence which forms chains of almost unlimited length, needed for DNA, RNA and protein. All the carbon in our universe apparently formed inside stars and was scattered over space as stars exploded. Yet by two coordinated "quirks" carbon is a common element rather than a very rare one. Carbon is formed by combining three helium nuclei; the element beryllium (two heliums) is so unstable inside stars that one almost needs a triple helium collision to get carbon. It happens that the temperature inside stars is right at a "resonance" for carbon, an energy level at which these nuclei stick together unusually well. If this resonance energy were only 4% lower, carbon would be very rare. On the other hand, carbon easily combines with another helium nucleus to form oxygen. But it just so happens that the energy of the combination is just above an oxygen resonance, which is thus out of reach. If this resonance were only 1/2% higher, nearly all carbon would convert to oxygen. In either case, carbon would be very rare and life itself rare or nonexistent. (3)

从一个非常简化的层面上看，像碳，磷，水这类化学物质提示，生命不可能自然而然产生出来。DNA，RNA和蛋白质都需要长度几乎无限的链，而碳是所有元素中唯一可以形成这种链的元素。在我们所处的宇宙当中，所有的碳元素显然都产生于星体之内，在星体爆炸后散溢于空中。但由于两个彼此配搭的“巧合，”碳成为一个非常普通的而非极为稀有的元素。碳由三个氦核联合而组成；铍元素（由两个氦组成）在星体内非常不稳定，以至于需要三个氦撞击才能得到碳。碰巧星体内的温度正合适形成碳所需的“共振”，其能量大小使氦核超乎寻常地稳定地粘在一起。如果共振能量低 4% 的话，碳就会成为稀有元素。另一方面，碳很容易与另一个氦核组合形成氧。然而，碰巧的是，碳氦结合的能量恰恰高过氧共振，使得它不可能发生。如果氧共振能量高 0.5% 的话，几乎所有的碳都转化成为氧了。上述两种情形中任何一种发生的话，碳都会成为稀有元素，进而生命本身就变得稀有甚至不存在。(3)

Phosphorus is unique among the elements in forming compounds (ATP, ADP) which can store large amounts of energy. Without these compounds, there would be no higher animal life, since such an efficient method of energy storage is needed for mobility. Yet only phosphorus, of all the elements, has this capability. It looks like phosphorus was designed for this purpose.

磷是所有元素中很独特一种元素，它可以形成存储大量能量的化合物（比如：三磷酸腺苷，二磷酸腺苷）。没有这些化合物，就不会有更高等的生命，因为这等高效的能量存储方法是生命运动所必需的。然而，在所有元素中，只有磷元素具有这种本领。磷似乎是特别为了这个目的而设计的。

Water is at least as unusual as carbon or phosphorus. Its molecule (two hydrogens and one oxygen) is lighter than molecules of nitrogen or oxygen, and thus should be a gas at temperatures suitable for life. However, water forms combinations of two or three water molecules loosely joined together, so that actually it is a liquid at these temperatures. As a liquid it is the basic fluid of animal blood, tree sap and cell plasma. Yet when water evaporates, it no longer forms combinations. This allows it to diffuse in the atmosphere so it doesn't stifle life by lying on the earth's surface as an unbreathable gas.

水至少和碳与磷一样不同寻常。它的分子（两个氢和一个氧）比氮分子和氧分子都轻，所

以在适合生命存在的温度下应当是气体状态才对。但是，水是由松散结合在一起的两个或三个水分子组合而成，这样使得它在通常温度下处在液体状态。作为液体，它是动物的血液，树木的体液，和细胞的浆液中最基本的液体。然而当水蒸发时，它不再能形成组合。这使得它扩散在大气中，不至于集结在地的表面，形成使生物无法呼吸的气体，导致生命窒息。

Water is also a universal solvent, dissolving the necessary solid chemicals so they can circulate in the bloodstream, plant sap, and living cells. All other liquids which can dissolve a comparable number of chemicals are highly corrosive and deadly to living things.

水还是一种普遍的溶剂，溶解某些必要的固体化学物，使得他们可以在动物血液中，植物体液中，和细胞浆液中循环流动。所有其它溶剂，如果能够溶解的化学物和水一样多，那么这些溶剂通常都具有高腐蚀性，对生物是致命的。

Water is unusual in being able to absorb a large amount of heat for a given change in temperature. As a result it moderates the climate of the earth and helps stabilize the body temperature of animals. Like few other substances, it expands rather than contracting on freezing. This prevents oceans and lakes from freezing to the bottom (killing marine life), and it aids in the formation of soil by splitting up rocks. Truly water is a most amazing substance. Together with the thirsty traveler on a hot day, the chemist can say, "There's nothing like it!" (4)

水还具有非凡的能力来吸收因温度变化而产生的大量热量。所以，它能调节地球的气候，有助于稳定动物的体温。很少有其它的物质象它那样，凝固时体积膨胀而不是收缩。这一特征防止了海洋和湖泊的结冰下沉（从而导致海洋生物死亡），帮助裂解岩石，形成土壤。水确实是最令人惊叹的物质。在炎热的天气里，干渴的旅行者会赞同化学家的话：“没有其它的物质象它那样伟大”(4)

The Right Environment
最合宜的环境

The earth's environment is unique in the solar system and at least very rare in our galaxy. The temperature varies substantially from pole to equator, summer to winter, and from the Dead Sea to Mt. Everest. Yet it exceeds the boiling point of water only near volcanoes and geysers. Temperatures below freezing are more common, yet our oceans never freeze up completely even in arctic regions. By contrast, the temperature on Venus, our nearest neighbor sunward, is about 900 degrees Fahrenheit. On Mars, the planet just beyond us, it barely gets above freezing even in midsummer at the equator. Earth alone has the right temperature range for life: warm enough for water to be liquid, cool enough that complex life molecules are not destroyed.

地球的环境在太阳系中是独一无二的，在我们的银河系中也至少是非常罕见的。极地和赤道之间，夏季与冬季之间，死海与珠穆朗玛峰之间，温度的差异非常之大。除了在靠近火山和间歇喷泉的地方，但很少有超过水的沸点温度的。温度低于冰点的地方倒是比较普遍，

但是我们的海洋，即便在北极地区，从来都不会全部结冰。相对地，金星是在朝太阳的方向离我们最近的邻居，其上的温度可达华氏900度。火星是我们另一侧的紧邻，它的温度在仲夏的赤道上也才刚刚超过冰点。只有地球具有适合生命的温度范围：足够暖和，使水处在液体状态；也足够寒冷，使复杂的生命分子不至于被毁灭。

A substantial amount of water is needed to support life, though a few organisms have techniques for living in arid conditions. For the earth as a whole (center to surface), the fraction of water is small. But this is all concentrated at the surface, so that our globe is two-thirds covered by water at an average depth of three miles. The water on Venus and Mars is infinitesimal by contrast.

维持生命需要大量的水，尽管有少数几种有机体具有在干燥状态下存活的技巧。地球作为一个整体（从地心到地表），水只占了一小部分。但水却集中在地球的表面，以至于我们的地球表面三分之二被水所覆盖，平均的覆盖深度是三英里。相反，在金星和火星上，水是微乎其微的。

Earth has the right atmosphere. If there were a few percent less oxygen, animals would not have enough to breathe. If there were a few percent more, plant life would burn up. Mars and Venus have virtually no free oxygen, so necessary to most kinds of life.

地球拥有合适的大气。如果氧气的百分比稍微低几点的话，动物就没有足够的氧气呼吸。如果氧气的百分比稍微高几点的话，植物生命会燃尽。事实上在火星与金星上没有绝大多数生命种类所必需的无偿的氧气。

Earth's gravity is just right. If the earth were only one-fourth as massive, the atmospheric pressure would be too small for life. If the earth were twice as massive, its atmosphere would work like a greenhouse in summer, raising the temperature enough to kill us all.

地球的重量也恰到好处。如果地球的重量只有四分之一，那么大气的压力对生物就会太小。如果地球的重量是两倍大，那么它的大气在夏季会象一个温室，温度升高到足以把我们都杀死。

Earth has the right kind of sun. A sun only 20% larger would burn up its fuel in just four billion years. By now, such a sun would have expanded into its "red giant" stage, and the earth would have burned up in the sun's atmosphere. On the other hand, if our sun were only 20% smaller, it would not produce enough blue light for plants to make sugar and oxygen efficiently. Both sugar and oxygen are needed by animals, and they can produce neither themselves. (5)

地球拥有合适的太阳。如果太阳大 20%，它会在40亿年中燃尽它的所有燃料。若是这样，那么到现在，这个太阳已经膨胀进入到它的“红巨星”的阶段了，而地球也已经在太阳的大气层中被燃烧净尽了。另一方面，如果我们的太阳小 20%，它就不能够产生足够的蓝光，让植物产生足够的糖和氧。糖和氧对动物是必需的，而且是他们自身是无法产生的。(5)

The sun cannot vary much in brightness or life will not survive. In fact, our sun's luminosity already has varied "too much" over the past four billion years, increasing in brightness by some 25%. But the creation of plant life appears to be timed just right to save the day. As the sun got hotter, plants removed carbon dioxide from the atmosphere, replacing it by oxygen at just the right rate to turn down the greenhouse effect and keep temperatures in the range safe for life. (6)

太阳的亮度也不可以变化太多，否则生命无法存活。事实上，我们的太阳发光度在过去的40亿年中已经变化的“太多”了，其亮度增加了25%左右。但植物生命创造的时间点再恰当不过，刚好可以满足当天的需求。当太阳变得越来越热时，植物却从大气中除去了二氧化碳气，代之以比例适度的氧气，刚好可以降低温室效应，保持了让生命安全的温度范围。(6)

This performance by the plants only worked because the earth was at the right distance from the sun. If it had been 5% closer, the greenhouse effect would have been too strong early in earth history, the plants would never have gotten started, and earth would now be a furnace like Venus. But if the earth had been only 1% further from the sun, the cooler temperatures about two billion years ago would have produced a runaway ice age, and the earth would now be like Antarctica everywhere. (7)

植物的这一作为有效，是因为地球与太阳之间的距离恰到好处。二者之间的距离若近5%，在地球历史的幼年期，温室效应会太强，生物还来不及开始工作，地球就已经象金星般成为一个火炉了。如果地球与太阳之间的距离远哪怕 1%，那么20亿年前地球上较低的温度早就产生了一个无法控制的冰河期，地球到现在都还会处处象南极一样。(7)

The Right Universe
合适的宇宙

Not only do we live in a universe having the right chemistry to support life, and on a planet with the right environment for life, the basic forces in our universe are just right. Without the precise balance which exists among these forces, life would be impossible anywhere in our universe.

我们居住在其中的宇宙具有最合适的化学来支持生命，我们居住在其上的星球具有最适合生命的环境，在我们的宇宙中几种基本的作用力对生命也是最合适的。若没有这几种力之间的精确的平衡，生命在我们的宇宙中任何地方都不可能。

There are just four basic forces presently known to mankind: gravity, electromagnetism, and the strong and weak nuclear forces. The balances between these forces are precise, making possible life as we know it. Consider the delicate balance between gravity and the expansion speed of our universe. Since the 1920s it has been known that our universe is expanding, apparently from an event known as the "big bang" which occurred some 15 to 20 billion years ago. Whether our universe will expand forever or eventually collapse is still debated among cosmologists. In either case, the actual density of matter in our universe is within a factor of 10 of the so-called critical density, the point of exact balance between permanent expansion and eventual contraction. But to be so close to this critical density after some 20 billion years of expansion, there must have been precise tuning in the earliest moments of the big bang. At 10 to the -43 seconds after the big bang, for instance -- the so-called Planck time -- the density must have been equal to the critical density to one part in 10 to the 60th. If it had been ever so slightly higher, the universe would have collapsed quickly and there would have been no opportunity for life to form. On the other hand, had the density been ever so slightly smaller, the universe would have expanded rapidly and no galaxies, stars or planets would have formed. Again, no life. Thus life is the result of fine tuning the density of matter-energy at the Planck time to one part in 10 to the 60! (8)

人类迄今所知的只有四种基本的作用力：重力，电磁力，强核力，和弱核力。这些力之间的平衡非常精确，才使得我们所知道的生命成为可能。让我们来思考一下重力与我们的宇宙膨胀的速度之间的精妙平衡吧。自从 1920 年代起，人们从一个发生在150亿到200亿年前的被称为“大爆炸”的事件中，已经知道宇宙明显正在膨胀之中。我们的宇宙是否会继续不断膨胀下去，或是最终会崩溃，这在宇宙学学者中间还有争论。但无论哪种情形，我们的宇宙中物质的实际密度落在与所谓的临界密度相差在十分之一内，而临界密度是介于永远膨胀和最终开始收缩之间精确的平衡点。但在经历了约200亿年的膨胀之后，物质的密度与临界密度之间如此接近，那么在最早的大爆炸发生的时刻就必然已经有了精确的调控。在大爆炸发生后的10^{-43}秒，即所谓的普朗克时间，宇宙的密度必需与临界密度之间相差不超过10^{60}分之一。如果那时宇宙的密度哪怕稍微高了一点点，那么宇宙应当很快就崩溃了，因此也就没有形成生命的机会了。另一方面，若密度稍微低一点点，那么宇宙本当快速膨胀，不会有诸多星系，恒星，和行星的产生了。因此，也就没有生命可言。所以，生命是宇宙中物质能量的密度在普朗克时间点被精确调准到 10^{60} 分之一！(8)

Life depends on a number of the heavier chemical elements, especially carbon, nitrogen and oxygen, but only hydrogen, helium and a few of the very lightest elements are formed in the big bang itself. The rest are formed inside stars. The strong and weak nuclear forces control how stars operate. If the strong force were weaker than it is, there would be no life. If it were only 50% weaker, not even iron and carbon would be stable. Even if the strong force were only 5% weaker, the element deuterium would not exist, and stars could not burn as they do. On the other hand, if the strong force were only 5% stronger, the diproton would be stable and stars would burn catastrophically. The strong interaction has to be just the right size to have stable stars and stable elements for life chemistry.

生命依赖好多个较重的化学元素，尤其是碳，氮，和氧，但只有氢，氦和其他几个最轻的元素在大爆炸事件本身中产生。其余的元素在恒星内产生。强核力与弱核力控制着星球的运作。若强核力比现在弱的话，不会有生命。若它比现在弱 50%，连铁和碳都不稳定。即便是强核力弱 5%，氘元素就不会存在，星体就不会象现在这样燃烧。另一方面，如果强核力再强5%，那么双质子就会稳定，星体就会灾难性地燃烧。强作用力必须大小合适才能有稳定的星体以及生命赖以生存的稳定的化学元素。

The weak nuclear force is important, too. All but the lightest elements are formed inside stars as they grow old. Were it not for the weak force, these elements would remain trapped inside the stars, of no use for life. But when a star has used up its fuel, it begins to collapse, becoming very hot inside and producing large numbers of neutrinos. The neutrinos cause the star to explode and scatter its heavy elements through space. These elements later become part of the next generation of stars, forming planets which accompany such stars. As a result the earth has the heavy elements so necessary for life. If the weak force were much smaller than it is, the neutrinos would escape quietly, the star would not explode, and the heavy elements would stay inside. If the weak force were much stronger, the neutrinos themselves would not be able to escape from the star, we would again have no explosion and no heavy elements would escape. So if the weak force were much different than it is, there would be no heavy elements outside of stars.

弱核力也是重要的。除了最轻的几种元素之外，所有化学元素都是在星体成长的过程中在其内部产生的。若没有弱核力，这些元素将永远藏在星体的里头，对生命的产生毫无作用。但当一个星体用尽了它的燃料时，它就开始崩溃，内部非常灼热，产生大量的中微子。这些中微子促使星体发生爆炸，将其中的重元素散溢在空中。这些元素后来成为下一代星体的一部分，形成行星伴随着这些星体。正因如此，地球才拥有生命必须的重元素。如果弱作用力比它现有的小得多，那么中微子就会悄然逃离，星体就不会发生爆炸，重元素就会一直留在星体之内。如果弱作用力比它现有的大许多的话，中微子自己不会脱离星体，我们同样得不到星体的爆炸和重元素的脱离。可见，如果轻作用力与它实际大小的差距很大时，在星体之外就不会有重元素。

Consider one more crucial balance. Gravity is much weaker than electromagnetism (by 37 powers of 10), yet gravity dominates in the realm of astronomical distances. Why is this, since both are long-distance forces? The reason is that electromagnetic charges, negative and positive, occur in equal numbers, so that at large distances they cancel each other out. But why should they occur in equal numbers? Scientists don't know. The main negative charge is the electron, a very small particle compared to the proton, the main positive charge. In modern cosmological theory, as the universe cooled down from the big bang, protons would have "frozen out" much earlier than electrons, and there is no obvious reason why the two should be equal in number. (9) In fact, the number of electrons and the number of protons left over must have been the same to much better than one part in 10 to the 37th power. If this had not happened, our universe would be dominated by electromagnetism instead of gravity, and there would be no life as we know it.

再考虑一个关键的平衡。重力比电磁力弱很多（相差 10^{37} 倍），但是重力在天体距离的领域中起主导性作用。既然这两种力都是远程作用力，那么如何解释这一现象呢？原因是，因为电磁力带着电荷，产生的负电荷和正电荷在数量上相同，所以在远距离情境中二者彼此抵消，电磁力就不对外显现了。但为什么他们产生的数量相同呢？科学家们并不知道。主要的负电荷是电子，与主要的正电荷质子相比，它非常小。按照当代的宇宙学理论，大爆炸之后，随着宇宙的逐渐冷却，质子应当比电子更早就已经冷却而消失掉了，二者在数量上保持相同并没有明显的原因。(9) 事实上，剩余的电子数与质子数必定是相同的，二者的差异率比 10^{-37} 还要少得多。如果不是这样的话，我们的宇宙本当受电磁力主导，而不是重力，那样的话也就不会有我们所知道的生命了。

In summary, it appears that very slight changes in the strength or balance of these forces gives a universe which will not support any life we can imagine. What are we to make of this? The simplest explanation is that we live in a designed universe.

总之，看起来，这四种作用力中任何微小的在强度上或平衡上的变化，都会导致这个宇宙变成为不能支持我们可以想象到的任何生命。我们如何来解释这一切呢？最简单的解释是，我们居住在一个被设计出来的宇宙中。

Explaining the Design
对设计的解释

Scientists have been discussing this problem for several years now. As Stephen Hawking has pointed out, (10)

科学家们讨论这个问题已经有一段时间了。正如斯蒂芬霍金斯所指出的，(10)

The odds against a universe like ours emerging out of something like the Big Bang are enormous.... I think there are clearly religious implications whenever you start to discuss the origins of the universe. There must be religious overtones. But I think most scientists prefer to shy away from the religious side of it.

对从诸如大爆炸这等事件中浮现出来的我们的宇宙，各种可能性都是有的。… 我认为无论任何时候你开始讨论宇宙的起源时，都会具有明显的宗教含义。必定会有宗教的联想。但我认为绝大多数科学家宁肯避开这个问题的宗教层面。

In shying away from religious explanations, some have suggested that this apparent design is merely an accident of observation. Admittedly, life would be impossible unless all the factors come out just right. But if life were impossible, then we wouldn't be here ourselves to observe such a universe! Conversely, there will only be observers in a universe where all these factors work out just right. This explanation, that the order in our universe is just an accident of observation, is called the anthropic principle (more precisely, the weak anthropic principle).

为了避开宗教的解释，有些人已经建议，这一明显的设计只不过是观察的意外。不可否认，除非所有的因素都恰到好处地运作出来，否则生命是不可能的。但如果生命是不可能的，那么我们自己也不会在这里观察这样的宇宙！反过来说，只有在所有这些因素都恰到好处的运作出来的宇宙中，才会有观察者。我们这个宇宙中存在的秩序只不过是观察中的偶发事件，这种观点被称之为人择原理（更精确地说，是弱人择原理）。

This is certainly clever, and true in some sense. Yet it postulates that our universe is a fluke of astronomically small probability. As an explanation, it is methodologically much inferior to any other theory in which a universe such as ours would be likely. But if the God of the Bible exists, then a designed universe such as ours would be a likely result, rather than the surprise we have in an accidental universe scenario.

这个观点的确是聪明的，甚至在某种意义上是真实的。然而，它预先假设我们的宇宙是天体般小概率事件的侥幸成功。作为一种解释，在方法论上，它比任何其他试图解释象我们这样的一个宇宙何以如此的理论都要逊色许多。但是如果圣经所说的上帝是存在的，那么象我们这样的一个出自设计的宇宙就是一个可能的结论，而不是一幅偶然的宇宙图画所带给我们的惊喜。

Not all who favor the anthropic principle are satisfied with the weak form sketched above. Some have moved into eastern mysticism, pantheism or something equally esoteric to propose a strong anthropic principle. Man himself has somehow caused the world to be just right for life and humanity to exist, whether because man is part of God, or because causes can produce effects backward in time. Such suggestions attempt to provide some adequate explanation for design, a serious defect in the weak anthropic principle. In evaluating such views, we should look at how evidence for each compares with that for the existence of the God of the Bible. To me, these views pale in comparison. (11)

并非所有赞成人择原理的人都对上述脆弱不堪的解释感到满意。有些人已经进入东方神秘主义，泛神论，或类似深奥的东西，以便提出一个所谓的强人择原理。人自己莫名其妙地使得世界适合于生命和人类存在，无论是因为人是神的一部分，或者是因为原因可以按照逆时间的顺序产生结果。这些建议试图对设计提供某种恰当的解释，以弥补弱人择原理的一个严重缺陷。要评估这类见解，我们应该仔细察看每个见解中的证据，与圣经所说的上帝存在的证据，二者比较，孰强孰弱。对我来说，这些原理与圣经相比均显得苍白无力。（11）

What to make of all this? I suggest we have here just one more line of evidence showing that we live in a supernaturally-created universe. Evidence of design, of a universe that had a beginning, of organization in living things far beyond what random processes can produce -- these conspire with biblical evidences to indicate that this God is the one revealed in the Bible. (12)

这一切意味着什么？我认为在这里我们有另外一个证据显示，我们生活在一个超自然的被创造的宇宙当中。设计的证据，宇宙具有一个开始的证据，以及有生命中组织结构的证据，都远超过随机过程能够产生的，这一切都与圣经提供的证据不谋而合，表明这位上帝是圣经中所启示的。(12)

But according to the Bible, God wants us to do more than just understand the world we live in. He wants us to love him with all our being, and to love our neighbor as much as we love ourselves. We all fail these continually. If we must one day stand before God to answer for how we've lived, what will we be able to say?

但按照圣经，上帝要我们不仅仅认识我们所居住的世界，还要我们全然爱他，并爱人如己。我们不断在这些事上失败。如果有一天我们必须站在上帝的面前，回答他我们是如何生活的，我们能说什么呢？

In his love and mercy, God has provided a solution. Some two thousand years ago, God became man -- the author entered his own story. As Jesus of Nazareth he lived a life of complete obedience such as we never do; if we trust in him, his righteousness will be counted as ours. In a few hours on the cross, Jesus suffered such punishment as would take us forever to suffer; if we trust in him, his suffering will take the place of ours.

出于他的慈爱和怜悯，上帝已经提供了答案。大约两千年以前，上帝成为人---故事的作者进入到他自己的故事里面。作为拿撒勒人耶稣，他活出了一个完全顺服的生命，这是我们永远无法企及的；如果我们相信他，那么他的义就归算为我们的。在十字架上的那几个小时里，耶稣承受了我们本当承受的永远的刑罚；如果我们相信他，那么他的刑罚就会取代我们所当受的。

That is the kind of God that really exists. Won't you turn away from a life of empty self-gratification and find the real joy of personally knowing the God who made the universe? You can do it right now.

这才是那位真实存在的上帝。你愿意转离虚空的自我满足的生活，找到因亲自认识这位创造宇宙的上帝而有的真正的喜乐吗？

Robert C. Newman, PhD, astrophysics, Cornell
Professor, Biblical Theological Seminary

罗伯特 C. 纽曼，康奈尔大学天体物理学博士
圣经神学院教授

参考注释

1．参见，例如，Michael Denton著，《进化论：一个充满危机的理论》(*Evolution: A Theory in Crisis*) (Bethesda, MD: Adler and Adler, 1985)；Gordon Rattray Taylor著，《伟大的进化论奥秘》(*The Great Evolution Mystery*)(New York: Harper and Row, 1983); Charles B. Thaxton, Walter L. Bradley与Roger L. Olson合著，《生命起源的奥秘》(*The Mystery of Life's Origin*)(New York: Philosophical Library, 1984)。

2．除了上述的书目之外，还可以参考Fred Hoyle与Chandra Wickramasinghe合著，《出自空间的进化：宇宙创造论》(*Evolution From Space: A Theory of Cosmic Creationism*) (New York: Simon and Schuster, 1981)。

3. Fred Hoyle著，《星系，核，与类星体》(*Galaxies, Nuclei and Quasars*)(New York: Harper and Row, 1965), 147-150页。

4. 有关这些题目的更多资料，请参考Allen Hayward著，《上帝的本体》(*God Is*) (Nashville:

Thomas Nelson, 1980)。

5. Michael Hart著,“大气的进化”("Atmospheric Evolution"), 出自《外星人，他们在哪里？》(*Extraterrestrials, Where Are They?*) Michael H. Hart与Ben Zuckerman合编 (New York: Pergamon, 1982), 156页. 参看下面的注释7。

6. Owen Gingrich, “要有光：现代宇宙进化论和圣经创造论”("Let There Be Light: Modern Cosmogony and Biblical Creation") 出自《上帝是一位创造论者吗？》(*Is God a Creationist?*) Roland Mushat Frye编 (New York: Charles Scribner's Sons, 1983), 132-133页。

7. Michael Hart, “关于主序星体的可居住区”("Habitable Zones about Main Sequence Stars"), *Icarus* 37 (1979), 351-357页. 关于这类证据的更多资料，请参见Hugh Ross著,《上帝的指纹》(*The Fingerprint of God*)(Orange, CA: Promise, 1989).

8. 这一段所讨论的大部分观点，在P.C.W. Davies著,《偶然的宇宙》(*The Accidental Universe*) (Cambridge: Cambridge University Press, 1982)中有所讨论; 更简略的讨论可以参见John Boslough著,《斯蒂芬霍金斯的宇宙》(*Stephen Hawking's Universe*) (New York: William Morrow, 1985), 第9章。

9. 随着宇宙大爆炸之后的逐渐冷却各种基本粒子形成的相关内容，参见Steven Weinberg著,《前三分钟》(*The First Three Minutes*) (New York: Bantam, 1979)。

10. Boslough著,《斯蒂芬霍金斯的宇宙》(*Stephen Hawking's Universe*)，121页。

11. 参见，例如，Kenny Barfield著,《为什么圣经最棒：基于科学的这世界的神圣著作》(*Why the Bible is Number 1: The World's Sacred Writings in the Light of Science*) (Grand Rapids: Baker, 1988)。

12. 参见，例如，John Wenham著,《复活节的奥秘》(*The Easter Enigma*) (Grand Rapids: Zondervan, 1983); Robert C. Newman编,《预言的证据》(*The Evidence of Prophecy*) (Hatfield, PA: IBRI, 1988)。