D. Fisher
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FEATURE: "Dare a Scientist Believe in Design?"
Owen Gingerich (Last in SERIES of 2)

VOICE: Does chance[1] have a brain? Can chance achieve anything?
偶然或者自然會思想嗎？，它的存在有目的嗎？

PROF.: What did a French scholar mean when he talked about "anti-chance" and "a cheater"? [2]

And if someone believes God designed nature, does that belief make him stop his scientific research?

TAPE: THEME AND ANNOUNCEMENT

VOICE: Professor, many scientists think that much of nature developed by chance. But how much can chance achieve?
石教授，很多科學家都相信自然界是來自偶然的，可信程度高嗎？

[1] (random processes, not directed by an intelligent mind; French: *lÕhazard).*
[2] (a person who breaks or violates the rules in a game or other event).

PROF.: Less than many people think. For example, Prof. Dr. Owen Gingerich of Harvard University quotes the late French scholar Pierre Lecomte du Nouy [pee-AIR le-KOHNT doo noo-EE]. The French savant pointed out that a typical protein molecule contains two thousand atoms, and he estimated the probability of forming a protein of that size was approximately one part in 10^{32}.

In his book entitled *Human Destiny*, Du Nouy elaborated on what that meant. Quote, "Events which…need an infinitely longer time than the estimated duration of the earth in order to have one chance…to manifest themselves can, it would seem, be considered as impossible in the human sense." He went on to say, "To study…Life and eventually Man, we are therefore forced to call on ***anti-chance***…; a cheater who systematically violates the laws of large numbers…"

VOICE: By "anti-chance," does he mean some influence that doesn't rely on the laws of mathematical probability – some person or influence that determines what will happen? 他是否說機會率以外的影響"超自然"就好像有目的的主宰事物發生一樣呢？

PROF.: Yes. And by "cheater" he means a person who makes things happen a certain way – not restricted to what natural law would do if it were the only thing that existed.

Dr. Gingerich explains, quote, "The game plan for evolutionary theory…is to find the accidental…ways in which…unlikely and seemingly impossible events could have taken place. The evolutionists…seek…random pathways…[which] could be at least partially retraced by induction[3] from the fragmentary historical record."

[3] (logic, reasoning).

VOICE: Is he saying evolutionists have fossils and other evidence, but not a complete record of the history of the universe and of life? And they try to figure out how natural forces could have made living creatures, based on fragments of evidence plus reasoning and imagination?
他是否說進化論者以化石、一些零碎証據再加上推論和想像來推測生物的起源，但他們卻缺乏一個生命和宇宙的完整記錄。

PROF.: Yes. He says that's a legitimate technique for scientists to use in their research. But some scientists try to apply that procedure to reach larger conclusions than the data will support.

In his words, quote, "But when the working procedure becomes ***raised to a philosophy of nature,*** the practitioners begin to place their ***faith*** in the roulette of chance. They find du Nouy…an aggravation to their assumptions about the meaninglessness of the universe.

"Despite the reluctance of many evolutionary theorists, ...there does seem to be enough evidence of design in the universe to give some pause." [4] He quotes one strong evolutionist who said, quote, "Man…is the most highly-endowed organization of matter that has yet appeared on earth…"

VOICE: How do scientists who believe in the philosophy of naturalism, interpret the anthropic principle? 相信自然主義的科學家們是如何解釋人類來源史的呢？

PROF.: Dr. Gingerich answers, quote, "[T]hey have turned the original argument on its head. Rather than accepting that we are here because of a deliberate supernatural design, they claim that the universe simply ***must be this way,*** because we are here. If the universe had been otherwise, we would not be here to observe ourselves…"

[4] (to make a person stop and think; to make him unsure of something he had previously thought was sure).

VOICE: It seems to me that scientists use the word "belief" in various ways. For example, some say they "believe in evolution." Does they mean they have faith in evolution in a religious sense? 對我來說，科學家們說相信進化，這個相信是否需要有宗教的信心呢？

PROF.: He answers, quote, "I have heard one leading paleontologist announce himself as a 'devout evolutionist' when asked his faith, and I guess that is a possibility.

"But I think most scientists would claim only that they accept evolution as a working hypothesis. In everyday, non-philosophical usage, most people, scientists included, would say that they believe in the results of science and that they believe the results of science to be true.

"Yet…most scientists would be mildly offended at the thought that their beliefs constituted an act of faith in a largely unproved…system of coherencies."

VOICE: My professors talk a lot about "scientific proof." How many things in science are really proven? 我常聽到 以科學証明，科學証明至今証明了多少東西了呢？

PROF.: Not as many things are proven, as most people think. Dr. Gingerich says, quote, "Actually,[5] surprisingly little in science itself is accepted by 'proof.' …[A]s an example, Newton had no proof that the earth moved, or that the sun was the center of the planetary system. Yet, his system did not make much sense without that assumption.

"What he had was an elaborate and highly successful scheme of both explanation and prediction, and most people had no trouble believing it. But what they were accepting as truth was a grand scheme whose validity ***rested on its coherency, not on any proof."***

[5] (in truth or in reality).

VOICE: Is he saying that scientists accepted Newton's theories, ***without proof?***
科學家是否在不用証明之下接受牛頓的理論呢？

PROF.: Yes. They were accepted because they were "coherent." The various parts of his theories ***fit together*** in logical ways.

VOICE: In other words, they don't contradict each other; they harmonize.
換句話說，他們互不矛盾，反而彼此相融洽。

PROF.: Yes. Dr. Gingerich continues, quote, "Thus, when a convincing stellar parallax was measured in 1838, or when Foucault [foo-KOLT] swung his famous pendulum at 2 A.M. on Wednesday morning, 8 January, 1851, these supposed proofs of the revolution and of the rotation of the earth did not produce a sudden, newfound acceptance of the heliocentric cosmology. The battle had long since been won by a persuasiveness that rested ***not on proof, but on coherency.***

"…[S]cience's great success has been in the production of a remarkably coherent view of nature rather than in an intricately dovetailed set of proofs. I would argue[6] that a belief in design can also have a legitimate place in human understanding, even if it falls short of proof. What is needed is a consistent and coherent worldview, and…***the universe is easier to comprehend if we assume that it has both purpose and design,*** even if this cannot be proven with a tight logical deduction."

VOICE: But some have criticized arguments from design, by saying they will cause scientific investigators to stop their research. We often find something that our present scientific knowledge can't explain. If we simply say, "Well, God made it that way," doesn't that stop scientific research?
有批評指，如遇到當今的科學未能解釋的情況下，就打答案推到神的作爲的話，預設論會導致科學探索的停頓，創造論會影響科學發展嗎？

[6] (He believes this is true, and he tries to convince others that it is true).

PROF.: No. Dr. Gingerich answers, quote, "I shall argue that there is no contradiction between holding a staunch belief in supernatural design and being a creative scientist. Perhaps no one illustrates this point better than the seventeenth-century astronomer Johannes Kepler. He was one of the most creative astronomers of all time, a man who played a major role in bringing about the acceptance of the Copernican system [by devising] his tables of planetary motion.

"One of the principal reasons Kepler was a Copernican arose from his deeply-held belief that the sun-centered arrangement reflected the divine design of the cosmos...[7] …[I]n the introduction to his [book] *Astronomia nova*, [which means] the New Astronomy, he defended his Copernicanism from the point of view that 'the heavens declare the glory of God'." (Psalm 19:1; Russian Psalm 18:1?).

VOICE: (SURPRISED) Johannes Kepler believed that God designed and created the universe?

他 相信上帝設計和創造了這個宇宙嗎？

PROF.: Yes. Kepler's words were, quote: "I implore my reader not to forget the divine goodness conferred on mankind, and which the psalmist urges him especially to consider. When he has returned from church and entered on the study of astronomy, may he praise and glorify the wisdom and greatness of the creator. …Let him not only extol the bounty of God in the preservation of living creatures of all kinds by the strength and stability of the earth, but also let him acknowledge the wisdom of the Creator in its motion, so abstruse,[8] so admirable." End quote.

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[7] (It was the way God designed the solar system and the universe).
[8] (difficult to understand; opposite of 'obvious').

Prof. Gingerich adds, quote, "Kepler was unwavering[9] on his views of God as a geometer and of a universe filled with God's geometrical designs. Kepler's life and works provide central evidence that an individual can be both a creative scientist and a believer in divine design in the universe. ***Indeed, the very motivation for scientific research can stem from a desire to trace God's handiwork.***"

VOICE: If purpose and design exist in the universe, who made them?
如果宇宙中存在著目的和設計的話，誰是幕後的主宰呢？到底是誰造的呢？

PROF.: The God who inspired the Bible. Dr. Gingerich explains, quote, "For me, it makes sense to suppose that the superintelligence, the transcendence, …has revealed itself through prophets in all ages, and supremely in the life of Jesus Christ.

"Just as I believe that the Book of Scripture illumines the pathway to God, so I believe that the Book of Nature, with its astonishing details – …the Conus cedonulli, or the resonance levels of the carbon atom – also suggests a God of purpose and a God of design."

TAPE: THEME AND ANNOUNCEMENT

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Source: "Dare a Scientist Believe in Design?" Chapter 1 in John Marks Templeton, *Evidence of Purpose* (New York: Continuum Publishing Co., 1994), pages 21-32.

[9] (not changing).