



## AI 能否作为专利发明人？

Week11 周四

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## 全文导读

2019 年，英国知识产权局拒绝了美国计算机科学家斯蒂芬·泰勒（Stephen Thaler）的两项发明专利，原因是其申请的发明人不是人类，而是人工智能。这一案例引起了人工智能和专利问题的探讨，早期法律尚未有相关规定；专利法对于 AI 的激励作用微乎其微；但是否允许 AI 作为发明人，则会带来不小的商业影响。

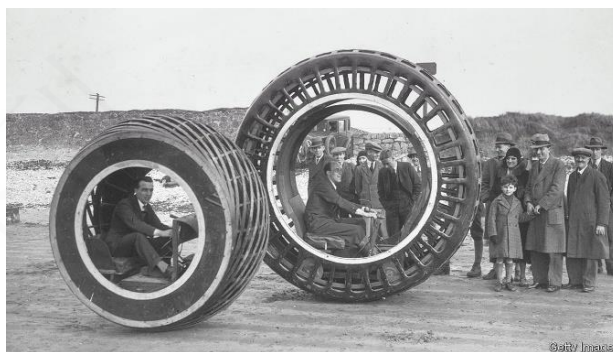
## 重难点讲义&amp;全文翻译

## Patent law: Discovery process

## 专利法：发现的过程

Can an AI be an inventor? A **landmark** case at the Supreme Court

人工智能能成为发明家吗？来看一则最高法院的标志性案件



**patent law** **重点难词** Patent law is a branch of intellectual property law that deals with the legal protection of new inventions 专利法

**landmark** **重点难词** / 'lændmɑ:k / n. ~ (in sth) an event, a discovery, an invention, etc. that marks an

important stage in sth （标志重要阶段的）里程碑 • a landmark decision/ruling in the courts 具有里程碑意义的决策/法庭裁决 SYN milestone

**Supreme Court** **背景知识** 英国最高法院，是英国（联合王国）最高司法机关，对于英格兰法律、威尔士法律（由威尔士国民议会为威尔士制定，并与英

格兰存异的法律除外) 及北爱尔兰法律三个司法制度下的事务拥有终审权, 也是这些司法管辖地区的最高上诉司法机关。

### Para.1

Judicial processes involve slow, **deliberative** thinking. Artificial intelligence (AI) involves **mind-blowing computational** speed. On March 2nd, in a **hearing** at the Supreme Court in London, these two worlds came together to raise big questions for **intellectual property** in the age of machines.

**deliberative** 重点难词 /dɪ'lɪbəreɪtɪv/ adj. involving careful thought and discussion when making decisions 审慎的; 商议的

**mind-blowing** 固定搭配 /'maɪnd bləʊɪŋ/ adj. very exciting, impressive or surprising 给人印象极深的; 非常令人吃惊的 • Watching your baby being born is a mind-blowing experience. 看你的孩子出生是一次非常难忘的经历。SYN mind-boggling

**computational** 重点难词 /kəmˈpjʊˈteɪʃənəl/ adj. of or relating to the process of mathematical calculation (与) 计算 (有关) 的 • the exam only really tested computational ability. 这次考试其实只测试了计算能力。

**hearing** 重点难词 /'hɪərɪŋ/ n. an official meeting at which the facts about a crime, complaint, etc. are presented to the person or group of people who will have to decide what action to take 审讯; 审理; 听审 • a court/disciplinary hearing 庭审; 纪律聆讯

**intellectual property** 固定搭配 /ˌɪntəˈlektʃuəl 'prɒpəti/ n. an idea, a design, etc. that sb has created and that the law prevents other people from copying 知识产权 • intellectual property rights 知识产权

司法程序需要缓慢、审慎的思考。人工智能 (AI) 则计算速度惊人。3 月 2 日, 在伦敦最高法院的一场听证会上, 司法与 AI 这两个世界碰撞在一起, 提出了机器时代知识产权的重大问题。

### Para.2

In 2019 Britain's **Intellectual Property Office** denied **Stephen Thaler**, an American computer scientist,

**patents** for two inventions—a beverage container and a **search-and-rescue** device. The applications were not denied because the inventions lacked **novelty**, but because the **named** inventor was not a human being.

**Intellectual Property Office** 背景知识 **英国知识产权局**, 其职责不仅包括专利、设计、商标和版权等方面的申报、审核和批准, 还负责协调政府决策者、执法部门、企业等各方面的努力, 共同对付知识产权领域的犯罪行为。

**deny** 熟词僻义 / dɪˈnaɪ / v. ~ (sb) (sth) (formal) to refuse to allow sb to have sth that they want or ask for 拒绝; 拒绝给予 • They were denied access to the information. 他们试图取得这个情报被拒。

**Stephen Thaler** 背景知识 **斯蒂芬·泰勒**, 美国计算机科学家, 美国企业 Imagination Engines 创始人。DABUS (统一感测自动引导设备) 是其开发的人工智能系统, 其一共发明了两项新技术, 分别是分形食品容器, 与能引起更大注意力的警示灯。Stephen Thaler 认为 DABUS 应认定为发明者, 他本人则获得两项技术的专利权。然而当 Stephen Thaler 去年向欧盟及十几个国家法院提出, 要将 DABUS 列为专利发明人时遭到拒绝, 在全球掀起浩大的争论与法庭大战。



**patent** 重点难词 / ˈpæt(ə)nt / n. an official right to be the only person to make, use or sell a product or an invention; a document that proves this 专利权; 专利证书 • to apply for/obtain a patent on an invention 申请/获得发明专利权

**search-and-rescue** 固定搭配 n. Search and rescue operations involve looking for people who are lost or in danger, for example, after a war or a natural disaster, and bringing them back safely. (如战争或自然灾害后的)搜索救援 • An alpine search-and-rescue team found Lancaster the day after he disappeared. 在兰开斯特失踪的第二天, 一支高山搜救队找到了他。

**划线句** 难句分析 原文为 In 2019 Britain's Intellectual Property Office denied 【deny sb sth 拒绝授予某人某物, 这里的 sth 是后文的 patents】Stephen Thaler, an American computer scientist 【Stephen Thaler 的同位语, 一位美国计算机科学家】, patents for two inventions—a beverage container and a search-and-rescue device 【破折号后进一步解释说明两项发明专利的内容】。

**novelty** 重点难词 n. the quality of being new, unusual, and interesting 新颖; 新奇性 the novelty of the ideas 那些想法的新奇之处

**name** 熟词僻义 / neɪm/ v. to officially choose someone or something, especially for an important job or prize 选中, 指定

2019 年，英国知识产权局拒绝了美国计算机科学家斯蒂芬·泰勒（Stephen Thaler）的两项发明专利——一个饮料容器和一个搜救设备。这些申请被拒绝并不是因为发明缺乏创新，而是因为发明人不是人类。

### Para.3

AI is often used as a tool to help researchers find new inventions. Applicants normally put the name of the person (or people) who worked most closely with the machine as the inventor. Until now this has not been a problem because AI has always required human assistance. But Dr Thaler asserts that his “creativity machine”, DABUS (**short for** “Device for the **Autonomous Bootstrapping** of Unified **Sentience**”), had **come up with** the two inventions without any intervention and that it would be dishonest to claim that he was the inventor. He is making the same argument in other **jurisdictions**. But this is the first time it has reached a country’s highest court.

**short for** 固定搭配 to be a shorter way of saying a name 是某事物的简称 Her name is Alex, short for Alexandra. 她名叫亚历克丝，是亚历山德拉的简称。

**autonomous** 重点难词 / ɔːˈtɒnəməs / adj. able to do things and make decisions without help from anyone else 自主的；有自主权的• He treated us as autonomous individuals who had to learn to make up our own minds about issues. 他视我们为独立个体，必须学会自主处理问题。

**bootstrapping** 专业词汇 /ˈbuːtstræpɪŋ/ n. a technique of loading a program into a computer by means of a few initial instructions which enable the introduction of the rest of the program from an input device 自举电路；引导指令；自展• Bootstrapping means putting the BC into service. 引导指令意味着让 BC 投入服务。

**sentient** 重点难词 /ˈsenʃənt/ adj. able to experience things through your senses 有感知力的，有知觉力的 Man is a sentient being. 人是有感知力的生命。 **Sentience** n. 感觉性；感觉能力；知觉 **SYN** consciousness

**come up with** 固定搭配 to suggest or think of an idea or plan 提出，想出：They always come up with some contrivance to raise prices. 他们总是想出一些诡计来提价。

**jurisdiction** 重点难词 /ˌdʒʊərɪsˈdɪkʃn/ n. an area or a country in which a particular system of laws has authority 管辖区域；管辖范围• In the U.K., unlike in most other European jurisdictions, there is no right to strike. 英国与欧洲大部分其他司法辖区不同，没有权利去罢工。

AI 常被用来帮助研究人员寻找新的发明。申请人通常会将与机器合作最密切的一个人（或几个人）的名字列为发明人。到目前为止，还未构成大问题，因为 AI 始终需要人类的协助。但泰勒博士声称，他的“创意机器”DABUS（“统一感知自动引导设备”的简称）在没有任何人类干预的情况下，完成了这两项发明，自称为发明人反倒是不诚实的。他在其他司法辖区也提出了同样的观点。但在伦敦最高法院的这次听证会，是该案第一次上诉到一个国家的最高法院。

#### Para.4

The immediate **stakes** may not seem **that high**. The British government conducted a **consultation** in 2021 on patents and AI; despite Dr Thaler's assertions, most **respondents** said AI is not sufficiently advanced to invent without human involvement. And a **ruling in his favour** in Britain alone would have limited commercial **repercussions**. “There is very little point in only the UK protecting AI inventions,” says Matt Hervey of **Gowling WLG**, a law firm. “If a company has a **viable** choice to keep its invention a secret and exploit it, it won't **disclose** the secret in a patent application to get a **monopoly** in only one country.”

**high stakes** 固定搭配 if the stakes are high when you are trying to do something, you risk losing a lot or it will be dangerous if you fail 高风险，很大的危险性 Climbing is a dangerous sport and the stakes are high. 爬山是一项危险的运动，风险很大。

**that** 熟词僻义 adv. as much as in the present situation or as much as has been stated 那么，那样 I'm sorry, I hadn't realized the situation was that bad. 很抱歉，我不知道情况有那么糟糕。

**consultation** 重点难词 / ˌkɒns(ə)l'teɪʃ(ə)n / n. a meeting with an expert, especially a doctor, to get advice or treatment （向专家请教的）咨询会；

（尤指）就诊：A personal diet plan is devised after a consultation with a nutritionist. 经向营养师作咨询后，一份个人饮食方案设计出来了。

**respondent** 重点难词 / rɪ'spɒndənt / n. a person who answers questions, especially in a survey 回答问题的人；（尤指）调查对象 • 60% of the respondents agreed with the suggestion. 回复调查的人中 60% 同意这项建议。

**划线句** 难句分析 原文为 The British government conducted a consultation in 2021 on patents and AI 【对于专利和 AI 问题的一次咨询，on 表示关于...主题】；despite Dr Thaler's assertions 【这一段中没有再重复泰勒博士的观点，需要到上一段去找，即 DABUS 的发明没有人类干预】，most respondents 【本句前半句中的 2021 年咨询】said AI is not sufficiently 【不足以...，翻译时可以根据意思调整，在这里可以翻译为“还没有先进到可以在没有人类参与的情况下完成发明”】advanced to invent without human involvement.



**ruling** 重点难词 / 'ru:lɪŋ / n. ~ (on sth) an official decision made by sb in a position of authority, especially a judge 裁决;裁定;判决•The court will make its ruling on the case next week. 法庭下周将对本案件作出裁决。SYN verdict

**in (one's) favor** 固定搭配 To one's advantage or for one's benefit. 对某人有利• I'm so relieved that the court ruled in my favor! 法庭的判决对我有利,我真是松了一口气! SYN to one's advantage

**repercussion** 重点难词 /,ri:pə'kʌʃ(ə)n/ n. an indirect and usually bad result of an action or event that may happen some time afterwards (间接的)影响, 反响• The collapse of the company will have repercussions for the whole industry. 这家公司的垮台将会给整个行业造成间接的负面影响。SYN consequence

**Gowling WLG** 背景知识 高林睿阁律师事务所, 一家跨国律师事务所, 总部位于加拿大安大略省渥太华。

**viable** 重点难词 / 'vaɪəb(ə)l / adj. that can be done; that will be successful 可实施的; 切实可行的•There is no viable alternative. 没有其他可行的措施。SYN feasible

**disclose** 重点难词 /dɪs'kləʊz/ v. to give sb information about sth, especially sth that was previously secret 揭露; 透露•The spokesman refused to disclose details of the takeover to the press. 发言人拒绝向新闻界透露公司收购的详细信息。SYN reveal

**monopoly** 熟词辟义 / mə'nɒpəli / n. ~ in/of/on sth the complete control, possession or use of sth; a thing that belongs only to one person or group and that other people cannot share 独占; 专利; 专利品• Managers do not have a monopoly on stress. 并不只是经营管理者有压力。

眼前的风险似乎没有那么高。英国政府于 2021 就对专利和 AI 问题开展了一次咨询会。尽管泰勒博士断言 DABUS 的发明没有人类干预, 但大多数受访者表示, AI 还没有先进到可以在没有人类参与的情况下完成发明。仅在英国做出有利于泰勒博士的裁决, 其商业影响将有限。高林睿阁律师事务所的马特·赫维 (Matt Hervey) 表示: “只有英国决定保护人工智能发明, 其意义微乎其微。如果一家公司可以选择将其发明保密并加以利用, 它就不会为了在一个国家获得垄断地位而在专利申请中披露秘密。”

### Para.5

But the technology is moving fast and the questions raised by the case are profound. There is **ambiguity** in British law over who, or what, can claim **credit** for an invention. The **Patents Act** of 1977 was written long before its drafters could imagine robots creating anything and refers to the inventor as the “**deviser**”. If the Supreme Court does interpret the law to include machines, that could undermine the **societal**

**bargain** on which patents are based. Inventors are encouraged to innovate on the understanding that if they disclose their inventions in a patent, they will be granted monopoly rights to recover their investment. An AI is different: robots do not require any incentive to innovate.

**ambiguity** 重点难词 / ,æmbrɪ'ɡju:əti / n. the state of being unclear, confusing, or not certain, or things that produce this effect 模棱两可; 不明确 (的事物) There was an element of ambiguity in the president's reply. 总统的回答有点模棱两可。

**credit** 熟词僻义 / 'kredit / n. ~ (for sth) praise or approval because you are responsible for sth good that has happened 赞扬; 称赞; 认可 • This isn't something that we can claim credit for. 这并非我们可以居功的事情。

**Patents Act** 背景知识 **英国专利法**, 英国是世界上实行专利最早的国家。1977 年英国专利法进行了大量的修订。经过这次修订, 与原来的专利法相比有以下变化: 专利有效期从 16 年延长为 20 年; 对发明专利的申请进行严格审查, 把新颖性的检索范围由国内扩大到国际上公开发表的文献; 设立专利法庭, 作为高等法院的一个重要组成部分; 明确规定了受雇人员申请发明专利的权限等。

**deviser** 重点难词 / dɪ'vaɪzə(r) / n. the person to invent sth new or a new way of doing sth 发明者; 设计者

**societal** 重点难词 / sə'saɪətl / adj. connected with society and the way it is organized 社会的; 关于社会的 • the societal changes that have taken place over the last two decades. 过去二十年中发生的社会演变。

**bargain** 熟词僻义 / 'bɑ:gən / n. ~ (with sb) an agreement between two or more people or groups, to do sth for each other 协议; 交易 • Finally the two sides struck a bargain (= reached an agreement). 双方最终达成了协议。

**on the understanding that** 固定搭配 if you agree to something on the understanding that something else will be done, you agree to it, believing that it will be done 以...为条件, 在认为...的情况下 Jack lent Sarah the money on the understanding that she would pay it back next month. 杰克把钱借给了萨拉, 相信她会在下月归还。

**recover** 熟词僻义 v. to get back an amount of money that you have spent or lost 重新获得, 收回 [花掉或失去的钱] He was entitled to recover damages from the defendants. 他有权向被告追讨赔偿。

**划线句** 难句分析 原文为 Inventors are encouraged to innovate 【指被鼓励进行创新】 on the understanding that 【在.....的前提下】 if they disclose their inventions in a patent 【if 部分是动作的前提, 如果他们在专利中披露自己的发明】, they will be granted monopoly rights to 【to 表示结果, 以收回投资成本】 recover their investment.

但技术发展很快，该案引发的的问题也愈发深刻。英国法律中，对于谁或什么东西可以获得发明的功劳存在歧义。1977 年《专利法》起草时，起草者还不能够想象机器人可以创造任何东西；法律用词上，发明人还被称为“设计人”。如果最高法院在法律解释中将机器包含在发明人范围内，可能会破坏作为专利的根基——社会交易。发明者被鼓励进行创新，前提是一旦在专利中披露自己的发明，他们将被授予垄断权以收回投资。AI 则不同，毕竟机器人不需要任何创新动力。

## Para.6

If the court decides that only a human inventor can hold a patent, its view on how rights can be legitimately transferred from an AI to humans (particularly if it is not clear how the AI works) will be closely watched. Although a machine has not yet created a pharmaceutical product on its own, Avi Goldfarb, an economist researching AI and health care at the University of Toronto, worries that if such inventions are not patentable there will be little incentive for firms to create machines that do drug research. (翻译作业) The court is expected to **deliver** its **verdict** in a few months. It will not be **the last word**.

**legitimately** 重点难词 / lɪ'dʒɪtɪmətli / adv. in a way that conforms to the law or to rules 合法地；合理地；正当地 • She can now legitimately claim to be the best in the world. 现在她可以理所当然地声称自己是世界上最优秀的。SYN reasonably

**划线句** 难句分析 原文为 If the court decides that only a human inventor can hold a patent. 【that 后从句，表示决定的具体内容——只有人类发明者可以拥有专利】 its view on 【对.....的观点】 how rights can be legitimately 【legitimately 修饰 transfer 这个动作，合法转移】 transferred from an AI to humans (particularly if it is not clear how the AI works) 【解释特殊情况，尤其在 AI 工作原理不清楚的情况下】 will be closely watched 【被密切观察的主语在这句话的前半部分，its view on 对...的观点】。

**pharmaceutical** 重点难词 / ˌfɑːmə'su:tɪk(ə)l / adj. connected with making and selling drugs and medicines 制药的；配药的 • pharmaceutical products 药物

**Avi Goldfarb** 背景知识 阿维·戈德法布，多伦多大学罗特曼管理学院市场营销学教授，人工智能和医疗保健罗特曼讲座主席。他的研究重点是数字经济的机遇和挑战。

**patentable** 重点难词 / 'pætntəb(ə)l / adj. used to describe a product for which it is possible to get a patent: 可取得专利权的，可给予专利权的 • At bottom, the "detection" involved in the disease gene patents itself is not patentable. 归根结底，疾病基因专利所涉及的“检测”本身是不可专利的

**deliver a judgment/verdict** 固定搭配 to officially state a formal decision or judgment 宣布判决/裁



决 The jury delivered a verdict of unlawful killing.  
陪审团宣布了非法杀人的裁决。

**the last word** 固定搭配 The final words in an  
argument or discussion, especially one that

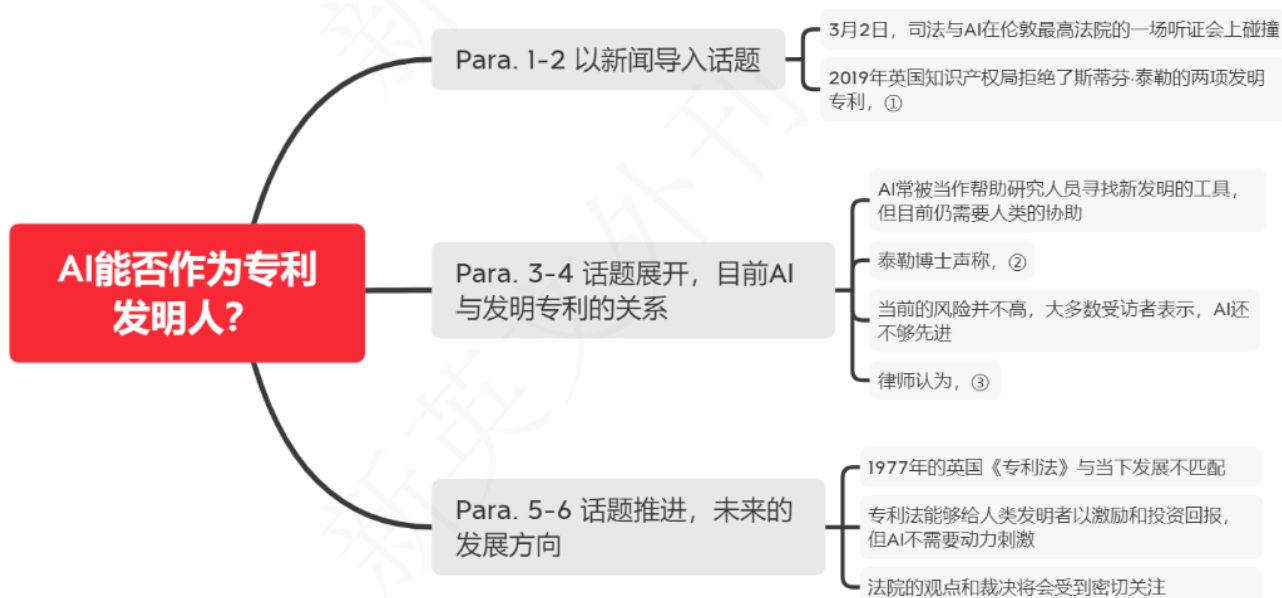
decisively or conclusively ends it. 最后一句话; 定  
论• He always has to have the last word in any  
argument. 在任何争论中总是得他最后说了算。

如果法院决定，只有人类发明人才能拥有专利，那么法院对于权利如何合法地从 AI 转移给人类的看法将受到密切关注，特别是在不清楚 AI 工作模式的情况下。(翻译作业)。法院预计将在几个月内作出裁决。一切尚未定论。

### 📌 全文思维导图作业

请大家阅读全文后，将思维导图补充完整。

方法提示：思维导图旨在督促大家从整体框架上把握文章逻辑，如果读完文章对文章所讲内容一头雾水，思维导图无从下手，说明还没有读懂，继续重复通读几遍文章，读懂文章之后再完成思维导图。



1. \_\_\_\_\_

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### 翻译作业

翻译作业：请将以下句子翻译成中文，要求理解准确、表达流畅

Although a machine has not yet created a pharmaceutical product on its own, Avi Goldfarb, an economist researching AI and health care at the University of Toronto, worries that if such inventions are not patentable there will be little incentive for firms to create machines that do drug research. (para.6)

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### 写作练习

文章第二段提到：The applications were not denied because the inventions lacked **novelty**, but because the named inventor was not a human being.

单词 **novelty** 表示 the quality of being new, different and interesting 新奇；新颖；新鲜 如，It was fun working there at first but the novelty soon wore off (= it became boring). 开始的时候在那里工作很有趣，但这股新鲜劲很快就过去了。

近义表达还有：

1 **newness** / 'nju:nəs / n. the quality of having been recently created or having started to exist recently 新颖，新奇 • Kids lose their enthusiasm for things when the sense of newness wears off. 当新鲜感消失时，孩子们就会失去对事物的热情。

2 **originality** / əˌrɪdʒəˈnæləti / n. the quality of being new and interesting in a way that is different from anything that has existed before 独创性；创意 • This latest collection lacks style and originality. 这本最新选集既无风格，又无创意。

3 **freshness**/ 'frefnəs/ n. the quality of being new or original, and usually therefore interesting 新颖或独创的性质 • The inclusion of new teams has brought freshness to the tournament. 新球队的加入为这项赛事带来了新鲜感。

牛刀小试:

请使用以上表达, 将句子翻译成英文

1. 在当代西方世界, 快速变换着的款式迎合了人们对新奇和独特性的追求。

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2. 这种方法有一定的新意。

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