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百答不厌—咨询科技英语
(Guide Time for Meeting You)

科技英语中的虚拟语气

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咨询问题: 句子 "If the robot were to move quickly and jerkly, the cow could get nervous." 中从句 "If...." 的谓语是过去将来时吗? 主句中的 "could" 是情态动词 "can" 的过去形式吗?

取自于机器人杂志 "Development of an Autonomous Cow-Milking Robot" 一文。

If the robot were to move quickly and jerkly, the cow could get nervous. (倘若机器人迅猛活动, 奶牛就会受惊。) 此句是一个将来时态的虚拟语气条件状语从句。

所谓语气简单地说是说话的口气。英语语气分陈述语气、祈使语气和虚拟语气三种。陈述语气表示事实, 祈使语气表示愿望, 虚拟语气表示假设。虚拟语气通常分为三种情况: ①与事实相反, 或不可能实现, 或难以实现的事; ②表示主观愿望、要求、建议等; ③表示语气委婉或主观推测。虚拟语气在日常英语口语中使用十分频繁, 在科技英语中也不时出现。下面用大量实例说明科技文中虚拟语气的主要形式。

一、用在条件句及其主句中

(1) If there were no gravitation, we and everything else would fly off the earth into space. (要是没有引力, 人们和其他所有的东西都会飞离地球而进入太空。)

(2) If the pressure (should) be raised further, the container would break. (如进一步加压, 容器就会破裂。) 此句中 should 可以省略掉。

(3) If man made use of all the sunlight, he would have no need for coal or other fuels. (人类若能把太阳光全部利用起来, 那么就不需要煤和其它燃料了。)

(4) If this new method had been adopted, much time would have been saved. (如果早就采用这种新方法, 就会节省好多时间。)

(5) Even a small motor could do this amount of work if it were allowed a long enough time. (只要给以足够的时间, 即使是一台小型电动机也

能做这么多的功。)

(6) It would have taken them a long time to solve the complicated problem if electronic computers had not been used. (如果当时不是使用电子计算机, 他们解决这个复杂的问题就要花很多时间。)

If 条件句中若有 were, had 或 should, could 这类动词, 连接副词 "if" 可以省略, 这时从句中的谓语要发生部分倒装现象, 例如:

(7) Were the diameter of wire smaller, its resistance would be increased. 此句等于 If the diameter of the wire were smaller, its resistance would be increased. (如果导线的直径小一些, 它的电阻就会增大。)

(8) Had silver been less costly, it would have been widely used as a conductor, its conductivity being very high. (要是银不是那么贵, 它早就广泛地被用作导体了, 因为它的导电率相当高。) 此句等于 If silver had been less costly, it would have been widely used as a conductor, its conductivity being very high. "... its conductivity being very high." 是分词独立结构, 在句中做原因状语。

(9) Should the polarities of cathode and anode be reversed, there would be no electron flow. (如果把阴极和阳极的极性倒置一下, 就不会存在电流。) 此句等于 If the polarities of cathode and anode (should) be reversed, there would be no electron flow.

条件从句也可由 provided (that) "若", "以... 为条件", in case "假使", "万一", unless "除非" 等引导, 还可由介词 without "若没有", under "在... 情况下", by "通过", but for = were it not for "要不是" 等, 以及个别副词, 如 other wise "否则" 引出条件状语从句。例如:

(10) Some things, like satellite communications, would be impossible without semiconductors. (要是没有半导体, 就不可能有卫星通讯。)

(11) But for the binary system, the electronic computers might have been much more complicated. (要是没有二进制, 电子计算机可能要比现在复杂得多。)

(12) All these high capacity systems would not be in service unless they were needed. (除非需要这些大容量的系统, 否则是不会全部使用他们的。)

二、用在某些主语从句中

用来表示要求、劝告、命令、建议、意愿、主张等。它与主句中某些含有这些词义的形容词和及物动词有关。从句中谓语为 should + 动词原形, 句型为主语从句:

It is + (与形容词有关句型)	$\left. \begin{array}{l} \text{necessary} \\ \text{essential} \\ \text{natural} \\ \text{desirable} \\ \vdots \end{array} \right\}$	$\left. \begin{array}{l} + \text{that} + \text{从句主语} + \\ \text{should} + \text{动词原形} \end{array} \right\}$
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It is + (与动词有关的句型)	$\left. \begin{array}{l} \text{required} \\ \text{desired} \\ \text{proposed} \\ \text{recommended} \\ \vdots \end{array} \right\}$	$\left. \begin{array}{l} + \text{that} + \text{从句主语} + \\ \text{should} + \text{动词原形} \end{array} \right\}$
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(13) For a system to be classified as a feedback control system, it is necessary that the controlled variable should be fed back and compared. (为了使一系统归入回授控制系统, 受控变量必须反馈回去并要和参照输入加以比较。) 句中的 should 经常被省略掉。

(14) It is desired that the switch should produce only one clock pulse each time it is closed. (我们的愿望是, 开关每闭合一次只产生一个时钟脉冲。)

(15) It is suggested that this design should be modified at once. (建议立即修改这项设计。)

(16) If you are using a public terminal at an internet cafe for example, it is advised that you (should) close the browser you were using when you are ready to end your Internet session. (如果您正在使用公共终端, 建议您在准备结束 Internet 会话时, 关闭所使用的浏览器。)

(17) Our suggestion is that this point (should) be grounded. (建议, 这个点接地。) 此句为表语从句。一是使用 requirement, desire, proposal 和 recommendation 等名词做主语, 表语从句也应使用虚拟语气。

三、用在某些宾语从句中

宾语从句的结构为:

主语 +	$\left\{ \begin{array}{l} \text{require} \\ \text{desire} \\ \text{order} \\ \text{insist} \end{array} \right.$	$\left. \begin{array}{l} + \text{that} + \text{宾语从句的主语} + \\ \text{should} + \text{原形动词} + \dots \end{array} \right\}$
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(18) In the year of 1791, the French Academy of Science suggested that the unit of length (should) be based on the size of the earth. (法国科学院在 1791 年建议, 长度的单位应以地球的大小为基础。) should 常常被省略掉。

(19) This increase in resolution necessitates that more numerical information (should) be obtained during the conversion process. (要使分辨力增强到这样的程度, 就要求在转换过程中必须获得更多的数字信息。)

(20) The requirement that energy be conserved must be met. (一定要满足节能的要求。) 此句中“that energy be conserved”是 requirement 的同位语从句, 也要求使用虚拟语气。

四、用于某些带补语的宾语从句中, 但并非多见。

其结构为: 主语 + 谓语 + it + 形容词 (宾语补足语)

(21) They consider it important that proper attention (should) be paid to the algebraic signs of distance, velocity and acceleration. (重要的是应当注意距离、速度和加速度的代数符号。)

五、用在某些表语从句和同位语从句中

(22) The condition for minimum impedance in a given circuit is that the frequency (should) be such that the inductive and capacitive reactances are equal. (某一电路阻抗值达最小值的条件是频率必须使感抗和容抗相等。)

六、用在某些状语从句中

由 as if, as though 引导的状语从句中。例

如:(23)Each of two wires carrying current has a magnetic field, as if it were a magnet. (通电的两根导线中,每一根都有一个磁场,好像是一块磁铁。)

在 In order that(或 so that)“为了...”引导的从句中,谓语常用 should(或 might, could)+动词原形,表示语气的委婉或主观推测。例如:

(24) In order that $U = Ah^2 + zBhk + ck^2$ (should) be a definite form, it is necessary and sufficient that $B^2 - AC < 0$. (为了使 $U = Ah^2 + 2Bhk + ck^2$ 成为一个确定的形式,其充分必要条件是 $B^2 - AC < 0$ 。)

Lest, in case, for fear that 等表示“以免”的从句中谓语常用 (should)+动词原形。在 Whether... or...“无论... 还是...”引导的从句中,动词也用原形。

(25) The chemical composition of water is

H_2O , be it solid, liquid, or water vapor. (水的化学成分总是 H_2O , 无论它是固态、液态还是水蒸汽。)

七、用在主句及多类从句中,表示主观推测或语气委婉。使用 should(would, could, might)+动词原形。例如:

(26) One would expect to be able to use Newton's laws to discuss the complex motion of a speeding airplane. (人们也许想要能够用牛顿定律来讨论一架全速飞行飞机的复杂运动。)

if only(“但愿”), (“要是...就好了”; wish “但愿”; would rather“倒希望”之后跟的句子也要使用虚拟语气。

八、虚拟语气的三个基本时态

虚拟语气用于表示与事实不符,不能实现或难以实现的事,根据假设条件所涉及的时间,可分成三类,列表如下:

假设类型	假设条件从句	主句
与现在事实相反的假设	if+主语+动词过去时 (be 用 were)	主语(第一人称)+should 主语(第二、三人称)+would } +动词原形
与过去事实相反的假设	If+主语+过去完成时	主语(第一人称)+should 主语(第二、三人称)+would } +have+过去分词
与将来事实可能相反的假设	If+主语+should (或 were to)+动词原形	主语(第一人称)+should 主语(第二、三人称)+would } +动词原形

九、虚拟语气的应用往往根据语义而定,不能完全公式化。例如:

“Holography continues in the United States much as it has for the past decade, Holographic basic research and development was continued at about the same level as in the past 2 decades, while commercial holography seems to have undergone a show growth. Overall, I think this is healthy state, although it would be more exciting to report on explosive growth. In any event, ho-

lography seems to be a mature and stable activity.”(大意为:美国的全息术研究与前 10 年一样,开发水平基本上与前 20 年雷同,商业性的全息术似乎发展缓慢。总体上看这很正常,当然爆炸性的进展更能振奋人心。全息术在每种应用中都显得成熟并稳定。)此段中使用了虚拟语气的句子“... it would be more exciting to report an explosive growth.”体现了作者的幽默感。

“The user simply presses a button to make a hologram, and the computer carries out the re-

construction and does whatever processing is required. The stable environment and the holographic skill usually needed in holography are eliminated, and a person without skill in holography can apply this important measurement tool. The results are remarkable, but the growth in hologram interferometry that I would have expected from these advances has not occurred.”(大意为:使用者只要按一下键就可以得到一个全息图,然后由计算机进行再现和处理。通常已不需

要稳定的环境和全息术技能,无此种技能的人照样可以使用这种先进的测量仪器。可见取得的成就是显著的,但早先我本会期待的全息干涉的发展并没有出现。)此段中虚拟句“... I would have expected from these advances...”是虚拟语气的过去时。

以上是虚拟语气在科技英语中应用的主要例证。因为科技英语表达的是事实、实验、结果、数据等,所以不可能使用方方面面的虚拟语句。

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