



Do Plants “Cry” In Distress?

植物痛苦的时候会“哭”吗？

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In a new study, it was shown that plants **emit** sounds when they are distressed. And these sounds are very different depending on whether they have recently been cut or whether they don't have enough water. The sounds are not **audible** to the human ear, as they are between 20 and 100 **kilohertz**, which is above the **threshold** of human hearing (which usually has the upper limit of 15-17 kilohertz).

一项新的研究表明，植物痛苦时会发出声音。这些声音各不相同，取决于植物最近被切割还是缺水。人耳听不到的这些声音，因为它们在 20 到 100 千赫之间，超过了人类听觉的阈值（上限通常在 15 到 17 千赫）。

These are fascinating results. But we should be careful with what the study shows and what it doesn't. It is **tempting** to **frame** these results as “crying” and that is exactly what the popular science press has been doing. Plants don't suffer in silence: they are screaming with pain.

这些结果很有趣。但我们应该注意研究展现了什么，没有展现什么。人们很容易将这些结果描述为“哭泣”，而这正是科普媒体一直以来的论调。植物不会默默忍受，它们会痛苦地尖叫。

This is a beautiful **illustration** of how easily we **slip into** anthropomorphizing not just animals, but also plants. **Anthropomorphism** is the attitude of **attributing** human-like features and mental states **to** animals (and plants). It has been widely **discredited** in biology as an **unproductive** method for finding out more about animal cognition (and also about how plants function). (A much more **promising** method would be the exact opposite of anthropomorphism, what could be called

443 Words

emit [i'mit] v. 发出，散发（光、热、声音、气等）

audible ['ɔ:dəbl] adj. 听得见的 | Her voice was barely audible above the noise. 一片嘈杂，她的声音只能勉强听得见。

kilohertz ['kiləhɜ:rts] n. 千赫(兹)

threshold ['θreʃhoʊld] n. 门槛；阈，界，起始点 | My earnings are just above the tax threshold. 我的收入刚刚超过征税起点。

tempting ['temptɪŋ] adj. 诱人的，有吸引力的 | It's tempting to believe her story. 真想相信她的故事。

frame [freɪm] v. 表达；制定，拟定；镶边 n. 框架 | You'll have to be careful how you frame the question. 如何提出这个问题，你得慎重。

illustration [ˌɪlə'streɪʃn] n. 例证，实例；图表，插图 | The project provides a good illustration of how people can work together. 该项目很好地说明了人们如何才能协同工作。

slip into 陷入，进入（困难或不愉快的处境） | He began to slip into debt. 他开始欠债了。

anthropomorphism

zoomorphism, when we attribute features and mental states that we know from the study of animals to humans.)

这很好地说明了我们是多么容易陷入拟人化的思维方式，对象不仅是动物，还有植物。拟人化是一种认为动物（和植物）具有人类的特质和心理状态的看法。这种方法在生物学上广受质疑，因为它无法更好地了解动物的认知（以及植物的功能）。（一种更好的方法与拟人化完全相反，也就是所谓的拟物法，即认为人类具有我们从动物研究中了解到的动物特质和心理状态。）

Anthropomorphism makes it easier to relate to findings like the one about plants emitting sound — crying in distress is something that **resonates** with us more than the scientific language of air bubbles in the **xylem** of plants, which is the actual mechanism of the sound production in plants. But as of now, there is no reason to think that the sounds plants produce would count as communication in any meaningful sense of the term.

拟人化使我们更容易理解植物发出声音等发现——“在痛苦中哭泣”比“植物木质部中的气泡”这样的科学语言更能引起我们的共鸣，而木质部实际上是植物发出声音的机制。但到目前为止，没有理由认为植物发出的声音从任何意义上可以算作交流。

There is no evidence that they are heard by anyone (although **theoretically** some animals — bats, moths, mice — could actually hear it as their ears are sensitive to the **frequencies** of the plant sounds). And it could very well be a **byproduct** of the physical condition of these plants: less water in the system leads to more air bubbles in the xylem (in the little tubes that transport water in plants), which leads to the sound of the popping of these bubbles.

没有证据表明植物发出的声音能被任何人听到（尽管理论上一些动物[蝙蝠、飞蛾、老鼠]实际上可以听到，因为它们的耳朵对植物声音的频率很敏感）。它很可能是植物体状况的产物：植物体内水分减少导致木质部（植物中运输水分的小管道）中气泡增加，这就产生了气泡爆裂的声音。

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[ˌæŋθrəpəˈmɔːfɪzəm] *n.* 拟人论，拟人观（认为动物或物体具有人类的情感和特质）

attribute ... to ... 认为……具有（某一品质或特征） | One should not attribute human motives to animals. 不应该认为动物也有人类的动机。

discredit [dɪsˈkredit] *v.* 使不相信，使怀疑；败坏……的名声，使丧失信誉 *n.* 名誉丧失 | These theories are now largely discredited among linguists. 这些理论现已大多受到语言学家的质疑。

unproductive [ˌʌnpɹəˈdʌktɪv] *adj.* 产量少的，效果不佳的，无益的 | an unproductive meeting 没有成果的会议

promising [ˈprɑːmɪsɪŋ] *adj.* 有希望的，有前途的 | The weather doesn't look very promising. 天气看起来不会太好。

zoomorphism [ˌzəʊəˈmɔːfɪzəm] *n.* 拟物法，动物形象

resonate [ˈrezəneɪt] *v.* 使产生联想，引起共鸣 | These issues resonated with the voters. 这些问题引起了投票者的共鸣。

xylem [ˈzaɪləm] *n.* 木质部（植物中将水分和矿物质从根部向上输送的组织）

theoretically [θiːəˈretɪkli] *adv.* 从理论上说，照理说 | It is theoretically possible for computers to be programmed to think like

Is this a disappointing explanation? I don't think so. The aim is to understand why plants do what they do. And the results about the emitted sounds contribute to this body of knowledge. They could even lead to better ways of controlling the needs of plants in **horticulture** by audio monitoring. All of this is true even if the plants don't strictly speaking "cry" or "scream".

这种解释令人失望吗？我不这么想。目的在于了解植物为什么会这样做。关于植物发声的结果有助于完善这一知识体系。在园艺学方面甚至可以利用这一原理通过音频监控来更好地控制植物的需求。所有这些都是真实的，即使严格来说植物没有“哭泣”或“尖叫”。

Plus, no guilt next time you **mow** your lawn...

另外，下次你修剪草坪的时候就不用内疚了……

humans. 对电脑进行编程，使它像人一样思考，这在理论上是可能的。

frequency ['fri:kwənsi] *n.* (声波或电磁波振动的) 频率；发生率，出现率

byproduct ['baɪ,pra:dʌkt] *n.* 副产品；附带的结果 | Job losses are an unfortunate byproduct of the recession. 失业是经济衰退的不幸产物。

horticulture ['hɔ:rtɪkʌltʃər] *n.* 园艺学，园艺

mow [moʊ] *v.* (用割草机) 割，修剪 | I mow the lawn every week in summer. 夏天我每周都要修剪草坪。

➤ 脉络梳理

Para. 1 指出研究表明植物在受到切割或缺水时会发出声音

Para. 2-4 指出人们很容易将此研究成果拟人化为“植物会哭泣”，并分析了拟人化动植物的局限性

Para. 5-7 分析植物发出声音背后的科学原理及其应用，指出不必将人类的特质带入到植物身上

➤ 长难句拆解

主句 (it 为形式宾语, easier 为宾补, to relate to findings 为真正的宾语) 后置定语, 修饰 findings

Anthropomorphism makes it easier to relate to findings like the one about plants emitting sound

破折号后的内容解释说明主句

定语从句, 修饰 something

— crying in distress is something that resonates with us more than the scientific language of air

非限制性定语从句, 修饰 xylem

bubbles in the xylem of plants, which is the actual mechanism of the sound production in plants.