

📢 《夸克英语笔记》使用声明:

本套笔记完全免费且未提供任何付费服务及纸质版。我们坚持公益、非营利的原则，只为让优质内容触手可及。请勿用于任何商业用途，欢迎在合法范围内分享。



夸克英语笔记

Lesson 40 Waves

海浪 状语从句 定语从句

本文档(更新于:2026-04-09)最新内容地址: <https://www.ncego.com/lessons/273>

📑 单词列表 * 需要重点掌握

signature /ˈsɪgnətʃə(r)/ n. 签名, 标记

ray /reɪ/ n. 光线

rhythm /ˈrɪðəm/ n. 节奏

exquisite /ɪkˈskwɪzɪt/ adj. 高雅的

crest /krest/ n. 浪峰

vertical /ˈvɜːtɪk(ə)l/ adj. 垂直的

actuality /æktʃuˈæləti/ n. 现实

particle /ˈpɑːtɪk(ə)l/ n. 微粒

undulate /ˈʌndjuleɪt/ v. 波动, 形成波浪

gravitational /ˌgrævɪˈteɪʃən(ə)l/ adj. 地心吸力的

infinity /ɪnˈfɪnəti/ n. 无穷

energize /ˈenədʒaɪz/ v. 给与...能量

transmit /trænzˈmɪt/ v. 传送

phenomena /fəˈnɒmɪnə/ n. 现象

trough /troʊf/ n. 波谷

horizontal /ˌhɒrɪˈzɒnt(ə)l/ adj. 水平的

catastrophic /ˌkætəˈstrɒfɪk/ adj. 大灾难的

maturity /məˈtʃʊərəti/ n. 成熟

tremor /ˈtremə(r)/ n. 震颤

海浪的诞生 难度: 2 级

※ Waves are the children of the struggle between ocean and atmosphere, the ongoing signatures of infinity.

『 child of... ...的孩子/产物 』

- The atomic bomb is **the child of** 20th century scientific developments.
- The romantic movement was **the child of** the Great Revolution.
- Innovation is often the child of necessity. 创新往往是必需品的产物。
- These intricate designs are the children of a long tradition of craftsmanship. 这些复杂的设计是长期工艺传统的产物。

『 **the struggle between... and...** ...与...之间的斗争/抗衡 』

- **the struggle between good and evil** 善与恶之间的斗争
- History often records **the struggle between progress and tradition.** 历史经常记录进步与传统之间的斗争。

『 **ongoing** adj. continuing to exist or develop 持续（存在或发展）的 』

- The police investigation is **ongoing**.
- Training is part of our **ongoing** career development program.
- The starry night sky can be seen as **the ongoing signatures of infinity.** 星空夜景可以被视为无限的持续标记。
- The continuous flow of the river represents **the ongoing signatures of infinity.** 河流的持续流动代表着无限的持续标记。

an ongoing debate — 一场持续进行的辩论	There is an ongoing debate among scientists about the long-term effects of this new technology. 科学家们正就这项新技术的长期影响进行着一场持续的辩论。
an ongoing discussion 一次正在进行的讨论	We have an ongoing discussion with our partners regarding the budget for next year. 我们正与合作伙伴就明年的预算进行着持续的讨论。
an ongoing process 一个持续进行的过程	Learning a new language is an ongoing process that requires constant practice and patience. 学习一门新语言是一个持续的过程，需要不断的练习和耐心。

※ **Rays from the sun excite and energize the atmosphere of the earth, awakening it to flow, to movement, to rhythm, to life.**

『 **ray** n. [C] a straight narrow beam of light from the sun or moon 光线 』

- The room darkened as a cloud hid the sun's **rays**.
- Plants convert energy from the **rays from the sun** into food. 植物将来自太阳的光线的能量转化为食物。

X-rays X射线；X光	The doctor ordered X-rays to check if any bones were broken after the fall. 医生要求拍X光片，以检查摔倒后是否有骨折。
ultraviolet rays (UV rays) 紫外线	Sunscreen protects your skin from the harmful effects of ultraviolet rays . 防晒霜可以保护你的皮肤免受紫外线的有害影响。

『 **energize** v. to make someone feel full of energy or enthusiasm 使某人充满能量或热情 』

- a refreshing and **energizing** fruit drink 一种清新提神的水果饮料
- The discovery of the new particle helped to **excite and energize** the entire research team. 新粒子的发现帮助激发并为整个研究团队注入能量。

『 **awaken sb. to sth.** cause sb. to become aware of sth. 使某人意识到某事 』

- **awaken** society **to** the dangers of drugs
- During the 1930s Churchill tried to **awaken** the British people **to** the need for rearmament.
- It has **awakened** millions **to** political consciousness and recognition of the danger of fascism.
- The spring rain seems to **awaken** the dormant seeds **to life**. 春雨似乎唤醒了休眠的种子以使其获得生命。
- The new policy is intended to **awaken** the market **to greater competition**. 这项新政策旨在唤醒市场以迎接更大的竞争。

『 **rhythm** n. [U and C] 节奏 』

- the steady **rhythm of** her heartbeat
- She started moving to the **rhythm of** the music.

※ The wind then speaks the message of the sun to the sea and the sea transmits it on through waves -- an ancient, exquisite, powerful message.

『 **speak** v. to say or state sth. 说出来 』

- She was clearly **speaking** the truth.
- He **spoke** the final words of the play.
- He **spoke** only two words the whole evening.
- The poet's verses **speak the message of hope to** a generation seeking direction. 诗人的诗句向寻求方向的一代人传达了希望的信息。

『 **transmit sth. on through...** 通过...传递/发送某物 』

- The radio station **transmits the signal on through** a network of local towers. 该电台通过本地塔台网络发送信号。
- Bacteria can **transmit resistance on through** horizontal gene transfer. 细菌可以通过水平基因转移传递耐药性。

波浪的特征 难度：3级

※ These ocean waves are among the earth's most complicated natural phenomena.

『 **be among ...** 是...之一； 包括在...之中 』

- He **was among** the last to leave.
- **Among** those present **were** the Prime Minister and her husband. 表系主 (引起了倒装)
- **Among** them will be Debbie's mother, who swam the Channel herself when she was a girl.
- Designing a secure system is **among the most complicated** tasks in software engineering. 设计一个安全的系统是软件工程中最为复杂的任务之一。
- The structure of the human brain is **among the most complicated** biological systems known. 人类大脑的结构属于已知最为复杂的生物系统之一。

※ The basic features include a crest (the highest point of the wave), a trough (the lowest point), a height (the vertical distance from the trough to the crest), a wave length (the horizontal distance between two wave crests), and a period (which is the time it takes a wave crest to travel one wave length).

『 **crest** n. the top or highest point of something such as a hill or a wave 山峰, 浪尖 』

- We reached the **crest** of the hill just as the sun was setting. 我们爬到山顶时, 太阳正好落下。
- The **crest** of the blue heron is particularly prominent during the mating season. 大蓝鹭的羽冠在繁殖季节尤为明显。
- The family **crest** was engraved on the silver platter. 家族徽章刻在银盘上。

crest of的顶端; ...的巅峰

- It took us over an hour to reach the **crest** of the hill.
- surfers riding the **crest** of the wave
- Surfers waited for hours to catch the perfect **crest of** a wave. 冲浪者等了好几个小时, 只为抓到一个完美的浪尖。
- She is currently on the **crest of** a wave of popularity following her latest film. 随着最新电影的上映, 她正处于人气巅峰。

『 **trough** n. the hollow area between two waves 波谷/低谷 』

- The economy is currently in a deep **trough**, but analysts predict a recovery soon. 经济目前处于一个深谷中, 但分析师预测很快会复苏。
- Waves are measured from the top (**crest**) to the bottom (**trough**). 海浪是从波峰到波谷进行测量的。
- From peak to **trough** more than 8m jobs were lost. 从峰值跌到低谷造成800万份工作流失。

..., and a period (which is the time ~~(which)~~ it takes a wave crest **to travel one wave length**). 补全

波浪的描述 难度：6 级

※ **Although** an ocean wave **gives** the impression of a wall of water moving in your direction, in actuality waves **move** through the water leaving the water about where it **was**.

『 **give (sb.) the impression of...** 给人一种...的印象 』

- He **gives the impression that** he really doesn't care.
- The sudden movement of the door made it sway slightly and it **gave me the impression that it was about to leap out at me**.
- The new software update **gives the impression of** being much faster than the old version. 新的软件更新给人一种比旧版本快得多的印象。
- Despite her confidence, her trembling hands **gave the impression of** deep nervousness. 尽管她很自信，但她颤抖的双手给人一种深度紧张的印象。

『 **be under the impression (that) ...** to believe that sth. is true when it is not 误以为... 』

- I'm sorry, I **was under the impression that** you were the manager.
- Though the crew **were** at first **under the impression that** the lost ship had been found, the contents of the sea-chest proved them wrong.

『 **wall** n. thing similar to a wall in its appearance or effect (样子或作用) 似墙之物 』

- Firefighters battled **the walls of flames**.
- The investigators were confronted by **a wall of silence**.
- The tidal wave formed **a terrifying wall of water**.
- The Titanic turned just in time, narrowly missing **the immense wall of ice** which rose over 100 feet out of the water beside her.

wall of fire 火墙；烈焰 屏障	The firefighters were suddenly confronted by a massive wall of fire as the wind shifted. 风向转变时，消防队员们突然面对一面巨大的火墙。
wall of water 水墙；巨浪（如海啸或洪水）	Witnesses described the tsunami as a terrifying wall of water rushing toward the shore. 目击者将海啸描述为冲向岸边的恐怖水墙。
wall of noise / sound 震耳欲聋的声音；声音障壁	As the band walked onto the stage, they were met with a wall of noise from the cheering crowd. 当乐队走上舞台时，迎接他们的是人群发出的排山倒海般的欢呼声。

『 **of** 做比喻（前面是喻体，后面是本体） 』

- Jane is **a submissive lamb of a girl**.

- There is always hope that in **its labyrinth of musty**, dark, disordered rooms a real rarity will be found amongst the piles of assorted junk that litter the floors.

a boy of a girl 假小子 一样的姑娘	She was a real boy of a girl , always climbing trees and playing football with her brothers. 她是个十足的假小子，总是和哥哥们一起爬树、踢足球。
an angel of a wife 天使般的妻子	He knew he was lucky to have such an angel of a wife who supported him through the hardest times. 他知道自己很幸运，能有这样一位在最艰难时期支持他的天使般的妻子。
a palace of a house 宫殿般的房子；豪宅	After winning the lottery, they moved into a palace of a house with twelve bedrooms and a private lake. 中彩票后，他们搬进了一栋像宫殿一样的豪宅，里面有十二间卧室和一个私人湖泊。
a garden of Switzerland 花园般的瑞士	With its pristine lakes and lush green mountains, people often describe the country as a garden of Switzerland . 凭借其纯净的湖泊和郁郁葱葱的青山，人们常将这个国家描述为花园般的瑞士。

『 **in sb.'s direction** 朝某人的方向；向某人（看、走等） 』

- I waved, but she didn't even look **in my direction**. 我挥了挥手，但她甚至都没朝我这边看一眼。
- Fortunately for me, as I was wondering what to do next, there appeared on the horizon a man on horseback, riding **in my direction**.

in the direction of ...朝...的方向	<ul style="list-style-type: none"> • Tom went off in the direction of the post office. • They headed off in the direction of the station. 他们朝车站方向走去。 • The wind is blowing in the direction of the coast. 风正往海岸方向吹。
in every direction 朝四面八方； in all directions 向 各个方向	<ul style="list-style-type: none"> • It is a harmless habit, but it litters up her desk to such an extent that every time she opens it, loose bits of paper fall out in every direction. • The elephant is not immediately susceptible to such blandishments, however, and usually lashes fiercely with its trunk in all directions. • The crowd scattered in all directions when the rain started. 下雨时，人群向四面八方散开。 • From the top of the hill, the woods stretched away in every direction. 从山顶望去，森林向四面八方延伸开来。

『 **in actuality** = in reality / actually 事实上；实际上 』

- **In actuality**, it's much more complex than that.

- The woman he had seen performing on stage was **in actuality** quite older than she had seemed.
- The plan seemed simple, but **in actuality**, it was incredibly complex to execute. 这个计划看起来很简单，但实际上执行起来却极其复杂。
- He claimed to be a billionaire, but **in actuality**, he was deeply in debt. 他声称自己是亿万富翁，但实际上他负债累累。

※ **If** the water **was moving** with the wave, the ocean and everything on it **would be racing** in to the shore **with obviously catastrophic results**.

『 **were** ⇒ **was** 在当代英语中的趋势（虚拟语气） 』

- If she **was** here, she could speak on my behalf.
- If I **was** rich, I would buy you anything.
- If it **was** to rain, the ropes would snap.
- if I **were** you ⇒ **were** I you 语言习惯，不能改
- as it **were** 固定搭配
- if it **were** not for ⇒ **were** it not for 固定搭配

波浪的存在形式 难度：1级

※ An ocean wave **passing through deep water** **causes** a particle on the surface to move in a roughly circular orbit, drawing the particle first towards the advancing wave, then up into the wave, then forward with it and then -- as the wave **leaves** the particles behind -- back to its starting point again.

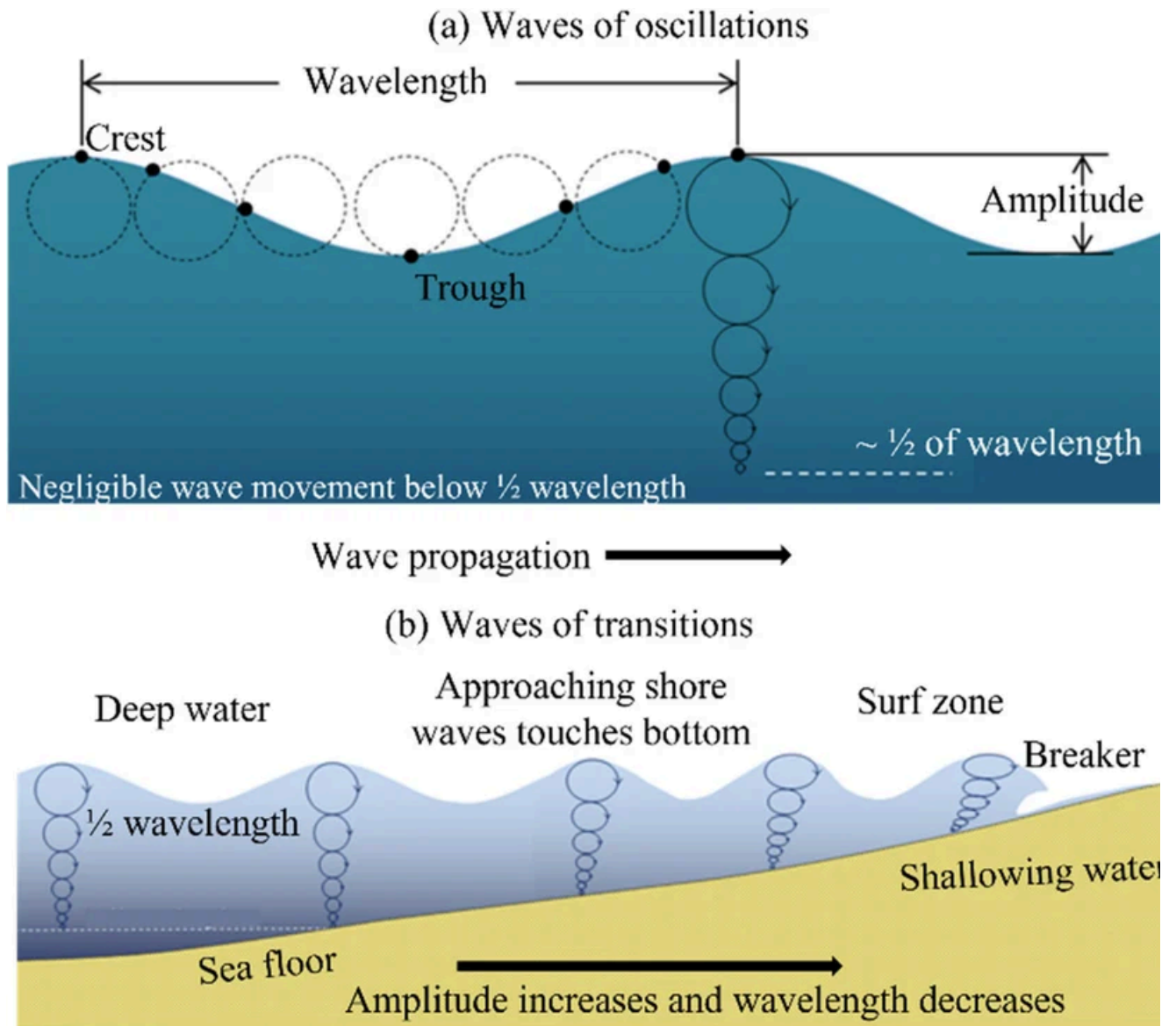
『 **particle** n. [C] a very small piece of sth. 微粒 』

- There's not a **particle** of truth in what he said. 他所说的话中没有一丝事实。
- Have you ever gotten a piece of sand or dirt or other small **particle** in your eye? 你曾经有过沙子、灰尘或其他小颗粒进入眼睛的经历吗？
- The energy of a light photon or **particle** is different for each color. 可见光子或粒子的能量因颜色不同而不同。

dust particles 尘埃微粒；粉尘	You can see dust particles dancing in the sunlight streaming through the window. 你可以看到尘埃微粒在透过窗户射进来的阳光中飞舞。
tiny particles of soil 极小的土壤颗粒	Plants absorb nutrients that are attached to tiny particles of soil . 植物吸收附着在极小土壤颗粒上的养分。

『 passing through deep water 穿过深水区 』

- The submarine was detected while **passing through deep water** far from the coast. 这艘潜艇在远离海岸的深水区穿行时被侦测到。
- The energy of the storm remained intact while **passing through deep water**. 风暴的能量在穿过深水区时保持完整。



海浪从成熟到消亡过程 难度：4级

※ From both maturity to death, a wave is subject to the same laws as any other 'living' thing.

From **both** maturity to death 这里的 **both** 是一个强调词 (Intensifier)，用来强调范围的两端，表示“从.....到.....这两者过程中的全部”。

通常我们学的是 both... and... (两者都)，但在 from both A to B 这个结构里，both 的作用是预示并强调接下来的两个端点 (maturity 和 death)。

这种用法在文学或正式修辞中较多，目的是为了表达一种“完整性”。你可以把它理解为：“从成熟直到死亡，这两端及其间的一切。”

- **From maturity to death...** (从成熟到死亡.....) —— 只是陈述一个时间段。
- From **both** maturity to death... —— 强调无论是成熟期还是死亡期（以及中间的过程），这个规律都适用。它把“成熟”和“死亡”作为两个对立但并列的点提出来加强语气。
- The company went through several phases **from both maturity to death** after the market changed. 市场变化后，这家公司经历了从成熟到消亡的几个阶段。
- The life cycle of a star extends **from both maturity to death** over billions of years. 恒星的生命周期从成熟到消亡绵延了数十亿年。

『 **be subject to ...** 1. if you are subject to a rule, law, penalty etc, you must obey the rule or pay an amount of money 必须服从或支付 』

- As a diplomat, he **is not subject to** local laws.
- Violators **are subject to** a \$100 fine. Cars are subject to a high domestic tax.
- All citizens **are subject to the same laws** and regulations, regardless of their status. 所有公民，无论其地位如何，都受制于相同的法律和法规。
- Even microscopic life forms **are subject to the same laws** of thermodynamics. 即使是微小的生命形式，也受制于同样的热力学规律。

『 **be subject to ...** 2. often having, suffering or undergoing sth 常有、常患或常遭某事物 』

- **Are you subject to** colds?
- Trains **are subject to** delays after the heavy snowfalls.
- The timetable **is subject to** alteration.

『 **be subject to ...** 3. depending on sth. as a condition 需要某事物（为先决条件），取决于... 』

- The plan **is subject to** the director's approval.
- Goods will be sent out within 14 days, **subject to** availability.

So let us begin anew—remembering on both sides that civility is not a sign of weakness, and sincerity **is always subject to** proof. Let us never negotiate out of fear, but let us never fear to negotiate. — John F. Kennedy

『 **as 引导比较状语从句（省略be）** 』

- From both maturity to death, a wave is subject to the same laws **as** any other 'living' thing ~~(is)~~. 主语里有be，所以从句省略
- From both maturity to death, a wave is subject to the same laws **as** ~~(is)~~ any other 'living' thing. 主语太长可以倒装

※ For a time it **assumes** a miraculous individuality that, in the end, is reabsorbed into the great ocean of life.

『 **for a time** temporarily, for a certain period 暂时，一时，一度 』

- This method was used **for a time**, but it is no use now
- He was **for a time** a professor at Cambridge.
- Despite the long and complicated process, the project was successful **in the end**. 尽管过程漫长而复杂，但该项目最终还是成功了。

『 **assume** v. (fml.) to start to have a particular quality or appearance = take on 开始拥有（某种特征或外表） 』

- These relationships **assume** great importance in times of crisis.
- In the story the god **assumes** the form of an eagle.

『 **individuality** n. [U] the qualities that make sb. or sth. different from other things or people 个性，个人特征 』

- We like our staff to show their **individuality** rather than wear a uniform.
- The plot is credible but the characters lack **individuality**.
- Each snowflake, briefly, **assumes a miraculous individuality** before melting. 每一片雪花在融化之前，都会短暂地呈现出奇迹般的个体性。
- The child's imagination allowed him to **assume a miraculous individuality** in his play. 孩子的想象力使他在玩耍中能够呈现出奇迹般的个体性。

『 **reabsorb** v. to absorb again 再次吸收，使再次融入 』

- The economy cannot **reabsorb** all of the refugees **into** the workforce.
- The kidneys **reabsorb** most of the water and nutrients back into the bloodstream. 肾脏会将大部分水分和养分重新吸收进血液中。
- After the rain, the water slowly **was reabsorbed into** the dry soil. 雨后，水缓慢地被重新吸收到干燥的土壤中。

reabsorb ... into

...
将...重新吸收到...中；
使...再次融入

After the merger, the smaller company was **reabsorbed into** the parent corporation. 合并后，这家小公司被重新并入母公司。

结论 难度：3级

※ The undulating waves of the open sea are generated by three natural causes: wind, earth movements or tremors, and the gravitational pull of the

moon and the sun.

『 **undulating** v. (fml.) to move or be shaped like waves that are rising and falling 波动, 呈波浪状起伏 』

- a field of wheat **undulating** in the breeze
- The artist perfectly captured the look of **the undulating waves** in the painting. 这位艺术家在画中完美地捕捉了起伏的波浪的景象。
- We watched **the undulating waves** from the deck of the cruise ship. 我们在游轮的甲板上观看着起伏的波浪。
- The surface of the lake began to **undulate** as the wind picked up. 随着风力增强, 湖面开始泛起波纹。

undulating hills 起伏的山
峦; 连绵起伏的小山

The road wound through miles of **undulating hills** and green pastures. 道路穿过数英里连绵起伏的小山和绿色牧场。

『 **be generated by** 由...产生/生成 』

- The undulating waves of the open sea **are generated by three natural causes**. 开阔海域起伏的波浪由三种自然原因产生。
- Electricity **is generated by** various sources, including coal, wind, and solar. 电力由各种来源产生, 包括煤炭、风能和太阳能。

『 **tremor** n. 1. a small earthquake in which the ground shakes slightly 轻微地震 』

- Minor earth movements or **tremors** are common in that fault zone. 轻微的地壳运动或震动在该断层带很常见。
- The **earth tremor** lasted only a few seconds, but it was enough to rattle the windows. 那次轻微地震仅持续了几秒钟, 但足以震得窗户嘎嘎作响。

『 **tremor** n. 2. a slight shaking movement in your body that you cannot control, especially because you are ill, weak, or upset 颤抖 』

- There was a slight **tremor** in his voice.
- She felt a **tremor** of fear run through her.
- There was a slight **tremor** in her voice as she began to speak about the incident. 当她开始谈论那起事件时, 声音略带颤抖。
- Parkinson's disease often causes an involuntary **tremor** in the hands. 帕金森病经常导致手部不自主地颤抖。

『 **gravitational** adj. related to or resulting from the force of gravity 重力的 』

- The **gravitational** force between the Earth and the Moon keeps the Moon in orbit. 地球和月球之间的万有引力使月球保持在轨道上。

- The **gravitational pull of** Jupiter affects the orbits of many asteroids. 木星的引力影响着许多小行星的轨道。

gravitational field 重力场；引力场	An object within a planet's gravitational field will experience a force pulling it toward the center. 处于行星引力场内的物体会感受到一股将其拉向中心的力。
gravitational pull 作用；重力拉力	The gravitational pull of the sun is strong enough to hold the entire solar system together. 太阳的引力强大到足以将整个太阳系维系在一起。

※ **Once waves have been generated, gravity is the force that drives them in a continual attempt to restore the ocean surface to a flat plain.**

『 **restore sth. to sth.** 恢复；使（某物）恢复到（某种状态/位置） 』

- The committee is working hard to **restore** the old church **to** its original glory. 委员会正努力使这座古老的教堂恢复往日的辉煌。
- The government promises to **restore** the economy **to** full strength.
- She was hoping that the Mediterranean climate would **restore** her **to** full health.
- The engineers worked to **restore** the damaged area **to** a flat plain for construction. 工程师们努力将受损区域恢复到平面以进行施工。



save my ass.

救我一命（不是“保定”）：用于形容某人帮助或拯救自己免于困境、危险或失败。

请发送邮件至：hibenba@gmail.com 或通过 (ncego.com) 页面底部“举报错误”。

一场孤独的修行，需要相信积累的力量。专注当下、珍惜时间、顶峰相见。