通代学技养活

文 选

南京大学公共外语教研室编

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TÖNGSÚ KĒJÌ YĪNGYŬ WÉNXUĂN 通俗科技英语文选

第二十三辑

南京大学公共外语教研室编

商务 印书馆出版 (北京王府井大街 36 号) 新华书店北京发行所发行

三河县二百户印刷厂印装

ISBN 7-100-00021-1/H·9

1988年4月第1版

开本 787×1092 1/32

1988年4 月北京第1次印刷 字数 53 千 印数 4.300 册

印张 2 1/4

定价: 0.51 元

Contents

When Laziness Pays off 懒惰的好处			
庆 译注 林 棣 村	交(1)
Do Chimps Really Use Tools? 黑猩猩真会使用			
工具吗?	交(6)
Notes from All Over: Animal Guards 天南			
地北: 动物警卫员	圣 (11)
Why Do Birds Sing? 鸟儿为什么啼叫	•		ĺ
·····································	交 (12)
How Do Birds Learn to Sing? 鸟儿是怎样学会			_
啼叫的。	÷ (16)
Do All Birds Sit on Their Eggs? 鸟儿都孵蛋吗?	• (_
	<u>ک</u> (19)
Cacti able to "Walk" 会"走路"的仙人掌	•		_
	<i>ኔ (</i>	24	`
Why Do Wolves Howl? 狼嗥之谜?			•
	ž (25	`
Riddles 谜语			
Alligator Males Prefer It Hot 雄性短吻鳄更喜欢	• (20	_
高温	s (28	`
Why Does the Gorilla Beat Its Chest? 大猩猩	. \	~0	,
为什么拍打胸脯。徐锡祥 译注 侯临海 校	5 (32	`
Can Crying Ease Stress? 流泪能减轻紧张情绪	. \	J-	J
Violet November 2017 10 10			

	纯	眞	权	(33)
Cellular Protein Factories 细胞一一蛋白]质加]	Ľ.			
厂	王	韬	校	(38)
Carbon Dioxide, Please! 请来点二:					
	. 监	海	译	(42)
Gallium Arsenide 砷化镓					
陈爱富 译注	刘纯	. 豹	校	(43)
What Is Electricity? 什么是电?					
王银萍 译注	纯		校	(47)
Boiling Water Freezes Fast 沸水结冰快					
徐丽卿 译注	刘	鼎	校	(50)
Universe's Mystery Force 宇宙中神秘的	力				
王 韬 译注	. 侯宁	海	校	(53	
Common Knowledge: Uses of Salt					
盐的用途宁 海 译	:	水	校	(58	
Nuts and Bolts of Computer Hardware	计算	机硬	Ē		
件的基本组成部分无名氏 译注	王	韬	校	(59)]

When Laziness Pays Off

It is hard to imagine how this improbable beast manages to survive. It can barely see or hear; it has very little muscle; it cannot walk or even stand; it spends most of its life hanging upside down, sleeping.

Everything it does seems to be in slow motion. It may take as long as 30 seconds to shift one leg a few inches. It even sneezes slowly—when it sneezes at all.

If you were to fire a gun next to one of these creatures, it would do no more than turn its head and blink. Its incredible sluggishness is truly "one of the wonders of nature," says an American zoologist. Yet it is one of the most successful mammals alive today. Despite its laziness, it is believed to be the most abundant tree-dwelling mammal in South America's tropical forests.

What is its secret? This indolent creature is a three-toed sloth. Named after one of the seven deadly sins①, the sloth's very existence seems an affront to our notions about the value of hard work. Sloths spend about 18 hours of every day sleeping. Even when awake, they remain nearly motionless; their few movements seem excruciatingly slow to a human observer.

But the sloth's extreme sluggishness works to its advantage. This primitive mammal expends so little energy that it eats much less than its more advanced relatives—one reason for its success. It survives on a few calories, and the leaves it cats are abundant.

The sloth's laziness in grooming helps its natural camouflage. Its coarse hair, rarely tended[®], is practically an ecosystem to itself, populated by[®] two species of blue-green algae, a cockroachlike moth and hundreds of beeltes. The algae turns the sloth's hair greenish, making it almost invisible in the trees, inconspicuous to jaguars and eagles, its predators.

Sloths have extremely tough skin, and their wounds heal quickly and cleanly; thus they survive injuries that would kill other animals. Another key to the sloth's survival is its long, sickle-shaped claws, which enable it to hang effortlessly from the limbs of trees and give the animal such a good grip that it's nearly impossible to pry one loose from its branch. Sloths remain hanging even after they die, often until their bodies have become quite decomposed.

The Indians who hunt sloths for meat often resort to sawing off the entire branch, sloth dangling obliviously[®] from the end. When on the ground, a three-toed sloth will lie help-lessly, all four limbs sprawled out[®]. It can only move by pulling itself along on its belly.

Nevertheless, the sloth is perfect—that is, perfectly adapted to its arboreal environment. Whereas monkeys and other tree dwellers rely on swiftness and agility for survival, the sloth's very sluggishness is the key to its success.

词汇

pay off 使人得益;有报偿 blink [blink] vi 眨眼睛 incredible [in'kredəbl] a 难以置 信的 sluggishness ['slagi∫nis] n 懒惰; 不想动 indolent ['indələnt] a 懒惰的 sloth [sləuθ] n 懒惰;树懒(产于

南美洲) affront [əˈfrʌnt] n 当众侮辱; 有 意冒犯 excruciatingly [iks'kru:fieitinli] ad 极度 to sb's advantage 对...有利 expend [iks'pend] vt 化费 groom [grum] vi 修饰 camouflage ['kæmufla:3] n 伪装 tend [tend] v 照料:管理 populate ['popjuleit] v 居住于... 中:在...占一席之地 algae ['ældji:] n (alga的复数) 水 cockroachlike ['kokroutflaik] a 类似幢螂的 inconspicuous [inkon'spikjuos] a 难以观察的

iaguar [ˈdxæqiuə] n 美洲虎 predator ['predətə] n 食肉动物 limb [lim] n 肢:大树枝 prv (one) loose 撬起; 用尽方法 **使脱离** decomposed [di:kəm'pəuzd] a 腐败 resort (to) 求助或采取某种手段 saw off 锯下 dangle ['dængl] vi 悬挂:摇晃 obliviously [ə'bliviəsli] ad 不在 意地 sprawl out 伸开四肢躺; 笨拙地 arboreal [aːˈbɔːriəl] a 栖息在树 上的 agility [ə'dsiliti] n 敏捷,灵活

注 释

- ① seven deadly sins: 宗教上,"七大重罪"指 pride (骄傲)、covetousness (贪婪)、lust (淫欲)、anger (愤怒)、gluttony (贪食)、envy (妒忌)以及 sloth (懒惰),并认为犯有这些罪的人死后就得讲地狱.
- ② rarely tended: 插入语,意为: "几乎不加护理和修整".
- ③ populated by: 居住着,相当于 occupied by
- ④ one: 指 sloth; pry one loose 使树懒松开(其爪)
- (5) sloth dangling obliviously: 分词独立结构; sloth 为 dangling 的 逻辑主语.
- ⑥ all four limbs sprawled out: 分词独立结构; sprawled out = being sprawled out, 意为"懒散地伸开".
- ⑦ SURVIVE 在本文中的一些用法归纳如下: Survive vi 话下来;幸存,残存

Sloth manages to survive despite its laziness. (尽管懒惰成性,树懒还是设法生存下来了。)

Sloth is one of the most successful mammals that survive. (树懒 是生存下来的最成功的哺乳动物之一。)

Sloth survives on a few calories. (树懒只要有几大卡的食物 量便可生存。)

Survive vt 幸免于;从...中逃生

Sloths survive injuries that would kill other animals. (对于其它动物是致命的损伤并不能伤害树懒。)

Many animals died because they could not survive the changes of the environment. (许多动物因不能适应环境的变化而死亡。)
Survival n 幸存, 残存, 牛存

Another key to the sloth's survival is its long, sickle-shaped claws. (树懒生存的另一关键是其长长的镰形爪子。)

Sioth depends on its sluggishness for its survival. (树懒是靠其懒惰才得以生存下来的。)

参考译文

懒惰的好处

很难想象这种似乎不可能存在的动物是如何设法生存下来的。它 谈不上有视力和听力,它几乎没有一点儿肌肉;它不能行走,甚至站也 站不住;它生命的大部是在倒悬着睡眠中度过的。

它的一切活动似乎都是慢吞吞的。一条腿移动几英寸也许要费 30 秒钟,连打喷嚏也是慢慢的——若是打喷嚏的话。

要是在它身旁打枪,那么它的反应充其量也只不过是转过头来眨眨眼睛而已。正如一位美国动物学家所说,它的这种难以置信的懒惰真可谓是"大自然之一奇",然而它却是现今活着的最成功的哺乳动物之一。尽管这种动物懒惰成性,人们却相信它是南美热带丛林中数量最多的哺乳动物。

其奥秘何在呢?这种惰性十足的动物原来是一种三趾的树懒,这

一名称就是取自该罚入地狱的七大重罪之一的"懒惰"。我们对勤劳一贯评价极高,而树懒的存在则是对这些看法的公然侮慢。树懒每天要睡 18 小时。就是醒着的时候,也几乎是纹丝不动;它少许的活动在人们眼里似乎也慢得可怜。

可是树懒出奇的懒惰却有利于其生存。这种原始哺乳动物的能耗极少,因而与其进化程度较高的亲属相比,它对食物的需求量就少得多了——这便是它能生存下来的原因之一。仅几大卡的食物量便能维持其生命,何况它赖以为生的树叶又很丰富。

树懒的懒于修饰的习性有助于其自然伪装。它的皮毛粗糙,从不修整,对它说来实际上是一种生态系统,里面居住着两种兰绿藻、一种类似蟑螂的蠹虫以及数以百计的甲虫。兰绿藻使树懒的毛带绿色,这样在树林里就不易被发现,对于觅食它的美洲虎和鹰来说也不那么显眼好找。

树懒皮肤坚韧无比,伤口愈合迅速彻底。那些可置其它动物于死地的损伤丝毫伤害不了树懒。树懒生存的另一个关键是它长长的镰形爪。有了这些爪子,它便能毫不费劲地倒挂着,爪子还能牢牢地抓住树枝,几乎无法使它松开。树懒的这种倒挂姿势可说是至死不变,常常要到其身体相当腐烂时才松落。

那些猎食树懒的印地安人通常采用将整个树枝锯下的办法,此时树懒却仍毫不在意地挂在一端,晃来晃去。可是一旦到了地上,三趾树懒就只好无可奈何地趴在地上了,四肢懒散地伸开,仅能以腹部贴地拖着身体移动。

尽管如此,树懒是无懈可击的,就是说,它完全适应在树林生活的 环境。猴子和其它以林为家的动物是凭借敏捷和机灵生存下来的,而 树懒的生存之道则是懒惰了。

丽庆译注林棣校

Do Chimps Really Use Tools?

Not only do they use tools; they invent them. It was Jane Doodall, perhaps the best known of all animal behaviorists, who brought this phenomenon to the world's attention. To chimps, termites are a delicacy. But, in their hard earthen mounds laced with intricate networks of tunnels, the insects are not easily procured.

Goodall learned how a very simple tool makes it possible for chimpanzees to go termite "fishing". The chimp simply scrapes away the surface of the nest with a finger, then inserts a twig or a long stem of grass — the tool. Almost instantly, termites grab at the intruding element. The chimpanzee retrieves the tool with termites dangling from it and nibbles them off, like a kid with a lollipop. Chimps have also been known to use rocks to crack open nuts. ©

Goodall observed that chimps sometimes modify tools to make them work better. Thus, before employing twigs as termite "fishing rods," the apes may strip off the leaves. It has been similarly well-documented in the laboratory that some apes can solve certain problems by improvising tools. For example, they can obtain food that is lying or hanging out of reach by connecting rods or stacking boxes.

These animals know how to make sponges, too. A chimp will grasp⁴ a bunch of leaves, chew them, and roll them into a ball. It then plunks the leaf sponge into tree hollows and other places where water collects. When the leaves are

soaked, the chimp squeezes the liquid into its mouth.

Tool-using is not exclusively a chimpanzee trait. To accomplish tasks beyond their natural physical limits, other animals also use sticks, stones, feathers and other foreign objects. But among behaviorists, a debate still rages as to exactly what all this means.

The debate is important because until fairly recently the scientific community agreed that one characteristic separating man from all other animals was the fact that humans made and used tools. Now that tool use has been documented in other animals, scientists are pondering whether such behavior is learned, instinctual or both. The evidence that apes seem to be capable, through a trial-and-error process, of intuitively solving problems by using tools suggests that an intellectual process is going on. ®

Whatever the significance of animal tool use, there is no gainsaying its inventiveness. Jackdaws use rocks as "anvils" to smash shellfish. Male bowerbirds "paint" their basketlike bowers with berry juices and fruit pulp, "brushing" it on with a wad of fibrous bark. The woodpecker finch of the Galapagos grasps a twig or cactus spine, then probes inside trees to pry out grubs and other insects. Polar bears have reportedly killed walruses using blocks of ice as bludgeons.

The Egyptian vulture clutches a stone with its beak, tears its head back and fires the stone at ostrich eggs, which are too thick to crack open with a simple peck. The northern shrike uses thorny bushes or the forks of tree branches to impale insect prey, storing dinner for a later date. Elephants scratch themselves with sticks held in their trunks. Sea otters

dine on clams, mussels, sea urchins or abalone, which they bash open with a rock "mallet".

The more scientists study the way these and other animals behave, the more they are forced to narrow their definition of what does indeed separate people from other creatures. The study of tool use is just one aspect of this. In recent years chimpanzees and other apes have been taught in laboratory to use sign language or computers for communicating with people.

词 汇

chimp = chimpanzee [tfimpon-'zi:] n 黑猩猩 termite ['tə:mit] n 白蚁 delicacy ['delikəsi] n 精美的食 物 mound [maund] n 土堆 lace [leis] vt 交织 intricate ['intrikit] a 复杂的 procure [prəˈkjuə] vt 获得 scrape [skreip] vt 刮、剥 twig [twig] n 细枝 retrieve [ri'tri:v] vt 取回、收回 dangle ['dæŋgl] vi 悬挂着 lollipop ['lolipop] n 棒糖 strip [strip] vt 剥夫 improvise ['improvaiz] vt 临时 准备、临时凑成 stack [stæk] vt 堆积 sponge [spands] n 海棉 plunk [plank] vt 把...扔在... exclusive [iks'klu:siv] a 唯一的,

独有的 trait [treit] n 特性、性格 rage [reics] vt 激烈进行 ponder ['pondə] vt 深思、考虑 instinctual [ins'tinktjul] a 本能 的、天性的 intuitive [in'tju:itiv] a 直觉的, 直观的 gainsay [gein'sei] vt 否认, 否定 (主要用于否定句和疑问句) jackdaw [ckækdo:] n 寒鸦 anvil [ˈænvil] n 铁砧 bower ['bauə] n 卧室 pulp [pʌlp] n 果肉 wad [wod] n 小软块 fibrous ['faibrəs] a 纤维状的 woodpecker ['wud.pi:kə] n 啄木 皀, finch [fint] n 胞盒 Galapagos (大西洋中的)盖拉邦 哥斯群岛

cactus ['kæktəs] n 仙人掌
spine [spain] n 针、刺
probe [proub] vt 伸人
pry [prai] vt 撬
grubs [grʌbz] n 蛆、蛴螬
walruse ['wɔ:lrəs] n 海象
bludgeon [blʌʤən] n 棒子
vulture ['vʌltʃə] n 秃鹫
clutch [klʌtʃ] vt 抓住
beak [biːk] n 喙
rear [riə] vt 举起

ostrich ['ɔstrif] n 鸵鸟
shrike [raik] n 百舌鸟
impale [im'peil] vt 刺穿、穿透
prey [prei] n 被捕食的动物
otter ['ɔtə] n 水獭
clam [klæm] n 蛤肉
mussel ['mʌsl] n 贻贝
sea urchin ['əːtʃin] n 海胆
abalone [ˌæbə'louni] n 鲍鱼
mallet ['mælit] n 槌

注 释

- ① It was Jane Goodall, ... to the world's attention. 本句为强调结构 "It was... who/that..." 强调的是句中的主语 Jane Goodall.
- ② ... a very simple tool makes it possible for chimpanzees to go termite "fishing". 句中 it 为动词 make 的形式宾语, 其真正宾 语为动词不定式的复合结构 for chimpanzees to go termite "fishing".
- 3 ... to crack open nuts = to crack nuts open
- ④ A chimp will grasp...: 此处 will 是情态动词,意思是"往往会"、 "总是".
- ⑤ The evidence...suggests that an intellectual process is going on. 本句中的 suggests 意为"提示"、"使人想到",不作"建议"解,因此,其后的宾语从句中不用虚拟语气.
- ⑥ ..., there is no gainsaying its inventiveness. (...,它的创造性是无可置疑的.) "There is no gainsaying..." 意为"...是无可置疑的". 又如: There is no gainsaying his honesty. 他的诚实是无可置疑的.
- ① ..."brushing" it on with a wad of fibrous bark. 句中的 on 是 副词,表示"接着又...","然后再...".

黑猩猩真会使用工具吗?

黑猩猩不仅会使用工具而且会发明工具。是简·古得尔使全世界注意到这一现象的。简·古得尔也许是 最著名的 研究 动物行为的专家。白蚁是黑猩猩的佳肴。但是,白蚁藏身于坚硬的蚁穴,内部通道密布,纵横交错。要想抓住它们可不是容易的。

古得尔发现了黑猩猩是如何使用一个十分简单的工具来"钓"得白蚁的。黑猩猩先用手指把蚁巢的表面扒开,然后把工具——一根小树枝或一根长草茎——插入洞穴。白蚁马上就会把伸入穴中的工具紧紧抓住。这时黑猩猩再把挂满白蚁的工具抽出来,然后就象小孩吃棒棒糖那样把白蚁吃掉。此外,大家还知道,黑猩猩还会用石块把胡桃砸开。

古得尔观察到黑猩猩有时还能改进工具,使它用起来更为方便。例如,在用小树枝当"钓鱼竿"时,猩猩也许会先剥去树叶。同样,实验室里的实验结果也证明:有些猩猩能临时制造工具来解决某些问题。例如,他们会把竿棒连接起来,或者把箱子堆高,来获取远处或悬吊着的食物。

黑猩猩也知道怎样做吸水海绵,它抓一把树叶嚼碎,搓成一个圆球。然后把这个树叶海绵球扔在树洞和其他积水的地方。当树叶海绵浸透了水,它就把这些水挤到自己嘴中。

使用工具并非是黑猩猩独有的特征。其他动物 为了要做一些力所不及的事,也会使用棍棒、石块、羽毛及其他身外之物。但是,所有这些行为究竟意味着什么呢,这是研究动物行为的科学家们仍在激烈争论的问题。

这场争论十分重要,因为直到目前,科学界还一致认为,区分人类和其他所有动物的一个特征是人类能制造和使用工具。现在既然证明工具的使用在其他动物界也存在的,那末,科学家们就在思考这样一个

问题: 这种使用工具的行为究竟是学来的,还是本能的,还是二者兼而有之。看来,猩猩经过尝试和失败,它凭直觉就能使用工具解决问题,这一事实便提示人们: 智能正在发挥作用。

不管动物使用工具的意义到底是什么,动物也具有创造性这一点是无可置疑的。寒鸦把石块当作"铁砧"来打碎水生的贝壳动物。雄园丁鸟能用各种草莓汁和果肉来"油漆"它们那篓筐式的卧室;然后再用一小块柔软的含纤维的树皮来"刷光擦亮"。盖拉邦哥斯岛上的啄木鸟能抓住小树枝或仙人掌的刺把它伸进树里,把蛴螬和其他昆虫撬出来。据说,北极熊会拿冰块当棒子来打死海象。

埃及秃鹫会用嘴咬住石头,把头往后一仰,然后把石头向鸵鸟蛋击去,因为鸵鸟的蛋壳太厚了,单用嘴是啄不破的。北方的百舌鸟能用带刺的灌木或树叉来刺穿捕获的昆虫,贮藏起来供以后食用。大象能用它们的鼻子卷住棍棒给自己搔痒。海獭以蛤肉、贻贝、海胆或鲍鱼为食,它会用石"槌"将它们砸开的。

科学家们对上述动物和其他动物的行为方式研究得越深,就越得严格限定将人类与其他动物真正区别开来的界线。对使用工具的研究仅是这个问题的一个方面。近几年来,有人在实验室里教黑猩猩和其他猩猩使用手势语或使用计算机来与人们进行交流。

俞凤娣 译注 刘纯鼎 校

Notes from All Over 天南地北:

Animal Guards 动物警卫员

A huge snake is hired from the zoo to guard the money box of a gambling house in Sweden. 瑞典一家賭场从动物园租了一条巨蛇来看守钱柜.

A football club in Britain keeps a lion in the house where all its valuable prizes are kept. 英国一个足球俱乐部在存放所有珍贵的奖品仓库养有一头狮子.

An Australian bank raise a crocodile to guard its vault. 澳大利亚一家银行养有一条鳄鱼来看守地下金库. 海 边 译

Why Do Birds Sing?

A "song" is a succession of musical tones repeated in a recognizable pattern. Of the world's 8,600 or so bird species, nearly half are songbirds. Some, like the song sparrow family, have a dozen different melodies. Others, like the redwinged blackbird, know only one or two. Birds other than songbirds make various noises — clucks, croaks, peeps, squeaks — but they cannot sing songs.

Usually only the male of a species sings and scientists believe this activity is closely correlated with nesting and mating. The males sing most effusively when certain hormoal levels increase. They use their melodies to define and defend their nesting territories. Sometimes, singing may substitute for fighting over an area in question — a sort of battle of the singers. Because different kinds of songbirds do not usually have the same food and nesting requirements, several species can coexist peacefully in the same area.

In addition to driving away their rivals, male songbirds employ their musical skills to woo their mates. Once the birds have paired off, singing may reinforce the bond they've established. It is also probably an important factor in reproductive success: Singing may help to synchronize the bird's sexual cycles during the early stages of their "relationship."

But sex is not the only reason birds sing. Some researchers now believe many birds sing for the sheer joy of it. That may help explain why nightingales and European black-

birds combine different notes to, in effect, compose new songs. Other birds seem to enjoy copying melodies they hear around them. Such species as the starling and lyrebird have no particular songs of their own but they are expert mimics. It has been suggested that for these birds, singing may have become less of a territorial imperative; it is no longer needed to find a mate.

Not long ago, two American scientists found that some songbirds sing not only to announce what species they belong to, but also to proclaim their individual identity. Studying indigo buntings and white-throated sparrows, the researchers learned that conflict between males of the same species is minimized once the birds grow accustomed to each other's distinct melodies.

At times, some songbirds "peep" rather than sing. These sounds are usually made up of one or two "call" notes that have little or nothing to do with mating. Instead, peeps are used to signal members of the same species. A call may alert a flock that a predator is near, orchestrate migration or coordinate other group activities.

汇

recognizable ['rekəgnaizəbl] a
可辨认的
blackbird [blæk bəːd] n 乌鸫(一种鸣禽)
melody ['melədi] n 调子; 美的音乐
other than 不同于; 与…不同;除

13