巧学巧用系列丛书

（第三版 V3.0）

外语下载中心http://down.tingroom.com
作者45岁时自学英语口语，只用了一年时间，就从“听不懂，说不了”进步到能当翻译，总结出英语学习逆向法。十几年来，指导不同层次的人用逆向法学习英语，都取得了成功。本书就是作者自学和辅导别人学习的经验总结。

供读者选购的配套产品有：系列有声读物《趣味慢速英语》听力练习，每辑两盘录音带；钟教授鼓励大家学习的演讲录音《踏上英语学英语》两盒。此外还有钟教授演讲录像《踏上实际学英语》VCD，本书的CD-ROM一张。

本书读者对象为大中学生、英语自学者、学生家长、教育工作者。

（CIP）
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第一部分  英语学习逆向法

1979  45  

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Good evening
The Man Who Escaped

English for Today—Book Four: The Changing Technology

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1984 年至 1987 年，外语下载中心的“外语下载中心”网路下载中心为“外语下载中心”。

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The Harvest of Additional One Hour
The Outcome of a Disaster
外语下载中心http://down.tingroom.com
Iran’s foreign minister has condemned Canada for helping six American (diplomats) escape from Iran. He said the action violated international law and may lead to (worse) (treatment) for the fifty American (hostages) remaining in Tehran. The foreign minister warned that Canada would have to pay for its action. The six American (diplomats) (fled) United States’ embassy in Tehran when Iranian (militants) (seized) the building on December 4th. The six (diplomats) hid in Canadian embassy for twelve weeks and left Iran a few days ago by using Canadian passports. They returned to the United States on Wednesday. In Washington, the state department (called again on) Iran to release the remaining American (hostages) in Tehran. It said they must be freed before any effort can be made to (improve) the (relations) between the United States and Iran. The (hostages) have been held for eighty-eight days.
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The peace talks between Iran and Iraq went into square one.
Back to square one— back to the very beginning of some task or enterprise as a result of a setback. The allusion is to the game of Ludo when a player is sent to square one if he lands on the wrong square.

The Penguin Dictionary of English Idioms

Back to square one on talks over Northern Ireland
derivatives

derivatives futures option trading swap
3

(1)  China Daily

(2)  China Daily (Internet)

(3)  1981
traffic stopped, but [rik??]“Camel Rickshaw” "rickshaw"
paparazzi

1981

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World Wide Web  WWW
virtual virtual university
virtual tourism
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6

All that life means is opportunity

SCIENCE HALL

It is free to
smoke“” smoke-free “”

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外语下载中心http://down.tingroom.com
National Geographic VOL.187, NO.6 JUNE 1995 Quiet Miracles of the Brain
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marine corps

Standard English

- marine corps
- ps
- corpse
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90 CET-4

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surfing

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Officials say the storm caused serious damage in central part of the nation (the Philippines) before moving out to sea.

Security experts say the bomb had been between 2 to 5 kilograms of explosives, its force threw bodies as far as 70 meters.
watch  

to help make let help make let help hear notice feel watch have " " " " " " " 

to
...He (a passenger) deposits money in a machine and receives a ticket, and he inserts the ticket in an entrance turnstile which allows him to pass through. The ticket is returned to him from another slot. At his destination, he deposits the ticket in an exit turnstile. If he has not used up the entire amount he deposited, a machine imprints on the ticket's face its remaining value and returns it to him immediately.”
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外语下载中心http://down.tingroom.com
What do you usually have for breakfast?
(4) "..."
第四章 逆向法与听说读写译

☆ 基本功是关键，基本功“化”了威力巨大
☆ 能听懂汉语就可能听懂英语
☆ 主要是听力水平低，不是缺乏背景知识
☆ 逐词逐句抠是提高听力的必由之路
☆ 水平低时不用汉语思考就是不思考
☆ 水平高才能抓关键听大意
☆ 听力无他，惟耳熟耳
☆ 这或许是捷径

一、不要单打一

学习英语的目的是为了与外国人交流。交流方式多种多样，有口头的，有书面的。所以学习英语时要注重提高综合水平，即“听、说、读、写、译”五种能力全面发展，不要单打一。

随着改革开放不断深入，使用口语的机会越来越多，对于哑巴英语尴尬的感受也越来越深，人们对于“听”和“说”的要求也非常迫切。但这在任何意义上都不是说可以忽视“读”、“写”、“译”能力的培养。否则“听”和“说”英语的能力再强，充其
量只不过相当于一个美国文盲，并不能适应对外交流的需要。

二、基本功是关键

英语“听、说、读、写”能力的提高离不开基本功。学习英语是必须从基本功抓起，越能尽快收到实效，因而越能鼓起进一步学下去的信心。从基本功抓起，循序渐进，就会感到在阅读和听力理解中的抓大意和关键词等一类技巧都来得很自然，因而也是容易理解和掌握的。反之，如果在基本功不扎实的情况下进行强化与提高，去学习抓大意和关键词等一类技巧，就会感到似懂非懂，模模糊糊。硬着头皮坚持听课，也只能是一头雾水；勉强参加考试，基本上靠蒙，其结果必然是屡战屡败，越考越没有信心。

1. 基本功的词性

什么是英语的基本功？简单地说中学英语就是，或者再进一步说，初中英语就是。下面我们从字母、语音、词汇和语法等几个方面来看看基本功不扎实的种种具体表现。

（1）字母。这里所要说的英语字母知识不是指不认得 26 个字母，而是指对英语字母还没有熟练到能下意识反应的程度。从我接触到的一些人员的情况看，有的人只熟悉小写，不熟悉大写。如果一篇英语材料是用大写的英语字母写成的，他看起来就感到很生疏，在脑子里有一个逐个字母从大写变换成小写的过程，即使是被很熟悉的词，也不可能很快反应过来。有的人只靠在脑子里进行默默地翻译还不行，看了后面的忘了前面的，只有逐个
DOGS ARE BEING USED TO GUARD SHEEP FROM WILD DOG, OR COYOTE. FARMERS ARE EXPERIMENTING ANOTHER KIND OF ANIMALS TO PROTECT SHEEP, THEY ARE USING DONKEYS. DONKEYS, ALSO ARE KNOWN AS BURROS OR ASSES. FARMERS ARE ALSO TESTING SOUTH AMERICAN LLAMAS FOR USE AS SHEEP GUARDS.

有的字母的排列顺序也没有达到滚瓜烂熟的程度，只有一个字母接一个字母地顺着背下来才知道自己所要的字母挨着哪个，因此查词典的速度就很缓慢，有时甚至因为搞错了顺序而找不着字典上的词。从严格的意义上讲，所有这些都属于没有过字母关。读者不妨以下面一段大写的文章为例，检查一下自己对于大写字母的熟悉程度。

熟悉字母的问题并不难解决。就拿大写字母来说吧，只要你认真地把它作为一个问题对待，一个字母一个字母地把某一篇文章从小写翻成大写，10 来页翻写下来，可能对大写就比较熟悉了。

(2) 语音。由于各种原因，有的人的英语语音知识不扎实，只会看，不会读，更不会听，基本上是“哑巴”英语。由于中学
里的各种考试中基本上都是笔试，不考“听”和“说”，因此大部分中学生对“哑巴”英语的严重性缺乏认识。只是在上大学以后，由于CET要考听力，好像才忽然间发现自己中学里学的英语是“哑巴”英语。

语音是“听”和“说”的基础，只有语音知识扎实，发音正确，朗读或说话时别人才能正确理解；只有语音知识扎实，发音正确，听懂别人用正确语音读出来或说出来的话时，自己才能理解。

语音知识差首先表现在朗读上。有的人一个音节一个音节地读时，出音并不是很大，但若多个音节连起来作为一个词来读，好像就不太对劲了。多个词连成一个句子读时，问题就更多了：不是重音不对，就是语调不对，别人听起来基本上不像英语了。

语音知识不扎实的人，一个英语单词，在自己的脑子里没有一个明确的固定的发音。看着词典上的注音，或许还能读出来，离开注音，放到课本里去读，受到前后词发音的牵制和影响，有时这样读，有时那样读。有的人虽掌握英语读重音的基本方法，读了以后别人听不出重音在哪里；或虽然掌握了读重音的方法，但有时重音在这个音节上，有时重音又在那个音节上（有趣的是，如果一个英语单词有多个音节的话，读来读去重音就是读不到正确的音节上）。

正因为脑子中没有一定的语音形象，读的时候必然拖泥带水，含含糊糊，不敢大声朗读，使得别人无法听清到底是什么音和有几个音节，由什么辅音和元音组成的。许多人没有受过正规的英语语音训练，发音不一定很标准，但决不能相差太远，对于每一个英语语音，脑子里至少要有一个固定的、自己认为是正确的读法（尽管在事实上可能是不很标准的），而不能随波逐流，时而这样读，时而那样读。
不少人觉得英语单词的记忆是一个难点，其实主要就是因为不会朗读而产生出这个问题的，只要从语音入手去学习，记忆英语单词的问题也可以迎刃而解。

语言知识不扎实和平日朗读训练搞得不多的人，朗读英语文章时常常有口不随心的现象，看着文章，嘴里读出来的音和自己心里想读的音不一样，有时不仅是重音不对，而且还可能错读成别的词。

有的人语音误差很大，而且成了“口癖”。而成了“口癖”的错误发音对学习英语的影响比不会还要大，因为不会可以从头学起，从头去学正确的音，而成了“口癖”的错误发音则需要从纠正开始，非常困难。所以有人形象地说“不会是从零开始，错了是从负开

这里还有一个连读的问题。有的人一个词一个词都读不清楚，但却热衷于学习连读。不会走就想跑，怎么可能呢？作者曾经碰到过一位基本语音知识差的大学生，模仿录音带读课文，“large boat”两个词实实在在地读成了“larbo”一个词。别人向他指出这样读不对时，他说“录音带上就是这样”。熟练的人连读，在不熟练的人听起来，似乎有的音不见了，吃掉了，其实在熟练的人听来，那些音还在（至少那些音的残余还在），是可以听出来的。这种能力很像一个对于跳水动作很熟悉的裁判看运动员跳水，能很准确地看出各种动作做得怎么样，而对于跳水的分解动作不是很熟悉的观众，恐怕只能看出“入水时水花大不大”一类的问题，至于其他动作完成得如何，只有看慢速重放才能明白。

(3) 听力。影响听力的因素很多，下面仅仅讨论语感和辨音能力。语感和辨音能力差的人听写时分辨不出一句话有多少词，每个词都是什么音；不习惯同化、连读、省音和弱读等，常常漏
掉或听错，或把多个词误以为是一个词，有时又把一个词误听成几个词。

阅读英语与听英语、说英语使用脑子不同的部位，两者之间没有必然的联系。英语语音知识很差的人，即使已经掌握了三四千词汇，能顺利地阅读与自己专业有关的英语书（主要靠专业做依托进行猜测），但听写起录音来，最简单的词语都不一定能听懂。例如一个英语听力班里 20 余位大学以上文化程度的人没有一个人能听出一篇慢速英语录音材料中 three of them 三个词，有听成 they often 的，也有听成 tree often 的。

(4) 词汇。词汇方面的英语知识不扎实表现在单词拼写、词义理解和词组知识上。

单词拼写：与不准确的语音相对应，他们的单词拼写也往往是晃晃悠悠和滥竽充数的：或缺胳膊短腿，丢三落四写字母的；或画蛇添足，多写字母的；或张冠李戴，不同单字互相混淆的等等。由于熟练程度不够，不能信手拈来，思索以后拼写出来，也没有确实的把握。有时明明拼写对了，但别人一反问，可能又会拼出一个错的词汇。在一则消息的听写记录里，同一个词会出现几种不同的拼写，而且可能没有一个是对的。有的对于各种不规则变化的动词、形容词和名词也不是非常熟悉，例如看到 brought 不知道是 bring 的过去式或过去分词，还以为是生词。

笔者曾问过五六个英语水平属中上等大学本科毕业搞电子通信的人，“卫星”一词的英语是什么，他们都能正确地回答出来，但请他们默写时，拼写正确的只有一人，有写成 satelite 的、“saterllite”的、“sotelite”的、“setellite”的、“satellit”的。

对词义的理解：有的人对英语单词词义的理解非常狭窄，有的甚至有一个英语单词只有一个汉语解释的错觉。

词组知识：有的人不太重视英语词组的学习和记忆，而是
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单打一，一个单词一个单词去理解，去记忆。因而他们的英语知识面非常狭窄，例如知道 touch 是动词，它的意思是“触、碰”，off 是副词，它的意思是“离、距”，但就是不知道 touch off 这个词组的意思是“开炮、使爆炸”。而英语词组是英语的一个很重要的组成部分，在日常口语和书刊中使用非常频繁。

(5) 语法。由于对口语重视不够，中国学生在中学和大学里学了许多语法知识，仍然听不懂和说不了。但并不能因此否定学习英语语法的必要性。也不能认为中国人没有学汉语文法也会说汉语，所以学习英语也不需要学习语法。

小孩子在母语环境中学习语言的过程是自发的，是在不断地模仿与重复过程中完成的，这个过程非常漫长。在自发状态下学会的母语知识往往是不完整的，没有学过母语语法的人，在“说”和写作时常常出现语病就是一例。

对于大多数中国人来说，不可能从托儿所开始就生活在英语环境中，自发地学会“听”“说”英语，只能在上学以后在语法指导下学。语法是规律性的东西，学了语法，可以举一反三，可以收到事半功倍的效果。

基本英语语法知识不扎实会闹出笑话。例如某公司在介绍自己的电子产品由于设计得好，电子元器件很少，因而可靠性很高时写了下面一段话：

What is not there can not go wrong—the most reliable component is the one that is not there.

作者曾用这段话测验过几十个近年来毕业的本科和硕士，由于搞不清语法关系，能正确理解的人并不多。有译为“没有不出故障的东西，那里缺少最可靠元件”；也有译为“世上没有东西没有错（或人无完人，金无足赤）”，也有译为“这里的东西不会出错，它们是最可靠的元件”；也有译为“这里的东西不能
再出错了，最可靠的元件不在这里，” 也译为 “什么在哪儿不出错，最可靠的元件是它不在这儿” 等。不管这些译文的汉语是否通顺，意思完全译错了。

其实这两句话的语法并不复杂，没有超出基础英语法法的范围。第一句话 What is not there 中的 what 一词相当于 the thing which，即：The thing which is not there can not go wrong。后一句话中 The most reliable component is the one 是主句，that is not there 是定语从句。整句话的意思是“不在那里（指设备）的元件是不会（使机器）出故障的，不在那里（指设备里没有用的）的元件就是最可靠的元件”。

笔者曾把这段话全部用大写后给十几位硕士生看。由于不适应大写，拿到卷子以后立即能看懂的只有两位，大部分人经过一段时间的从大写到小写的翻译以后才看懂，其中有两人光靠脑子中的“默翻” 还连不成句子，只有逐个字母地把大写翻成小写才看懂。

由此可见，拼写不准确和语音、语法知识不熟练而引起理解（翻译）错误的现象在受过高等教育的人中间也是存在的，有的还相当严重，一点也不亚于口语中“哑巴英语”，只不过没有人在报刊上大声疾呼罢了。

解决基本知识不扎实这个问题的最好方法就是采用逆向法，在“听、说、读、写、译”过程中一个词一个词、一句话一句话地抠，一个词一个词进行“甄别”，把“晃晃悠悠”的英语知识固定下来，把“滥竽充数”的知识剔除出去，从而做到“会看也会写、会听也会读”。
上述种种问题，实际上就是“会熟化”的问题。下面以一年 12 个月 January、February、March、April、May、June、July、August、September、October、November、December 等 12 个单词为例作些说明。

(1) “会”：对于这 12 个单词，首先是“会”和“不会”的问题。如果对于这 12 个单词，不能正确地朗读与拼写，就属于“不会”。如果能慢慢地依次读出或写出 January（默念汉语“一月”或用手指数）→February（默念汉语“二月”或用手指数）→March（默念汉语“三月”或用手指数）→April（默念汉语“四月”或用手指数）→May（默念汉语“五月”或用手指数）→June（默念汉语“六月”或用手指数）→July（默念汉语“七月”或用手指数）→August（默念汉语“八月”或用手指数）→September（默念汉语“九月”或用手指数）→October（默念汉语“十月”或用手指数）→November（默念汉语“十一月”或用手指数）→December（默念汉语“十二月”或用手指数），就可以算“会”了。

注意这里“慢慢地”三个字和“依次”两个字。所谓“慢慢地”，是说有时间思考与判断；所谓“依次”是说在看到这 12 个英语单词中的某个单词（例如 September）时，知道是某个月份，但不能立即断定是几月，需要依次默念汉语的月份或用手指数，从 January→February→March→April→May→June→July→August 数到 September 后才能回答出是“九月”。

具有“会”水平的人可以应付各种考试，甚至可以考出高分，但是由于依靠默念汉语或用手指数进行推测，速度比较缓慢，难以应付口语中听和说的需要。

(2) “熟”：对这 12 个词能听能读能写，即使无序地听到、
看到或说到任何一个月份，稍假思考即可做出正确的回答。但还没有熟到能习惯成自然地“脱口而出，信手拈来”的“化”的程度，脑子里多多少少存在用依赖默念背台词或用手指读数进行推测的过程。

（3）“化”：这对12个词熟得能“脱口而出，信手拈来”。

依靠默念背台词或用手指读数进行推测的过程完全消失，能与听到或看到汉语时一样轻松自如地做出判断。

不少人在听英语讲课时，一个词一个词分开来听，似乎听懂的词自己都学过，但就是不能立即理解其意思。只有等到翻译把所讲的内容译成汉语说出来以后，他们才恍然大悟。这种现象足以说明他们听不懂的主要障碍不是词汇量不足，而是对于已经掌握的词汇的熟练程度还没有达到“化”的地步。

有的人认为自己阅读速度不快的主要原因是词汇量不够，因此用力背记单词。有的人甚至一页一页地背记词典。但学上一段时间，阅读速度提高并不明显。从我的实践经验看，对于大部分大学毕业的人来说，他们起码已经学过3000—5000个单词了，而且只要时间充分，见到时还是认得的。但还没有达到“熟”与“化”的程度。看的时候还不能做到下意识地反应，直接从英语理解英语。

如果还没有做到这一点，他们提高英语阅读速度的主要障碍就是那些自己以为“会”了，但还没有“熟”与“化”的英语单词，一旦通过逆向法学习，把所有“会”的词都“熟”与“化”了，阅读的速度一定会大大地提高。

在英语不熟的情况下，见到一句话，虽然所有的词都认得，但却经常看错或读错，尤其是那些拼写和意义有点接近的词就更容易混淆，不能做到如同看或读汉语材料那样地去读和译英语，这就是差距。至于语法和主从句等的分析和理解则问题就更多
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了。如何从脑子中去掉语法分析和加快汉英翻译过程则是提高阅读速度的重要环节，而听写的方法就能解决这个问题。

当然，这样说从任何意义上都不是否定扩大词汇量的重要性，其实在扎实学完学习过程中，词汇量一定会自然而然地扩大的。而且词汇量也只有结合一定的课文内容去扩大，才可能理解其意义，才可能记得牢。就词汇量学词汇量，学到的东西是死的，理解是很狭窄的，有时甚至于有一个英语单词一个意义的情况。所以即使学习的目的是为了提高阅读速度，用逆向法进行听写，效果也是很好的。

据笔者调查，一般大学毕业生脑子里“会”和“化”的比例大体上是 10：1，如果自己觉得“会”8000 到 10000 个左右单词，可能真正“化”在自己脑子里的只有 800 到 1000 左右。

不少基本功不扎实的人为了应付各种考试，热衷于做各种各样的模拟题，一边做，一边看答案。做得不对，哈哈一笑，接着做下一道题，花去了大量的时间和精力，提高并不明显。虽然做做模拟题可以起到熟悉题型和提高答题技巧的作用，但从根本上说，它只能检查当时达到的水平，而不能提高水平，所以是一种治标的方法。基本功不扎实的人要想治本，真正提高英语水平，一定要把功夫下在基本功上，使之达到“化”的水平。

在“说”的方面也同样存在“会、熟、化”的问题。很多人学习口语时一边听录音带一边看书，似乎没有什么不懂的，但是却并没有真正掌握。

例如一位毕业后已经工作多年的硕士，曾几度想提高口语能力都没有如愿。后来严格按照逆向法的要求学习《英语900 句》，一句一句地听写了 200 余句，水平提高很快，不但在博士生入学考试时听力得分高，入学后也常常因为口语好而得到外籍教师的称赞。他深有体会地对笔者说：“以前不知学过多少句，但是
由于学得不扎实，到了用的时候说不出，勉强说出来，也是Chinglish，扎扎实实地学了200多句以后，就基本上能表达自己的思想了，逆向法从基本功入手的效果就是好！

把常用的词语和句型背得滚瓜烂熟，就可以与外国人进行一般的交谈，反之，即使学了许多复杂的词语和句型，到时候还是说不出来，即使说出来，用的可能还是一些比较难的词。

例如，有的人学口语时学过“表达某一件事情很容易做”，可以用 It is a piece of cake, No sweat, It is a snap, Snap, It is easy和 It is not difficult 等6种方式。由于前4种方式很生动，很口语化，是地道地道的英语口语，所以他们的兴趣和注意力完全集中在前4种方式上，而不注意熟练地掌握最容易的后两种。结果到了真正要用的时候，涌现在脑子里的是 piece, cake, sweat, snap 等比较不常用的词，自己的注意力也集中到回忆这几个句型上，稍有遗忘或不熟练，就不能脱口而出。

其实对于一般人来说，能熟练地用 It is easy 和 It is not difficult 也足以表达自己的思想了。

基础英语不熟练的人在与外国人交谈时，事先反复思考，把自己想说的话从汉语译成英语，等到认为有把握了，才张口说。可是在说的时候，由于种种原因，说到一半可能“卡壳”，事后可能又会把“卡壳”的原因归纳为“词汇量不够”。其实只要熟练地掌握了中学英语（或本书所介绍的慢速英语），达到“熟”和“化”的地步，想说什么就能召之即来，与外国人进行一般性的交谈应该是不成问题的。

例如，一次一位研究生在展览会上想问现场讲解的外国人，他们公司在中国有没有办事处一类的机构。思考后想用 Is there any representative in China？的句子去问。可是临到要说的时候，
说不出 representative 一词的准确发音，外商听不懂。其实如 agent、agency、office、branch、department、division、people 等词都可以用来表达这个意思，可是由于这些词在脑子里还没有熟到即来和脱口而出的地步，一着急就一个也想不起来了。

3

对于基本功 “化” 了以后的威力要有足够的估计。下面是笔者碰到过的一些例子：

例一：一位大学期间通过了 CET-4 考试的助教为了提高口语能力，学习了四五年，由于没有从基础入手，收效甚微。后来改用逆向法业余学习，不看课文，逐词逐句地听初中英语录音带，跟着录音带练习发音，把听懂的内容一词不漏地写出来。用了九个月左右的时间，写出了厚厚的一本《初中英语课本》。随后又用了四个月左右的时间，写出了厚厚的一本《高中英语课本》，英语水平得到全面的提高：阅读速度加快了，听力提高了，也敢说和会说了，在一次英语俱乐部口语活动中被英语教师誉为 “语音” 最好的演说者。真是前后判若两人，令那些不肯在初中英语知识上下功夫的人大为震惊。他深有体会地说： “基本功太重要了，基本功不行，怎么可能强化和提高呢！”

例二：一位中学英语学得很扎实的大学生，第一学期就能以 93 分的优异成绩通过本应在大学二年级结束时才参加的 CET-4 考试，第二学期又以 84 分的成绩通过本科学完研究生英语课程后才能参加的 CET-6 考试。

例三：一位中学英语学得很扎实的高中二年级学生与在读硕士研究生一起参加 CET-6 考试，以 91 分的优异成绩名列第
一。她在讲到自己体会时说：“CET-6 并没有什么神秘的，只要中学的英语学得扎实，用两、三个星期把 CET-4 和 CET-6 的词汇量突击记忆一下，就可以通过 CET-6。”笔者相信她的说法，只有基础英语学扎实了，才可能真正掌握英语，否则即使把考试应付过去了，真正的英语水平一定会有很大提高。当然，这里说的仅仅是“通过 CET 考试”，并不意味着英语水平特别高。

与他们的情况相反，不少基础不扎实的人，大学英语学了两三，或大学毕业以后研究生英语又学了一两年的人，为了通过 CET-4 和 CET-6 考试，苦苦学习，不断强化，翻来覆去地阅读与 CET-4 和 CET-6 考试有关的书，仍然不一定能通过，或只能以 60 来分成绩勉强通过。一位通过了 CET-6 考试的研究生形象地把这种情况概括为如下的公式：

(凑凑合合的中学英语) + (马马虎虎的大学英语) = CET-4 及格

(凑凑合合的中学英语) + (马马虎虎的大学英语) + (晃晃悠悠的研究生英语) = CET-6 及格

为了引起读者对于基础英语知识的极端重视，不妨把以上的结论再大胆地引申一下：

(凑凑合合的中学英语) + (马马虎虎的大学英语) = CET-4 及格 = 扎扎实实的初中英语

(凑凑合合的中学英语) + (马马虎虎的大学英语) + (晃晃悠悠的研究生英语) = CET-6 及格 = 扎扎实实的高中英语

不少大学生通过 CET-4 和 CET-6 考试以后就再也不学英语了，但是学习英语犹如逆水行舟，不进则退，而且退得非常快，大体上可以认为每停止学习一年，英语水平就倒退两年。如果大学二年级时通过了 CET-4 考试后停止学习，两年后毕
业时的英语水平可能还不如四年前参加高考时高。走向工作岗位以后，由于各种事务性工作的拖累，英语水平下降更快。

4

无论是听说还是读写，基本功都是非常重要的，它是一切高级英语能力的基础。有了扎实的基本功，才有可能掌握高级技巧，没有扎实的基本功，任何高级技巧都无从谈起。

如何才能获得扎实的基本功呢？最有效的方法就是逐词逐句抠，力争词汇句句懂。这个过程是很艰苦的，也就是说要苦练基本功。

不少基本功不扎实的人，为了应付迫在眉睫的各种考试，觉得“逐词逐句抠，力争词汇句句懂”的成效太慢，因而热衷于学习种种应试技巧。

进行听力训练或应试时，有的人规定的时间内“来不及听懂每一个词”，因而“不可能词词都听懂”。造成这种状态的根本原因是听力水平低，唯一的解决途径就是通过“逐词逐句抠”来提高听力。但是不少人就事论事，认为实际应付听力考试时“不可能词词都听懂”和“没有必要词词都听懂”。基于这样的认识，他们提高听力的方法就是研究如何在不懂的情况下“听关键，抓大意”，甚至研究如何在根本没有听懂的情况下选择正确的答案。

是的，英语水平高的人确实具有“听关键，抓大意”和“一目十行”地抓住文章中心思想的能力。参加听力考试，他们在规定时间内，完全来得及“词词都听懂”。由于他们具有从总体上去把握和理解所听到内容的能力，因而听的时候不把注意力局限在每个词和每句话上，似乎能在“没有词词都听懂”的情况下正
确理解所听到的内容。绝对不是“来不及听懂每一个词”，也不是“不可能词词都听懂”。

他们这种能力是在长期的“逐词逐句抠，力求词词懂和句句懂”，和“十目一行”的反复练习过程中积累起来的，是在苦练基本功基础上的英语能力的升华，绝不是没有下过功夫苦练基本功的人所能体会和掌握的一种方法。

水平低的人错把这种高级英语能力当作学习方法，想在基本功不扎实的情况下生搬硬套地学会它们，结果成了无源之水和无本之木。这种状态表现在听力上，其结果必然是“关键的没有听懂，听懂的几乎都不是关键”，“抓大意成了瞎蒙”；表现在阅读上，其结果必然是云里雾里，茫茫然而不知所云，怎么能抓住文章的中心思想？在这样的状态下进行学习，时间一天天过去，东鳞西爪地学到一些应试技巧，并在某次考试中偶然用上了这种技巧而勉强通过考试，但是实际英语水平始终不可能有质的突破。这就是不少人发出“越学水平越低”感叹的根本原因所在。

要想从根本上提高英语能力，只有按照“逐词逐句抠，力求词词懂句句懂”的要求去学习，把看起来似乎是边边角角的次要问题逐一搞透了以后，才会有新感觉，才会有质的突破。

实践证明，只有这样去做，才能体会到什么是逆向法，才能充分发挥出逆向法的优点。

三、与听力有关的几个问题

1. 0.0.0.0.0

到底是听难还是阅读难？这个问题的答案视对象的背景不
同而不同。

英美国家的文盲有很好的听力，但不能阅读。对他们来说，阅读比听说难。

而不少具有“哑巴英语”能力的中国人虽有很好的阅读能力，但听力却很差。对他们来说，听比阅读难，并由此发出“听不懂”和“听不懂”的感叹。

不少已经能顺利阅读用词范围广、语法现象比较复杂的专业英语词典的人员，听写英语录音材料时困难很多，不是“听不懂”就是“写不出”或“写不对”。为什么会这样呢？因为听写与阅读有以下区别：

(1) 听力与阅读能力是两种不同的能力。听是通过耳朵把刺激送到脑子形成记忆，阅读是通过眼睛把刺激送到脑子形成记忆，两者使用不同的器官，记住的信息存储在脑子的不同部位（详见 Scientific American, September 1992），所以听力和阅读能力是独立存在的两种能力。

(2) 阅读的对象是固定的、有形的。一篇文章，章节段落、大标题小标题、标点符号等清清楚楚，一个句子的主、谓、宾语层次分明，因而文章的意思比较容易理解。一个词一个词的拼写印得清清楚楚，哪个词会，是什么意思，哪个词不会，一目了然。不会的词只要查阅词典即可得到解决。

听写则不同了，它的对象是流动的无形的声音，未知的因素很多。例如哪里到哪里是一句话，哪里到哪里是一个词，听得懂的词怎样拼写，哪个词听不懂等等。碰到听不懂的词，困难就更多了。要有一个听（录音）、猜（可能的拼写）、查（词典）等的反复过程，直到猜出正确的答案为止。

(3) 阅读现成的文章，一般情况下是从容不迫的。掌握快慢的主动权在自己的手里，看得懂就读一点，看不懂就慢一点。想
在哪个词或句子上停留太久就可以停留多久，一时理解不了或回忆不起来可以慢慢地推敲和回忆，文章的意思可以根据语法知识慢慢地进行分析。目光所及，上下左右好几行，很容易把文章的前后内容串起来。因此脑子不会发懵，比较容易发挥出水平。

根据声音进行听写就完全是另外一回事了，即使翻来覆去地进带倒带，也不可能把声音分解成一个字母一个字母的。录音带的声音不等人，不管你听不听得懂，它都要继续说下去，是声音左右着你。对于听懂的词，要立即能根据语音和语法知识判断出应该是些什么词，进而立即理解句子的意义。至于说到写，那又是另外的一种能力。实践证明，听懂了也不一定能正确地默写出来。

（4）书面的文章有很多有助于理解的因素和线索，而听则没有。例如专有名词（人名、地名等）是大写的，读者一看到就明白是专有名词，不用花更多的精力去查词典。书面文章一般还有公式和附图，有时即使对文字本身不甚了解，也有可能从公式和附图中得到一些启发，反过来再去理解文字的含义。又如一些加了前、后缀以后派生出来的词，阅读时很容易判断是从什么词派生来的。但听的时候，有的派生词的音与原来的词出入较大，不太容易联想起是从什么词派生来的。例如知道“train” 的意思是“训练”，后缀 “-ee”的意思是“被……者”，那么阅读时看到“trainee”这个词时十有八九可以猜测到它的意思是“受训人员”。但是对听来说，情况就不一样了。由于一个重音在前面，一个重音在后面，听起来好像两者完全没有联系，不太容易猜测出意思。其他如“accident”和“accidental”等都有类似的情况。

（5）在抓关键词和大意上，听写与阅读也有明显的区别。阅读时所有的词和句子都正确无误地写在纸上，因而比较容易找到关键词和抓住大意。而听写时只有转瞬即逝的声音，难以抓住关
键和大意。

从以上的区别不难看出，对于已经从书面材料入手学了一些英语知识的人来说，“听写”比“阅读”困难，“听写”对英语水平的要求比阅读高多了。如果说具有“不熟”和“较熟”英语水平的人就能比较顺利地阅读英语书刊，而听写英语语音则要求具有“化”的英语水平，以便一听就懂，一写就对。

已经认得数千个英语单词和能阅读英语书刊的人，只要通过一定的训练，听力水平即可快速提高。因为通过反复地听写，会在大脑中管听和写（阅读）的神经细胞之间建立起连接。经过不断的反复，会在脑子里形成音形一体化的英语知识，看到书面形式的英语单词或句子，脑子里就会回响起其声响（发音与语调），听到英语单词的发音或成串的句子声响，脑子里就会浮现出每个拼写以及一行一行的句子排列。

由此也可以得出结论，对于习惯于从书面学习英语的中国学生来说，一旦到了能听，他们的阅读能力一定会大幅度提高，达到一目十行的境界。正因为这样，一些用逆向法学习英语成功的人认为“以‘读’攻‘读’攻不下‘读’，而以‘听’攻‘读’则可以顺利地攻下‘读’”。为了全面提高英语能力，中国学生应该树立起“看得懂不算懂，只有听也懂才算懂”的思想。

当然也要防止只注重口语而忽视阅读和写作能力的培养，不要把美国文盲作为学习英语的目标。

2□□□□□□□□□□

从信息传输的角度看，可以把听广播分两个过程：接收声波信号和理解声波信号。人们通常所说的英语听力是指对于听到的英语声波信号的理解力（listening comprehension）。
接收是指耳朵接收到传来的声波，引起鼓膜振动，听觉神经把声音信号传到大脑听觉语言中枢里。很显然，任何一个听觉正常的人都能下意识地实时完成接收过程。

理解是指大脑听觉语言中枢接收到语言信号以后进行的一系列自觉的思维活动：把听到的语言信号与原来已经存储在大脑中的语言知识与背景知识建立起联系，对收到的语言信号进行解码、辨认、分析和归纳，在语音、语法和语义三个层次上理解它所表示的意义。

由于听广播时供辨认、分析、归纳和理解所需要的声音信号是一个接着一个串行传入脑子的，所以解码、辨认、分析、归纳和理解过程是动态的。也即一边听，一边解码、辨认、分析和归纳，一边在语音、语法和语义三个层次上理解其意义。一开始，传入脑子的信息量少，在此基础上做出的辨认、分析、归纳和理解可能对，也可能不对。随着接收到的信息量的逐步增多，供辨认、分析、归纳和理解的信息量也随之增多，就有可能对先前的辨认、分析、归纳和理解结果进行核对，修正差错部分，确认、补充和引申正确部分，直到正确地理解其整个含义。

下面用图 4-1 说明此动态过程，图中的“解码与理解”表示“解码、辨认、分析、归纳和理解”。为便于分析，假定一个语言信号由三部分组成。
假设根据听到的第一部分语音信号正确理解出其含义为①；与随后听到的第二部分语音信号结合在一起进行分析判断。正确理解出其含义为③；再与随后听到的第三部分语音信号结合在一起，正确理解其含义为⑥。

如果在听到第二部分以后发现根据第一部分语音信号做出的理解①有误或不完善，需要把补充信息⑦反馈回去与先前听到的第一部分语音信号综合在一起，进行重新分析判断，理解出其含义应为②。再把②与听到的第二部分语音信号综合在一起，重新理解出其含义为⑤。⑤再与听到的第三部分语音信号综合在一起分析判断，如果发现理解②与⑤有误或不完善，需要把补充信息⑥和⑨反馈回去与先前听到第一部分和第二部分语音信号综合在一起，再进行分析判断，得出最后理解⑥。如果理解⑥不正确或不完善，就需要重新分析判断，直到正确理解为止。

有时输入大脑的语音信号不完整（例如广播信号受干扰后听不清楚或变音），甚至有错（例如播音员口误），需要在动态理解过程中对其进行纠正与补充。

人脑的思维活动是积极主动的，随着英语水平的提高和背景知识的积累，分析判断的速度会加快，因而能在理解已经输入脑
子的语言信号的同时，能对随后出现的语言信号做出预测。所以图 4-1 中的①、②、③、④、⑤中也包含有对随后出现的语言信号内容的预测。

如果预测正确或大体正确，则又可极大地加快对随后输入的语言信号的分析判断过程，从而腾出更多的时间从总体上对整个信息进行分析判断，以提高理解的准确性。如果预测的内容不正确，一定会引起听者的注意，从而聚精会神地去听随后出现的内容，修正原先的判断并准确地理解到整个语言信号的含义。

上面分析的过程不但适用于一条完整的信息和一句话，也适用于由几个单词组成的短语以及一个单词。例如听一个单词，由于连读、吃音和弱读或声音本身不清楚等原因，仅仅根据听到的该单词的声音难以做出正确的理解，只有再次听到或与前后的词结合在一起，整个句子的意思结合在一起才能做出正确的理解。

实际上人脑对于听到的语言信号的解码、辨认、分析和归纳，在语音、语法和语义三个层次上理解其意义的动态过程非常复杂：既有串行处理，也有并行处理：既有多次小环路反馈，也有多次大环路反馈，直到最后得出正确结论为止。

下面以具体例子来说明这个动态过程。笔者曾把以下一段新闻录音播放给一些通过了 CET-6 级考试的大学生和研究生听：

Ministers of six countries concerned with development of Yugoslavia, the so-called contact group meet in London Monday morning to discuss the crisis in Kosovo.

这条消息中只有 Yugoslavia 与 Kosovo 是专有名词，其余的词都是普通词。缺乏听力基本训练的人则只能断断续续地听到孤立的几个词，根本无法说出消息的大意，而且纷纷说这条
(1) Ministers of six countries concerned with development of Yugoslavia

(2) Ministers of six countries concerned with development of Yugoslavia, the so-called contact group

(3) Ministers of six countries concerned with development of Yugoslavia, the so-called contact group meet in London Monday morning to discuss the crisis in Kosovo.

在听了多遍 (1) 以后，有的人由于英语语法不熟练，错把其中的 concerned 一词当谓语，理解为“六个国家的部长们关心南斯拉夫事态的发展”。

在这样判断的基础上接着听 (2) 时，由于不能听懂 contact group 这个词，人们就把其中的 called 与 contact 当作另外的谓语，把整句话理解为“六个国家的部长们关心南斯拉夫事态的发展，要求 (called) 与接触 (contact) 组织 (group)”。

在这样判断的基础上接着听全句时，就把整条消息理解为“六个国家的部长们关心南斯拉夫事态的发展，要求 (called) 与接触 (contact) 组织 (group) 星期一在伦敦开会讨论科索沃危机”。

而几位已经能熟练听懂 Special English 新闻并坚持天天听的人，听了两遍即正确理解了消息的内容。因为他们知道，人们在前几天的消息中已经知道了科索沃省的阿尔巴尼亚民族民与塞尔维亚民族民间发生的冲突，也知道有一个由美国、俄国、英国、法国、德国和意大利等六国组成的联络小组 (contact group)。
Ministers of six countries concerned with development of Yugoslavia

The Contact Group was formed during Bosnia’s war in 1994 to co-ordinate Big Power peace diplomacy dealing with the region. It was composed of the United States, Russia, the United Kingdom, France, Germany, and Italy. The group’s objective was to bring about a ceasefire and a political settlement to the conflict in Bosnia and Herzegovina.

The Contact Group was expected to meet in London Monday morning to discuss the crisis in Kosovo. The so-called contact group, a term used to refer to a group of countries that have interests in a particular region, was formed to bring about a political solution to the conflict in Kosovo.

The meeting in London was expected to focus on the situation in Kosovo, which had been a source of tension between Serbia and the international community. The meeting was seen as an opportunity to discuss the future of Kosovo, which had been occupied by Serbia since 1999.

The Contact Group was an ad hoc group that was formed during the Bosnian War to coordinate Big Power peace diplomacy dealing with the region. It was composed of the United States, Russia, the United Kingdom, France, Germany, and Italy. The group’s objective was to bring about a ceasefire and a political settlement to the conflict in Bosnia and Herzegovina.

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他，惟耳熟耳”。

读者应该树立起这样的信心：能听懂汉语，说明自己的听觉器官正常，智力水平正常，具备了听懂英语的可能性。英美国家的文盲都能听懂英语，为什么文化知识比他们多，逻辑分析能力比他们强的中国大学生却听不懂呢？说到底，不过是缺乏练习罢了。只要多多练习，就可以获得较强听力。

对于已经具有相当词汇量与语法知识的人来说，听力只不过是一种多练就能取得的反应能力罢了，听得懂就是听得懂，听不懂就是听不懂，并不需要像学习数理化那样绞尽脑汁去思考，去问为什么。从这个意义上讲，听力应该是比较容易获得的一种能力。

四、听不懂的主要原因

从图 4-1 可以看出，对于任何一个听觉正常的人来说，听不懂的原因是：

- 语言知识不足
- 反应速度快（解码、辨认、分析、归纳与理解的速度慢）
- 背景知识不足

下面逐个讨论这些因素对听力的影响。

1. 语言知识不足的表现形式很多，下面只分析几种比较常见的形式。

(1) 语音知识不扎实。扎实的语音知识是听懂英语的基础。
准确地抓住了语音，即使是生词，也不难根据其发音从词典中找到答案。反之，如果语音知识不够，即使是自己会的词也不一定能听懂，更不用说真正碰到生词了。

由于种种原因，不少人在学习英语过程中没有得到足够的语音训练，虽然记住了数千个或上万单词和大量语法知识，可以顺利地阅读书面英语文章，但听不懂用词量只有1500余个的慢速英语广播。

语音知识不扎实的表现形式有以下一些：

● 读音不正确或根本不会读。不少人脑子里的英语音形脱节，记住的只是英语单词的字母拼写（形状），而没有正确的声音印象，不是不会读就是读得不对。看写在纸上的英语，能根据其拼写确定是不是认得，但是听到一个英语单词的正确发音，由于与自己脑子里不正确发音不一致，以为是生词。例如：

把 unfertilized male flies 听成 a photo mail flies；

把 Hitler challenged both the idea of democracy and the security of some of America’s closest allies 听成 Hitler challenged both the idea of Marxism and the security of some of America’s coast lines；

把 The assassination was planned by foreign intelligent agency with help from local traitors 听成 The assassination was planned by foreign intelligent agency with help from local traders 等。

重音正确与否对于听力的影响极大，例如有的人能听懂 resign，但听到 resignation 时由于重音的改变而听不懂。

某些词英美读音的区别也会带来一些问题，例如 schedule、missile 等。

● 虽然能正确地发音，但是没有熟练到能立即反应的地步，所以听懂以后需要反复思考才能明白其含义，因而感到应接
不暇而听不懂。

不适应连读，尤其不适应外国人地道地道的连读。初学者在听写中常常听不懂录音带上的外国人的原声，但若由中国人再重复说一遍，他就有可能听懂。我们提高英语听力的目的是为了听外国人讲英语，而不是为了听懂中国人说英语，所以一定要以能听懂录音带上的原声为准。

由于不适应连读，常常会把两个词误以为是一个词，例如把 a part 听成 apart，把 a special 听成 especial。

但也会把一个词误听成几个词，例如把 underground 一个词听成 under the ground 三个词，把 especially 一个词听成 a specially 两个词等等。

不适应弱读而形成掐头去尾现象。听力水平比较低的时候，常常会因不适应弱读而形成掐头去尾现象。例如:

把 set up tent cities 听成 set up ten cities，没有听出 tent 一词后面的 t;

把 freeze the nuclear program 听成 “to free the nuclear program，没有听出 freeze 一词后面的 z;

把 atrocity 听成 trocity，没有听出 atrocity 一词前面的 a;

听不出介词、冠词、连词、助动词（a、an、the、of、in、at、or、is、was…）等。播音员在读这些词时一般都是弱读，既轻又快，一带而过。对于初学者来说，不是很容易听得出的，这是起步阶段听写中的一个难点。笔者在批改初学者的听写记录时向他们指出某处有这类词没有听写出来时，他们的第一个反应一般都是“有吗？”。但是有了疑问后，再去听，才感到好像是一个词，反复听上几遍以后或许能听出来。真是“初听似没有，越听越有，越听越像，越听越是”。没有亲身实践过的人
不太相信这一点，认为这些简单的词应该是最容易听出来的。
其实不然。实践证明，能否听出这些词是衡量英语听力的一个很重要的标志。这里的关键是听不出来，不是写不出来。
解决这个难点的方法只能是多听，多练，久而久之就习惯了。
一旦到了能听出这些词时，别人问你是怎么样听出来的，你的回答可能是：“我听着就是有”，不一定能说出为什么要领来。到了这个境界，说明已经适应这些词的弱读，听力大大地提高了。
● 分辨不出各种前后缀。英语词汇有很大一部分是常用词汇基础上加前后缀派生出来的。如果不熟悉加前后缀的规律，听录音时会碰到很多的生词。例如知道 marine 的意思是“海的”，way 意思是“路”，但是不知道前缀 sub 的意思是“下面的”，
听到 submarine 和 subway 以后不知道是“水下的，潜水艇”和“地下铁路”。

对于语音知识不扎实的初学者来说，一段录音不是一次听写就能完成的，前几遍的听写记录一般会有不少空白（听不出来是什么）和差错（有的自以为正确地听写出来，其实却是错的）。这些空白和差错，需要经过多次听和写去发现和纠正。由于语音知识不扎实，往往听写错了也发现不了。

(2) 基本语法知识不扎实。如果基本语法知识不扎实，即使把一句话全部正确地听写出来，也搞不清楚语法关系，分不出主句和从句，因而搞不懂其含义。

听写过程中要有意识地锻炼根据内容和语感进行分段、断句和加注标点符号的能力。能不能根据录音进行正确的分段、断句和加注标点符号，是英语水平的一个方面。一般水平比较低的人写出来的记录，往往不分句，不分段，严重影响对于内容的理解，也难以发现差错。

也许有人会问，只有录音没有文本，怎么知道分的段、断的
句和加的标点符号是对的呢？其实这个问题并不难解决，只要自己分的段、断的句和加的标点符号不影影响对于消息内容的理解，一一般说来就是可以接受的。如果还没有把握，可以请英语水平高的人帮助检查一下，看看是不是正确。如果不正确，就要很好的分析和总结。也可找一些自己没有学过的教学录音来听，先不看文字记录，听写了以后再与记录对比，看看自己分段、断句和加标点符号的准确性如何。

如果有条件进入因特网，可以从该网下载（download）相应的内容，然后与自己的听写记录对比。如果自己在分段、断句和加标点符号等方面大体上都是正确的，说明自己已经有了相当的英语水平了。

2000

词汇量不够的表现形式是多方面的，例如：

● 词写出来认得，而且也能正确地读出来，但由于对词义的理解太狭窄而听不懂。例如只知道 free 的意思是“自由的”，不知道还可以作“免费的”理解。听到“The windmill costs money of course, but the wind itself is free”时感到不好理解。“free”若作“自由”解，这句译出来即为：“虽然建造风车要花费金钱，但风本身是自由的”。这样的理解显然很不通顺，与上下文的意思不衔接。但若把“free”解释成“免费的”，这句译出来即为：“虽然建造风车要花费金钱，但风本身是免费的”，也就很好理解了。

Free 这个词还有别的含义，例如：“Dr. Koope has called for a smoke-free America by the year 2000。”有的初学者从上面关于风车的句子里知道了 free 除了作“自由”解以外，还可以作“免费”解，因此就把这句话理解为：“库伯博士号召在 2000 年以
前建立一个自由抽烟的美国”或“库伯博士号召在 2000 年以前建立一个免费抽烟的美国。”这样理解显然和文章的主题格格不入。一查词典，free 一词还可以作“无……的”解，这句话的意思是：“库伯博士号召在 2000 年以前建立一个无人吸烟的美国”。

由此可见，应该通过不断的学习各种各样内容和风格的英语材料，加深对英语词义的理解。

单个的词写出来你得，能正确地读出来，词义也明白，但不明白与其他词合在一起组成的词组以后的意思是什么而听不懂。例如知道 give、in、up 的意思，但是不知道 give in 的意思是“屈服、让步”，give up 的意思是“停止、抛弃”。听到以后搞不懂。

对不规则变化动词和名词不熟悉，不能“脱口而出”，听到了不知道是从哪个词变来的，误以为是“生词”而听不懂。

如果所用的英汉词典收入的英语单词释义不全也会影响对听写结果的正确理解。

例如听写出了“Incontinence is a medical condition”和“These drugs are used to treat nine serious medical conditions”以后，理解不了其中的 condition 一词，查手头几本“英汉词典”中有关“condition”的注释，找不到合适的。比较接近的解释是“状态”。用这个解释译出来即为：“（小便）失禁是一种医学上的状态”，“这些药品可用来医治九种严重的医疗状态”，很不令人
满意。

后来从 Longman 出版社 1988 年新出的词典中查到“condition”一词作“病”解，举例为：This is an interesting condition, I have never seen this illness before.（这是一种很有趣的病，我以前从未见过）。Condition 一词在这里作“病”解，这两句话就好理解了。

但 condition 这个词与同样作“病”解的 disease 的含义还是不一样的，例如“Experts also say dyslexia is not a disease, they say it is just a condition caused by differences in development of brain tissue before a baby is born”。翻译出来则为：“专家们说诵读困难症不是一种疾病，它仅仅是由于婴儿出生以前脑部组织发育不同引起的一种病”。这样的翻译很令人费解，“不是疾病……，仅仅是一种……病”。再进一步查有关词典，找出了“disease”与“condition”的区别，这句话的意思为：“专家们说诵读困难症不是一种（传染性的）疾病，它仅仅是由于婴儿出生以前脑部组织发育不同引起的一种小毛病。”

英语在发展，新词不断出现。例如近年来随着信息高速公路的出现而产生的 cyberspace、cybermarket 和 homepage 等等，国内出的英语词典一般都来不及收入这些新的内容，碰到这种词时往往会影响对内容的准确理解。

3

英语广播节目的题材非常广泛，用到的词汇也很不相同。即使英语水平已经提高到了能顺利听懂某些节目的水平，也仍然会在某一则特定的消息中听到一些自己不懂的词。由于这些词往往是该则消息的关键词，搞不懂就影响对消息内容的理解，此时一
定会深深地感到“词到用时方恨少”。为了扩大词汇量，应该树立起“宁肯学了没有用，也别用到的时候后悔没有学”的思想，不拘一格，尽量把碰到的各种生词都搞清楚。

一般说来，既然在某个节目里用到某个词，今后同类节目中可能还会用到。如果第一次听到时不把它搞清楚，下次再听到还是不懂。

非常有趣的是，只要你把某个生词搞清楚了，一定会在以后节目中反复听到这个词。例如某年报道一美国青年在新加坡犯法后被处以“鞭打屁股”的刑罚时，用了 vandal, vandalism, vandalization, cane, caning, flog, flogging, buttocks, scar 等词，而且这些词连续在新闻中出现达一个月之久。如果第一次听到时搞不清楚，可能要影响一个月左右的收听。

又如某年报道有人从俄国走私核原料到德国的新闻中使用了 plutonium（钚）、uranium (铀)、lithium (锂) 等元素名以及 weapon grade (武器级) 等词，后来这些词又在报道朝鲜核反应堆问题时反复出现。

认真阅读英语书刊是扩大词汇量的有效方法。读者可以根据自己的兴趣，选定一本有一定篇幅的英语书，从头到尾一词不漏地阅读过去。由于阅读的目的在于学习英语，所以不要以看懂大意为满足，而“从头到尾一词不漏”地看，即使是版权页的“版权所有，翻印必究”等一类有关出版事宜的说明也要看。而且要反复阅读，每阅读一遍，都要把不认识的词作上标记并抄写在生词本上，注上音标，反复背诵。下一次再阅读时还是从头到尾一词不漏地看过去，并且检查一下上一遍不会的词这一次会了多少。只要这样踏踏实实地去阅读，每遍都会感到有明显的进步。

阅读英语报纸（例如 China Daily）也是扩大词汇量的一个很好的途径。但报纸上的内容包罗万象，有的内容对于某一个具
体人来说可能困难很大，或者兴趣不大。例如一个不懂比赛规则，不熟悉体育组织、球队和选手名字的人去看有关体育比赛的新闻，几乎满篇都是生词，再花工夫也不可能引起多大的兴趣。所以应该从学习英语的目的出发，对自己选定要学习的内容（例如国际时事或体育新闻等），要一条不漏，一词不漏地看过去，不懂的生词都要记下来，绝不要以看懂内容大意为满足。如果这样去做，一般报纸内容起码应该学习两三天，并不一定要天天看当天的报纸。

4

英语传媒中大量使用专有名词，如果不懂，会严重影响听力。

（1）专有名词也是单词。英语传媒中使用的专有名词量很大，它们往往是句子的主语或宾语，一定要把它们搞清楚，否则很难完全听懂。例如不知道印度尼西亚的货币为 rupiah、马来西亚的货币为 ringgit、菲律宾的货币为 peso、泰国的货币为 baht、韩国的货币为 won，就难以完全听懂东南亚金融危机方面消息。

应该树立专有名词也是英语单词的看法，像对待其他英语单词一样地对待专有名词，千方百计地搞清楚其拼写和含义，而不要用“一”、“?”等符号代替。

（2）把专有名词拼写出来。坚持把专有名词拼写出来有以下好处：
- 学到许多有用的专有名词。
- 有助于隔绝出真正听不懂的生词。有时由于专有名词的干扰，感到有许多词听不懂。根据听到的声音把专有名词拼写出来以后，就有可能把真正的生词隔离出来并集中心力把它们搞
清楚。

正如我们听汉语广播里的人名或地名时不能完全根据声音确定其写法一样，根据声音拼写某些专有名词时不一定过分计较拼写是否准确，只要基本吻合听到的发音即可。例如笔者根据声音把 1997 年底轰动美国的邮包爆炸凶犯 Unabomber 错拼为 Unibomber，但并不影响对于新闻的理解。

(3) 不要把职务或头衔当作人名。听人名时不要忽略最前面的职务或头衔，以便掌握更多的英语单词。一般情况下在称呼某一个人的姓名时会在前面加上其头衔，例如 Pope（教皇）、bishop（主教）、archbishop（大主教）、the Reverend（对牧师、神父的尊称）、Chancellor（奥地利、德国的总理或首相）和 Admiral（海军上将）等。

(4) 注意缩写词。广播中使用缩写词时为了能让听众听懂，一般情况下都是在播出某一个缩写的全称以后，后面再提到时就用它的缩写。例如在播出 Food and Drug Administration 的全称以后，下面一般就用缩写词 FDA。或者先用缩写词然后再立即说出其全称，例如在说出 CSCE 后立即说 Conference on Security and Co-operation in Europe（欧洲安全和合作会议）。

(5) 注意特殊的专有名词。国外广播在首次提到某一个强热带风暴的消息时会给这个风暴命名（例如把 1997 年 8 月于江浙登陆的第 11 号台风称为 Winnie），随后几天里直接用名字称呼这个风暴，而不再用 typhoon、cyclone 或 tornado 等词。

在英语新闻广播中，常常约定俗成地用地名或建筑物表示某国政府或机构，例如：Moscow、the Kremlin 代表俄国政府，Washington、the White House 代表美国政府，the Pentagon（五角大楼）代表美国国防部等。

(6) 如何查找专有名词和背景资料。媒体中出现的专有名词
一般可以通过以下两个方法查找：

- 查阅 *China Daily*（中国日报）。国际新闻是活动的历史记录，有些背景资料难以在现成的书本上查到。一般情况下，新闻广播中提到的重大事件，*China Daily* 上都有相应的报道。例如 1998 年 2 月的新闻广播中提到海牙国际法庭受理利比亚提出的关于 *Lockerbie*（洛克比）空难事件的申诉，而英美两国
反应强烈。

不了解该空难的情况与当时背景，就不理解为什么利比亚向国际法庭申诉？英美两国为什么反对？查 China Daily，即可得知 1988 年 12 月美国 Pan American 公司的 103 航班在苏格兰 Lockerbie 镇上空爆炸，死难 270 人（机上 259 人，地面 11 人），英美两国认为是两名利比亚人所为，要求利比亚将嫌疑犯交英美审判。

又如近年来克隆技术发展很快，1997 年英国科学家克隆出了一只名为 Dolly（多莉）的羊，美国 PPL 公司于 1998 年克隆出了一头名为 Mr. Jefferson（杰弗逊先生）的牛。所有这些，只听广播也不可能准确地知道如何拼写，也不可能在现成的资料上找到，只有依靠连续收听广播与阅读 China Daily 才能搞清楚。

各种专有名词（人名、地名等）一般都可以在这份报纸上找到。

(7) 水平提高以后可忽略一般专有名词。英语水平低时为了不错过学习英语的机会，必须坚持“宁肯学十个没有广泛用途的专有名词，也不放过一个有用的专有名词”的做法，逐个搞清楚听到的专有名词。但是水平提高到能准确地判断出哪个是--般专有名词（例如长达六七个词的阿拉伯官员的名字全称）以后，可以不必花工夫去找它的准确拼写。

随着形势的发展，会逐步形成一些新的词汇（或者老的词汇有了新的含义），在英语学习过程中要注意查找和积累这样的新词。
查阅新词的途径很多，主要有：

- 英文报纸。例如 1991 年初的海湾战争期间，China Daily 在一个月之内发表了“Desert Storm brings in a new vocabulary” 和“The latest word on the war” 两篇短文，介绍了很多新出现的英语单词和缩写词。
- 上网。因特网上的资料非常丰富，查找也方便。例如在听到新闻中有关于格鲁吉亚一非法武装组织谋杀现总统谢瓦尔德纳泽未成的消息，其中有一句话提到该组织在 1992 年协助推翻总统的事。

欲知此事的详情与前总统名字的准确拼写，可在电脑上用浏览器调出 Yahoo 搜索引擎后点取 Nations 选项，接着点取 Georgia，最后点取 History，电脑屏幕上就会显示出 1992 年格鲁吉亚总统 Zviad Gamsakhurdia 被赶下台并由 Edward Shevardnadze 取而代之的经过。

五、听不懂应该高兴

一个人英语听力水平的提高是在一个个问题的发现与过程中实现的。发现不了问题就找不到提高的方向，发现了问题不加以解决就不可能提高。提高英语听力水平的过程犹如登山，现有的听力水平就是已经到达的某个高度，听不懂的地方就是登上新高度的台阶。只有登上这个台阶，把听不懂的地方搞懂了，英语水平才能有所提高。

有了这样的认识，听不懂时就会高兴，精神也会随之振作起来，因为又找到了进一步提高听力的方向。

不少人由于急躁与浮躁情绪作怪，听不懂时非常不耐
六、背景知识问题

10 00 00 00 00

英语录音稿的撰写人大都是地道的欧美人，他们熟知西方的风俗习惯和各种文化、历史背景，在写文章时，对于一些他认为是人人皆知的背景知识就不会再费笔墨了。此类隐含在文章里的背景知识，对于不熟悉西方社会和文化的人来说，如果文章的作者没有把必要的背景知识交待清楚的话，听到以后不一定懂。

例如美国在报道白宫遭枪击以后 Treasury Secretary（财政部长）出面处理此事，听了以后感到难以理解。其实由于历史的原因，Treasury Secretary is in charge of the secret services to protect President。

又如 1998 年 11 月上旬有如下一条新闻：

Turkey is pressing Italy to extradite the Turkish Kurdish guerrilla leader Abdullah Ocalan who was arrested on Tuesday. Turkey said it will abolish the death penalty to persuade Italy to hand him over.

为什么引渡与否与废除死刑有关？因为意大利法律规定凡是引渡以后要处死刑的人不能引渡。不了解这个背景，听这条消息时影响理解。

又如 PETS 五级听力题的一段对话中，使用了 software、hardware、CAD、C-language、phonetic processing system 等与计
算机词处理软件有关的单词。如果听不懂这些词，势必影响对对话的理解与答题的准确性。对于一个使用过某种词处理软件（例如 Word）的学生来说，听到这段话中的这些词时应该能理解其含义，不会感到因背景知识不足。但是对于一个没有接触过电脑和没有用过字处理软件的考生来说，恐怕听力再强也不一定能完全理解这段话的含义。

又如 PETS 五级听力理解中有一篇关于 George Orwell 的内容，如果读者知道 Orwell 这个人的身世和他的观点，听的时候心情一定比较放松，因而容易听懂。反之，如果从来没有听说过 Orwell 这个人和他的观点，听的时候一定心情紧张，难以听懂大意和做出正确的选择。

又如 PETS 五级听力理解中有一篇听力材料中提到英美图书馆计算机室外面有 laser printer（激光打印机） 和 matrix printer（针式矩阵打印机），前者收费，后者免费。如果不了解为何为 laser printer 和 matrix printer，恐怕也难以立即理解为什么一个收费，另一个不收费。

2. ☑️ ☑️ ☑️ ☑️ ☑️ ☑️ ☑️ ☑️ ☑️ ☑️ ☑️

一般来说，中国学生（尤其是大学生）已经具备了学习英语和应付考试所需要的背景知识，讨论背景知识对于听力理解的影响时，必须十分注意不要把背景知识不足作为听力差的防空洞，把主要由于听力水平低造成的差错统统归结为背景知识。

各种听力录音材料（尤其是考试用的录音材料），对大部分听众不熟悉的背景知识会做出足够的解释（当然是用英语解释的），很少有“隐含”的背景知识，否则听力考试就主要不是考
A. Script（录音）

W: You are about late, I was worried.

How is the car? What did you find out about it?

M: The mechanic said that the best thing will be to sell it and get a new car. This car is totally dead.

Q: What will the man probably do with his car?

B: Choices

A) To keep his old car and get a new one.

B) To leave it in the garage to be repaired.

C) To get his car repaired later.
D) To sell his car for a new one.

选择正确答案 D 的学生只有 44%左右，选择 B 的有 30%以上。

例二:
A. Script (录音)
M: How do you manage to work and to go to school at the same time?
W: My classes are at night and I work during the day.
Q: What do we learn from this conversation?
B: Choices
A) The woman goes to school during the day and works at night.
B) The woman has to work to support herself.
C) The woman’s classes are difficult.
D) The woman studies at night.
选择正确答案 D 的学生有 45%左右，选择 A 的有 40%左右。

例三:
A. Script (录音)
When you take a walk in any of the cities in the West, you often see a lot of people walking dogs. It is still true, but the reasons why people keep a dog have changed. In the old days, people used to train dogs to protect themselves against attacks by other beasts, and later they came to realize that a dog was an example. When people use dogs for hunting, the dogs will not eat what was caught without
permission. But now people in the city need not protect themselves against attacks of animals. Why do they keep dogs then? Some people keep dogs to protect themselves from robbery, but the most important reason is for companionship. For a child, a dog is his best friend when has no friends to play with. For young couples, a dog is their child when they have no children. For old couples, a dog is also their child when their own children have grown up. So the main reason why people keep dogs has changed from protection to friendship.

Q: What is the most important reason for people in the city to keep dogs now?
B: Choices
A) For companionship.
B) For amusement.
C) For protection against robbery.
D) For hunting.

选择正确答案 A 的学生有 45%左右，选择 D 的近 50%。
每一个听力题几乎都有 40% 以上的学生选错了答案。什么原因呢？有的人把出错的原因归结为对于西方的文化和生活背景知识不足，认为对于例一来说，因为中国人连自行车都是不经常骑用烂了才去买新的，更不用说价值昂贵的汽车了，所以不少学生选择了答案 B（修车）。对于例二来说，因为中国半工半读的学生一般都是白天上课，晚上做工，所以不少人选择了答案 A（白天上课，晚上做工）。对于例三来说，因为中国人养狗不是为了看家就是为了打猎，所以不少人选择了答案 D（打猎）。

当然，这样的分析没有找到“学生听力水平太低，考试时只能根据听到的只言片语连蒙带猜”这个真正原因。就这三个例
子而言，每一段录音都已经把选择正确答案所需要的背景知识交代得清清楚楚了，没有任何隐含的背景知识，只要听力基本上可以，就能做出正确的选择。

避免发生此类现象的真正出路在于平时学习的时候，一定要坚持一个词一个词、一句话一句话地抠，确实提高听力水平。只有这样，才能在考试的时候得心应手地把勾划在对的答案上，而不是连蒙带猜地乱划一气。

3

虽然通过学英语可以增加一些背景知识，但扩展背景知识的主要途径不是靠英语课，而要靠学习其他课程与平时积累，靠经常看报纸和听广播。

七、逐词逐句抠是提高听力的必由之路

1

说到这里逐词逐句抠的方法提高听力时，水平不同的人有不同
的看法，有的人认为“看听力时不可能逐词逐句都抠得懂”、“考
听力时来不及逐词逐句抠”，有的人则认为“看听力时没有必要
go逐词逐句抠，只要抓大意听关键词就行”。

实际生活中听英语时（实时广播、通电话或与人对话），由
于种种原因（外来干扰、谈话含糊或口误等），有时确实“不可
gu逐词逐句都抠得懂”。但是一般说来，考试所用的听力材料都
是语音比较清楚和没有干扰和口误的，因此只要具有相应的水
平，一定来得及能够“逐词逐句都抠得懂”。如果听此类材料都
感到“不可能”和“来不及”，只能说明听力水平比较低。
一切依水平而转移，水平低的人只有通过逐词逐句抠的方法，把基本功搞得非常扎实以后，才有可能体会和掌握“抓大意”和“听关键”的要领，千万不要把终点当起点，把能力当方法。

2

英语水平低的人即使听写语速缓慢，用词浅显与语法简单的慢速英语录音（或广播），由于听力差，聚精会神地听了一条消息或一篇短文，听到的可能只是断断续续的几个单词（而且往往不是关键词）。由于听不懂的地方太多，因而不能准确地说出来什么地方听不懂。所以不但一条消息或一篇短文听不彻底，往往连一句话也听不到底，几乎每听几个词就要“卡壳”。
由于不适应音的同化、连读、省音和弱读等，有时甚至分不清一句话中有几个词，一个词中有几个音节，因而听写时心情非常紧张，结果越紧张越听不懂，“丈二和尚摸不到头”，茫茫然不知从何下手。要想听懂，只得塌下心来，老老实实地逐词逐句抠。
有些水平低的人认为考试（例如考 CET 或 TOEFL）前的准备时间有限，逐词逐句抠太费时间，因而他们往往采取以下的方法：大量做模拟题，一边听着录音，一边看着教材，在基本上（甚至根本上）听不懂的情况下凭感觉在 A、B、C、D 中打一个勾，然后对标准答案。由于基本功不行，所做的选择十有八九不对，在感叹一声“呀！又不对”之后再接着蒙下一题。如此不断循环，时间花去不少，水平没有提高。
从表面上看，似乎逐词逐句抠是不得已而为之，其实它是快速提高英语水平（尤其是听力）的一个有效途径。教学实践经验表明，凡是在学习 Special English 时扎扎实实地通过逐词逐句抠
的方法打好了听力基本功的人，转听 Standard English 时都比较顺利，反之则感到困难重重。

3.

英语水平不高的人在起步阶段也用“抓关键词”和“听懂大意”的方法学习慢速英语，而且模模糊糊地感到自己似乎能“抓住关键词”和“听懂大意”，所以也就不会把听懂的写下来，也不深究每一个听不懂的词。有的水平比较低的人甚至声称“能全部听懂”。

笔者对此曾进行过详细的调查，发现他们的所谓“抓住了关键词”和“听懂了大意”的自我感觉在很大程度上是一些假象：他们从各种新闻媒介中（例如汉语的新闻节目）了解到所要听的消息大意，在听的过程中只要听到几个与自己想象中消息内容相对应的英语单词（并不一定是关键词），就连蒙带猜地把消息顺到底，认为“听懂了大意”。其实就英语本身而言，并没有完全听懂，甚至大部分不懂。

例如一位以 80 多分的好成绩通过了 CET-6 级考试的研究生，两年多来坚持天天收听 China Radio International（中国国际广播电台）的英语新闻广播，认为几乎都能听懂，可是又感到听力并没有明显的提高，要求笔者帮助他找找原因。笔者用当天一段某国领导人访问法国巴黎，会见当时法国总统密特朗的英语广播录音让他听。他以从汉语新闻媒介中得到的信息为基础，结合部分听懂的单词（例如 president、visit 和 Paris 等等），稍加思索以后就正确地讲出消息的大意，并没有什么很大的出入。

但是当他逐词逐句去听写时，有的虽然听懂了，但是不会写，或拼写不对，不少“听懂”的地方实际上没有听懂，发现了很多
Dogs are being used to guard sheep from wild dog, or coyote. Farmers are experimenting another kind of animals to protect sheep, they are using donkeys. Donkeys, also are known as burros or asses. Farmers are also testing South American llamas for use as sheep guards.

如果不逐词逐句抠，只能得出“美国正在试验用别的动物代替狗来看羊”的部分大意，“别的动物”是什么，则一概说不出，失去了学会 coyote、burro 和 llama 等词的机会。

4. □ □ □ □ □

有一定水平的人起步以后往往自我感觉已经能做到“词词懂、句句懂”了，但是不是能“词词对，句句对”呢？不一定。作者曾经碰到过这样的一些读者，他们以高分通过了 CET-6 级考试，有的在各种英语竞赛中得了奖，但在听写 Special
Opposing groups in Liberia have reached a truce agreement (利比里的对立派别达成了一项停火协议) 一句时，
把 truce 一词错写成 truth，即 Opposing groups in Liberia have reached a truth agreement (利比里的对立派别达成了一项真理协议)。
或者单独读 truce 与 truth 时能分清 ce 与 th 在发音上的区别，但是放在一个句子中，比较难以区分，所以把 truce 听成 truth 也情有可原。但是再仔细一想，意思讲不通，所以应该怀疑它可能是不对的，设法再寻找合适的词。只要 truth 的音是抓得准的话，就有可能找到应该是 truce 这个词。所以稍有疑问即“自以为非”，是减少听写差错和提高听力水平的重要一环。那种只顾听写的速度，不花功夫去推敲自己听写记录的做法是不
可取的。

只有力求词词对才能学到更多的英语知识。例如有人把 He was arrested and held incommunicado（他被捕了并单独监禁）写成 He was arrested and held in communicado。把 incommunicado 一个词分成 in communicado，并把 communicado 当成地名。从语法上讲，似乎没有什么不通之处，但是该消息从头到尾没有提到过这个地名，一般说来，不会突然出现，后来再听再查，却原来是一个单词，通过这样细抠，可以极快地扩大词汇量。

5. ☑ ☑ ☑ ☑ ☑

从学习英语的角度看，只要有可能坐下来听写和查词典，就应该精细。集中精力于某一段录音内容，逐词逐句抠，搞深搞透，而不要泛泛地听大意，否则很容易在泛听的掩盖下错过提高的机会。只有在不可能坐下来听写的时候（例如在火车上、飞机上，汽车上或散步）才泛听。泛听时也要注意抓住听不懂的词，尽量记住其发音，用笔记录下其发音和猜写出可能的拼写，事后再查词典加以确认。

6. ☑ ☑ ☑ ☑ ☑ ☑ ☑ ☑ ☑ ☑ ☑ ☑ ☑

逐词逐句听写可以从根本上提高听力，因为一般情况下如果能把某段录音的全部内容正确无误地听写出来，就一定能应付各种听力考试。

但是也有人认为听力练习和应试时“来不及词词听懂”、“不
可能词词听懂”、“没有必要词词听懂”等等，并且主张把听力练习的重点放在“即使听不懂，也能做出正确判断和选择”的应试技巧上。

对于听力很强的人来说，实际听英语或应试时他们有能力做到“词词都听懂”，听到只言片语就能抓住关键词和大意，因而感到“没有必要词词听懂”，而且有时真具有“即使听不懂，也能做出正确判断和选择”的能力。

但对于听力差的人来说，这种方法是根本行不通的。由于听力水平低，“来不及词词听懂”和“不可能词词听懂”，对他们来说，“即使听不懂，也能做出正确判断和选择”一类的应试技巧实在是可望而不可及的。对他们来说，花大量时间去练习“即使听不懂，也能做出正确判断和选择”的应试技巧是没有出路的，只有在逐词逐句地基础上，扎扎实实地提高听力水平才行。

八、翻译过程影响听力

从图 4-1 可知，理解听到英语声音时的反应速度取决于解码、辨认、分析、归纳与理解的速度。而解码、辨认、分析、归纳与
理解的速度则主要取决于单词、词组、短语、语法等的熟练程度以及背景知识的多少和逻辑能力的强弱。

1

不少从书面材料入手学习英语的人，一个字母一个字母地记忆每个单词的拼写，一个音标一个音标记忆每一个单词的发音。他们听到一个英语声音时，脑子里有以下“声音→音标→拼写”的思考过程：

● 想出与这个声音对应的音标组合
● 根据音标组合找到对应的单词

很显然，这个过程延缓了对于听到的声音的反应速度，是提高听力的第一道障碍。只要对于单词的熟练程度达到了“熟”的地步，这个障碍就基本上消除了。而对于一开始就从录音入手学习英语，而不从音标入手的人（例如幼儿）来说，他们的脑子里根本没有这两个思考过程。

2

英语的表达方式与汉语不同，对于习惯于汉语的人来说，不少英语表达方式是倒序的。不适应英语语法的人听英语声音时脑子里有以下两个翻译过程：

● 把“解码”和“辨认”出来的一个一个单词或词组翻译成汉语
● 把倒序的英语句子翻译成正序的汉语

假定听到以下一条新闻，看看这两个翻译过程是如何影响理解速度的：
（Mr. Hassan, the commander of the only police station in Kismal was killed）（while trying to clear gunmen away from the airfield）（where a Red Cross plane carrying relief supplies was due to land.）

为了便于分析，我们把这段话划分为三部分，如文中括号所示。

不适应英语语法结构的人听这条新闻，脑子里有以下翻译过程：

听到第一部分中和“Mr. Hassan, the commander of the only police station in Kismal was killed”时的翻译理解过程为：
① 听懂“Mr. Hassan”后翻译为“Hassan 先生”
② 接着听懂“the commander of the only police station in Kismal”后翻译为“Kismal 惟一的一个警察站的指挥员”
③ 再听懂“was killed”后翻译出“被杀”
④ 把前面听懂的内容综合起来即可把第一部分译为“Kismal 惟一的一个警察站的指挥员 Hassan 先生被杀”
⑤ 听懂第二部分的第一个词“while”后判断出后面要出现的是时间状语
⑥ 听懂“trying to clear gunmen away from the airfield”后与前面的“while”结合起来译为“试图把枪手从机场清除出去时”
⑦ 听懂第三部分的第一个词“where”以后判断出后面要出现的是地点状语
⑧ 听懂“a Red Cross plane”后译为“一架红十字协会的飞机”
⑨ 听懂“carrying relief supplies”后译为“携带援救物资”
被视为不可阻止的信号，导致了某人的命运。

与前面的内容结合起来，可将该部分翻译为：“Kismal 惟一一个警察站的指挥员 Hassan 先生试图把枪手从机场清除出去时被杀，一架携带救援物资的红十字协会的飞机预定要在那里着陆。”

只要对于单词、词组与基本语法达到了“化”的地步，翻译单词和词组所涉及的词数不多，词间的距离也短（相隔一两个词或几个词），一般都可以很快翻译出来，做到“即听即译即懂”，不会有“来不及翻译”的感觉。

但是如果不适应英语的语法结构，翻译每部分以及整条消息涉及的词数比较多，词间的距离也长，翻译时需要进行大范围的词序调整时，所需要的时间就比较大，可能难以做到“即听即译即懂”，会有“来不及翻译”的感觉。

不少人的听力提高过程表明，局部的翻译过程是比较容易加快和消除的，提高听力的主要突破口就是如何适应英语的语法结构。例如在上面所举的例子中，即使听的时候每一个局部都觉不自觉地进行了翻译，只要不把英语语法结构转换为汉语语法结构，就可少一次比较费时间的翻译过程，就可以使自己的思维与听到的声音同步。例如在每个局部都即时翻译为汉语的情况下，输入脑子的汉语信息顺序为：

“先生 Hassan, Kismal 惟一的一个警察站的指挥员，被杀，（是在）试图把枪手从机场清除出去时（被杀的），那里一架红十字协会的飞机，携带救援物资，预定要着陆。”
很显然这样的语法和词序是完全不符合汉语习惯的，但是如果已经习惯于英语语法，完全可以正确地理解以上按照英语语法排列的汉语句子，做到“即听即懂”。

听或阅读有关新知识或新技术的信息时，即使信息载体是汉语，虽然每个字都认得，每句话都懂，但有时却不能立即理解其含义，需要反复思考与分析归纳才能完全理解与掌握。这种情况在听或阅读英语信息时也会发生。有的英语信息所传递的内容比较深奥，即使全部单词都认得，语法也懂，但可能仍然不能完全理解其含义。

例如慢速英语 Space and Men 节目中有一篇介绍爱因斯坦的文章，其中有一段文字如下：

Einstein said that the speed of light—three-hundred-thousand kilometers a second—never changes. It does not matter where the light is coming from, or who is measuring its speed. It is always the same. However, time can change. And mass can change. And length can change.

不懂相对论的人即使从语音和语法结构上完全明白了 However, time can change. And mass can change. And length can change 一段话，但是恐怕难以真正明白它所表达的含义。一般说来，这种情况已经不是英语听力训练所要讨论的问题了。

听英语时脑子里翻译数量的多少与翻译过程的快慢取决于
听力水平的高低，不依主观意志为转移。在听力水平低的时候，即使再三告诫自己“尽量用英语思考，不要把英语翻译成汉语”，但是实际上仍然紧张地、情不自禁地逐词逐句地、慢慢地翻译，想摆脱也摆脱不了。

随着英语水平的提高，会逐步适应英语倒序结构，最后到达能直接按倒序结构去思考的“化”的地步。此时，无论是听还是阅读，再也不需要将倒序的结构翻译成习惯的正序汉语结构了，从而大大地加快反应速度。

听力水平的高低与英语熟练程度有很大的关系。听到不熟悉（不熟悉其发音或释义）的词（词组）或句子，会感到发音不清、语速快，稍有干扰就可能听不清或听不懂。而听到很熟悉的词（词组）或句子，会感到发音清楚、语速不快，即使有些干扰也仍能听清或听到。

这种情况很像用 PC 机放 VCD 图象时的情景。如果 PC 机的运算速度低与内存容量不足，屏幕上显示出来的图象是断续的。相当于英语不熟练，反应速度缓慢，因而只能断断续续地听到一些不连贯的词语。当主机运算速度足够高与内存容量足够大时，看到的图象就是连续的。相当于英语很熟练，听到即能反应。

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以下几种做法有利于加快听英语时的反应速度：

● 反复听录音带

为了“耳熟”，应该反反复复地听录音带。不但学习时听，休息时听，乘车时听，干家务活时也可以听，总之，要有一有空就听的毅力。有时确实不一定能听懂什么，这也不要紧，只要能听到英语的语音就行了，以使自己的耳朵适应英语发音，思维方式
符合英语习惯。

除了多听录音以外，很重要的一点就是要逐渐习惯英语的表达方式。其实倒序与正序是相对的，从英语的习惯来看，汉语的表达方式不也是倒序的吗？一旦思维方式适应了英语习惯，觉得英语的倒序方式很顺时，听广播的时候思维活动能与播音员的声音同步，听到就能理解。

听一遍后复述录音内容
一段录音的内容只听一遍，边听边速记下一些关键词（可以用自己认定的各种缩写和符号代替，例如用 gt 代表 government、C 代表 China、PM 代表 Prime Minister 等）。放音结束后，边看记录边用英语重复说出所听内容。

练习时要以整段内容为单位，从头到尾放一遍，而不要只放听不懂的部分，以便锻炼从整段内容入手抓大意的能力。

多做这样的练习，有助于使思维方式适应倒序的英语表达方式。

熟词组的习惯搭配
熟悉词语间的习惯搭配非常有助于适应快语速。例如对于 to be quoted as saying、to be aimed at、to be charged of、to be accused of、to be assigned (dismissed, fired, nominated) as …等习惯搭配很熟悉时，在听完前面的一两个词以后，可以提前想到下面要说出来的词。这样，思路不仅能跟上了播音员的声音，而且有一定的提前量，因而也就不会感到语速太快了。

直接从英语出发记忆国外的人名与地名（尤其是日本国的人名与地名）时，刚一接触时就完全从英语出发，而不要去考虑它们的汉语译名是什么。例如日本国首相 Keizo Obuchi 一上台，就直接用英语记住其名字，而不要考虑他的汉语名为“小渊惠三”。这样听到广播里说到他的名字时脑子里就少一次从英语
到汉语的翻译过程。

● 逐步适应和接受英语计数方式。由于汉语计数方式与英语计数方式有区别，影响实际听懂英语。为了适应英语的计数方式，除了多听以外，应逐步适应和接受英语计数方式。例如听到 three hundred million 时，就按 three hundred million 去理解，而不要翻译成“二百个百万”，更不要翻译成“三亿”。

● 充分利用冗余信息

英语广播报道某个人或某个机构说什么或做什么时，除了要说出其名字以外，还会说出他的全部头衔或机构的职能。

从信息论的角度看，这些都是冗余信息。充分利用这些冗余信息，熟悉经常出现在新闻中的国际人物的姓名与头衔以后，听广播时只要听懂其中的一部分内容即可立即下意识地联想到下面的内容。例如听 Bill Richardson，US ambassador to the United Nations 一串 8 个词时，如果对此很熟悉，在听懂 Bill Richardson 两个词以后，脑子里马上会联想到他是“US ambassador to the United Nations”，也即可以心不在焉地听余下的 6 个词。此时不但可以“分心”去推敲前面已经听懂的内容，而且也不会感到语速太快了。
我们的脑子是一个容量和功能无比强大的信息网。就英语学习而言，可以把这个信息网看成由一个汉语子网与一个英语子网组成的分布式计算机数据网。每个子网都有独立的处理能力，两个子网之间有信道相联，以交换信息。

学习英语之前，整个网的信息都存储在汉语子网里。其中包括大量小学、中学或大学里学到的各种自然科学和社会科学知识。

学习英语的过程就是建立英语子网和在两个子网间建立快速大容量信道的过程。刚开始时，由于英语子网上的信息资源少得很，独立处理能力极低，因而理解任何一个英语信息（例如理解一个英语单词的含义）都离不开汉语子网的帮助，也就离不开用汉语思考。

例如没有学英语时我们就已经知道日本的首都是东京，学习英语以后知道东京的英语为 Tokyo。这样，只要听到 “东京”，脑子里就会立即想到 “Tokyo”，听到 “Tokyo”，脑子里就会立即使想到 “东京”。

对于那些没有对应汉语的英语信息，则不论水平高低，都会直接用英语思考。例如从英语媒体了解到 1997 年在日本的 “Nagano” 市举办冬奥会。如果不知道 “Nagano” 的汉名为 “长野”，听到 “Nagano” 时就不会用汉语去思考，只可能在理解时用汉语思考：“这是日本的一个城市”。

随着学到的英语知识的增多与熟练程度的提高，尤其是直接以英语接受的信息的增多，英语子网独立处理信息的能力也随之扩大和增强。慢慢地，自然而然地在理解某些英语信息时
可能不需求助汉语了。也就是说，可以直接用英语思考。对于此类信息，如果需要用汉语表达出来（例如需要翻译给别人听），倒反而需要多一层从英语到汉语的翻译过程。

对于我们中国人来说，英语子网的信息的容量和质量恐怕永远无法与汉语子网相比。例如英语信息所需要的各种背景知识大部分都存储在汉语子网里。所以即使英语非常熟练，也离不开求助于汉语子网。例如听有关科索沃的英语新闻，涉及到大量有关巴尔干地区的民族、历史、地理、政治和文化方面的背景知识。这些背景知识绝大部分存储在汉语子网里，或者是中学时学世界地理历史时获得的，或者是从汉语媒体获得的。只有求助于汉语子网才能完全理解听到的英语新闻。所以不要笼统地把用汉语思考对听力的影响都看成是负面的。也不要笼统地说不用汉语思考。在水平不高的情况下，不用汉语思考就是不思考。

英语水平提高到“化”的程度以后，可以认为两个子网之间的信道已经更新得足够宽，速率足够高，两个子网之间的任何信息交换所需要的时间延迟很短，不会影响对于输入信息的实时理解。到了这个地步，即可认为汉语知识与英语知识已经融合为一体。

到达这个境界以后，如果生活在英语环境中，基本上不用汉语的话，英语子网的功能与容量会迅速增强与扩大，理解时汉语的影响会越来越少。随着直接以英语方式输入与存储的信息的增多，理解这些信息时则可彻底摆脱汉语的影响。

九、抓关键词和听大意

无论是听英语声音还是阅读书面英语资料，都要抓关键词
Israeli and Palestinian negotiators have failed to reach an agreement about the withdrawal from the occupied West Bank town of Hebron. Talks about the withdrawal ended in the Palestinian self ruled town of Jerico Monday. Israel is still demanding the right to send troops into Palestinian ruled areas of
Hebron if they are following suspected Arab terrorists. Palestine rejected this as an attempt to change already signed agreements.

If all the content could be accurately transcribed, no one would be able to seize the last sentence of the news content with the key word in the middle. However, if we mistakenly transcribe the whole news content, it may affect the understanding of the whole content, so we cannot say it is a key word. For example, someone transcribes as an attempt to change already signed agreements.

Palestine rejected this as they attempt to change already signed agreements.

This transcription error results from a lack of what big issues, but the meaning is completely different.

As we can see, listening to broadcast “spot keywords” with “understanding” is a high level of ability to be achieved. That is, only those with a high level of understanding can be used. Low level of understanding cannot understand the meaning of the sentence completely. It is necessary to understand and understand. For example, the test of the CET-6 Exam, which has difficulty in passing, will continue. The news came after three young brothers burnt to death in a firebomb attack on their home in Ballemoney.

The boys aged 10, 9 and 7 were born in Catholic and attended a Protestant school. Their Catholic mother and her Protestant
boy-friend survived the attack. British forces are now gearing up for the possibility of more violence during an Orangeman parade Monday in Belfast where sectarian motions run high during the annual marching season.

连续播放了十几遍，没有一个人能准确地抓住关键词并说出其大意。究其原因，他们认为是因为这条消息里专有名词太多，例如 Protestant、Orange Order、Northern Ireland、Catholic、Portadown、Ballemoney、Belfast 等，严重干扰他们抓关键词与大意。理解得比较好的一位听出了 Northern Ireland、demonstration、put down 等词，加之他通过其他新闻媒体知道北爱尔兰冲突的背景知识，所以他就把该消息的大意归纳为“这是一条关于北爱尔兰的消息，有人要游行抗议，当局不同意，进行了镇压”。

哪里来的“镇压”？他说录音里肯定有 Put down（镇压）词组，原来他把 Portadown 这个地名听成动词 Put down（镇压）了。

看来他不仅没有听到 Portadown 这个词本身，而且也没有听到该词前面的介词 in。因为如果真正听出了 in，根据语法知识立即可以判定后面跟着 Portadown 应该是个名词，根本不可能是动词 put down。

听 during an Orangeman parade Monday in Belfast 这组词时好几个人感到由于听不懂专有名词 Orangeman 和 Belfast，所以不能理解其含义。其实如果确实 Orangeman 和 Belfast 两个词以外的所有非专有名词都能听清听懂，即可断定 Orangeman 是 parade 的定语，Belfast 是地名，因而并不会因为听不懂这两个专有名词而影响对整个消息内容的理解。

由此可见，听懂非关键词有助于判定真正关键词，或者说可
以减少把非关键词当作关键词的可能性。

2

由于听力是脱离阅读能力而独立存在的一种能力，对于任何汉语听力正常的人来说，英语听力差的原因只有一个——缺乏训练。与一个词一个词，一个语句一个语句地积累词汇量和语法知识以后才能提高阅读速度一样，提高听力也必须一个词一个词，一句话一句话地从头学起，在反反复复地听各种录音带过程中提高对于语音的敏感性和熟练程度，故此没有别的路可走。

例如英语中的连读、弱读和失去爆破等发音现象或规律都是自然而然形成的，是任何一个人对英语熟练到一定程度说得快时必然形成的一种语音现象，不是专门为了为难我们中国初学英语的人而故意做作出来的一种发音技巧。所以练习听力的时候不可把如何适应连读、吃音和弱读等当做一种非自然的发音技巧去学习，而应该在多听的基础上去体会，去总结，去掌握。

功到自然成，听力水平低的人常常因为不适应连读、吃音和弱读而分不出一句里有几个词和是什么词。可是拿同一录音内容让听力水平高的人听，他们却不会感到有明显的连读、吃音和弱读。所以初学者在听听力时请教听不懂的录音内容时，在得到正确的答案以后，要总结一下为什么自己没有听出来，而问别人为什么能听出来。因为对于一段录音内容来说，只有是什么的问题，没有为什么的问题。在这里我们不妨依照初中语文第一册中欧阳修作的《卖油翁》一文“无他，惟手熟耳”这一句话，把提高听力的要领归纳为“无他，惟手熟耳”。“
学习者的英语水平不同，其心态和学习方法也不同。英语水平低时，无法抓住关键词和听懂大意，只得逐词逐句抠，而水平提高以后，不逐词逐句抠也能抓住关键词和听懂大意。英语水平低时，脑子里的英语和汉语是截然分家的，从英语到汉语的两个翻译过程无处不在，无时不有。对于记忆在脑子里的某一条特定信息，能清楚地区分出是从汉语信息载体得来的还是从英语信息载体得来的。水平提高以后，脑子里从英语到汉语的翻译过程也逐步减少，慢慢地能直接听懂英语内容，慢慢地不能清楚地区分出记忆在脑子里的某一条特定的信息是从什么语种信息载体得来的，说明脑子里的英语和汉语平起平坐，慢慢地融为一体了。查找生词和记忆生词的情况也随着英语水平的提高而发生变化。水平低时，根据语音在词典里查词很困难，很长时间查不出一个词，但是一旦查着了，记忆很深刻。随着水平的提高，比较容易根据语音从词典里查到所需要的词，但是查过也就忘了，记忆不深刻。听写时的心情是紧张还是放松也与英语水平有关系。水平低时，竖起耳朵，全神贯注地听，生怕漏掉什么，心情必然是紧张的，而心情一紧张，本来应该听得懂的也听不懂了。水平提高了以后，心情就比较放松，即使一心二用，也能听懂，而心情越放松则越能发挥出水平，该听懂的都能听懂。对待听写中难点的态度也是随着英语水平的提高而变化。水平低时，听懂了一些词或句子，心中就高兴不已，听不懂就不高兴。随着水平的提高，如果一天学下来，没有碰到生词，会觉得收获不大。反之，如果碰到听不懂的词，心里会非常高兴，
因为 “这下子又可以学到新的知识了”，精神随之兴奋起来，
因为正是这些听不懂的词才是引导你进一步提高英语水平的
向导。

十、怎样猜词

逐词逐句抠时碰到听不懂的疑难词，只能靠自己去猜，所以
怎样猜词就成了提高听力过程中的一个重要环节。水平越高，一
般说来碰到的疑难词越难猜，有时花许多工夫都找不到答案，似
乎到了 “山重水复疑无路”的境地。由于没有解决的疑难词时
浮现在你的脑海里，使你念念不忘，此时的心情是相当困惑与苦
闷。但只要坚持下去，穷追不舍，千方百计通过各种途径去找，
就有可能 “柳暗花明又一村”，找到正确的答案。此时你一定会
感到一种茅塞顿开的兴奋，一种苦苦探索以后获得知识后的满足
感。

事后翻阅听写记录，看看上面一个个改来改去、费了许多工
夫才找到正确答案的词语，脑海中会立即浮现出当时千方百计找
答案的情景。尤其是当一些费了很多工夫才学会的词语又在以后
的广播中听到时，心中不免为之一喜：“这个词又来了，这回我
听得懂。”其愉快心情是没有亲身实践过逆向法的人难以体会的。

从一定意义上可以说，猜词是逆向法的难点所在，也是逆向
法的优点所在。

由于没有任何材料可供参考，完全依靠自己的英语知识去
找，因而远比对照文字听录音的学习方法要难，因而也是许多人
第四章 逆向法与听说读写译

难以坚持按逆向法要求学习到底的原因之一。但是也正因为所有的疑难问题都是通过自己苦苦探索后找到答案的，记忆才非常深刻，不但记得住，而且记得准，而且往往能回忆起是在什么情况下通过什么途径找到它的。

由于猜词过程中需要综合运用英语知识（尤其是语音与语法知识），整个猜词过程就成了不断地复习、巩固与扩展英语知识的过程，尤其是可以极大地提高对语音的敏感性和辨音的准确性。

由此可见，猜词不是一种不得已为之的权宜之计，而是逆向法特有的一种提高听力的极好方法，读者应该主动迎接它，乐于去猜，而不是回避它。通过各种方法找到答案以后还应该注意总结经验教训，不断提高根据声音猜词的本领。

随着英语水平与猜词能力的提高，读者一定会慢慢地习惯于这样的学习方式，从而进入以下境界：如果听广播时没有碰到疑难词，反而会觉得很平淡，精神兴奋不起来。因为只不过听听新闻而已，没有学到什么新的知识。而如果碰到了疑难词，心情会顿时兴奋起来，因为这下子又可以学到新的知识了。

猜词的方法很多，下面介绍从语音、语法和内容含义等几个方面入手猜词的方法和注意事项。

2

从语音入手猜词是解决猜词的主要方法，只要语音知识扎实，一般情况下都能根据发音找到相应的词。

从语音入手猜词时要注意以下几点：

● 不要一碰到听不懂的地方就去看书中的听写记录或问别人，否则来得容易走得也快（即所谓 Easy come easy go），不
会在自己的脑子里生根。
● 反复听录音，直到能模仿出播音员的发音为止。搞清楚听不懂的地方有几个词，每一个词有几个音节组成，然后根据语音知识试拼出一个词后去查词典，查不着再试拼一个再查。例如听到一个 [liː] 的音，它可能是 li...、可能是 le...、可能是 lee...、可能是 lea...、可能是 lie...、可能是 ley...、可能是 lae...等等。这个过程比阅读时碰到生词时查音标困难多了。

试拼单词时要特别注意相近的发音，例如 t、d 之间；p、b、f、v、gh、ph 之间；l、r 之间；tion、sion、cian 之间等。

要注意不发音的辅音，例如听到一个发音为 [ˈrɪnəʊ] 的字后，试拼出 rino 去查，词典里没有。根据 rh 连在一起时 h 不发音的规律，试拼出 rhino 就对了，作“犀牛”解。

要注意元音的特殊发音，例如 geyser（间歇喷泉）一词中的 ey 发 [ai] 的音，amoeba（阿米巴）一词中的 oe 发 [iə] 的音，women 一词中的 o 发 [ə] 的音等。

注意以下一些容易混淆的语音：there、their 和 they’re；were 和 will 等。

由于录音中有干扰，有的声音不是非常清楚，所有这些确实给初学者带来了不少困难。
● 注意弱读的词头词尾，例如 approve 一词的 a 发音很轻，很容易误听成 prove，而且在词典里可以找到 prove 这个词，更使得初学者难以自己发现与纠正；又如 parade 中第一个 a 的发音也很轻，初学者往往听写成 prade，但是词典里找不到这个词。
● 注意录音带发音的微小区别。例如把 Wind Energy 一文中的 We can use the wind to move a boat 一句写成 We can use the wind to move about。这句话在语法上是讲得通的，意义上
also are pronounced, and the sound is relatively close. But careful to hear about and a boat in pronunciation is different.

As for a sentence that is clear in a strong earthquake report "Rescue workers are searching ruins of building for survivors" is written as "Rescue workers are searching rooms of building for survivors". If we quickly listen ruins and rooms, the pronunciation is quite similar, and since it is a grammar issue, it seems to be right, but when you carefully listen, "n" and "m" pronunciation is obvious.

- Pay attention to the interference of familiar words. Difficult people who listen to pronunciation have a tendency to pay attention to these words, for example, Canadian (Canadians) but not familiar comedian (comedian) will cause miswriting of He is a comedian. He is a Canadian.

- For some words that sound clearly at the front and unclear at the back, called "difficult words", you still need to look up the dictionary for help. You can only look up the pronunciation of any difficult word to get the answer, that is, the pronunciation of the front is clear, the pronunciation of the back is unclear, and then look up the pronunciation of the back. Common words are difficult words, and it is easier to find the pronunciation of the back. If you find it, you can get the pronunciation of the front. If you are not sure, you can get the pronunciation of the back. If you can't find the answer, you can try to find the pronunciation of the front or the back.

3 3 3 3 3 3 3

Some errors are hard to identify from the speech to determine right or wrong, so it is necessary to use grammar to check. For example, a person got the pronunciation of care for and careful, so he inserted a sentence: Modern medicine combines many kinds of knowledge to help train and careful people who take part in sports.

This sentence, however, is clear, but train is a verb, and...
careful 是形容词，两者不能用 and 连接起来，所以 and 后面应该是动词 care 与 for，整句应该是：

Modern medicine combines many kinds of knowledge to help train and care for people who take part in sports.

有时可以觉察到某处录音中有个词（应该说，能觉察出来某处有个词也是有一定英语听力的表现，比起根本觉察不出来的人的英语水平要高），但是抓不住其准确的发音。此种情况以“弱读”的各种“小词”和名词及动词后面加的 s、ed 等为多。碰到这种情况，可以运用语法知识进行判断。假定这篇短文由你来写的话，此处应该用什么词。例如“两篇初学者的听写记录”中多处冠词 a 与 the 互相混淆，根据不定冠词 a（an） 与定冠词 the 惯用法，

有的差错是可以自己判断出来的。有了初步判断以后再去听录音，可能又会有些新的体会，说不定也就知道是什么词了。

录音中有比较大的干扰时，就语音论语音往往很难说清楚应该是什么词，但是与语法联系就可以作出判断。例如一次有人把 in fighting 听成 in Friday，但是根据语法，如果是 Friday 的话，应该是 on Friday，而不是 in Friday，听成 in Friday 显然是不对的，继续推敲下去有可能听出 in fighting。

英语水平提高到了一定程度以后，碰到听不清的词就假定自己是作者的话，在这个地方应该用什么词。经过这样假设以后再返回去听可能就听出来了。

英语新闻中经常使用同位语解释主语或宾语，注意这一点有利于快速判定句子的语法结构。例如听到（不是看到）以下一句：

In Jordan, three men, one police hit by stone and two men hit by rubber bullets were wounded.

如能熟悉到能立即地听出 one police hit by stone and two
men hit by rubber bullets 是 three men 的同位语，就可立即听懂。否则可能把意思搞错。

多次试拼找不着时，可以根据上下文的关系推测一下可能是什么意思，要逐步养成根据上下文判断生词的释义。在初学阶段一有问题就应该查词典，水平提高了以后，是否还必须一遇到生词就立即查词典呢？不一定。可以先根据上下文的内容判断一下可能是什么意思。如果自己判断出来的意思与文章的内容没有什么矛盾，就先这么理解着，等到发生矛盾时再查词典。虽然世界上各种语言不同，但是人们的思维逻辑是一致的，是有可能根据上下文的意思判断出新词的含义（或旧词的新义）的。

有的单纯从语音入手很难说是哪一个，但从内容含义入手可能一下子就断定应该是什么。例如在报道美国对伊拉克的政策时说 President Clinton said doing nothing will set a bad precedent（克林顿总统说不采取行动会树立一个坏的先例）。有的人把它听写为 President Clinton said doing nothing will set a bad president（总统克林顿总统说不采取行动会树立一个坏的总统）。

precedent 一词中的 ce 的发音为 [si]，president 中的 si 的发音为 [zi]。如果慢慢地单独读这两个词，有一定辨音能力的人或许能区分出两者的区别，而作为一条消息中的一个词快速读出和一而再过时，不太容易听出来两者的区别。但是只要从内容含义方面仔细想一下，就可以发现 set a bad president 是讲不通的，应该是 set a bad precedent。
5

句子中的某些音不清楚时可以从词语常用搭配入手去猜测。例如听写He has been accused of spying for foreign country一句，如能写出He has been cused（前面的音听不清）of spying for foreign country。根据词语常用搭配关系，一般情况下可以认为这个词是accused。

要特别注意一些固定搭配中某些发音既快又轻的词。例如播音员在读the city of, be charged of, be accused of, aim at, talk with和to prevent（protect, stop, block）from等固定搭配中of, at, with和from等词时往往既快又轻，一带而过。就语音论语音很难听出来，初学者往往认为没有这些词。

只有辨别能力提高到一定程度，对这些固定的搭配已经熟悉到能下意识反应时，听到the city, be charged, be accused, aim, talk后不论其他词听不听清，都会自然而然联想到后面可能有of, at, with和from等词，就比较容易听出这些词。

6

如果应用以上方法去猜得不到答案时，应该考虑到原来猜词的大方向可能有错，另选方向再猜。辨别能力不强的初学者根据语音猜词时，往往一条路走到底。一旦猜想出一个词，即使是错误的，也总觉得越听越像，越听越熟，很难跳出认定词框框的束缚。所以在反复很多次找不到正确答案时，应该有意识地注意跳出原假设的框框。其中主要是由于不适应连读而把两个单词听写成一个词或把一个词分解为两个词。初学者由于听力水平低，往往会把连读的两个词误以为是一个词。例如:
Dogs are being used to guard sheep from wild dog, or (coyote). Farmers are experimenting another kind of animals to protect sheep. They are using donkeys. Donkeys, also are known as (burros) or asses. Farmers are also testing South American (llamas) for use as sheep guards.

听到文中的 coyote、llamas、burro 的音以后，根据上下文可以推测出这三个词都是动物的名称，但是根据发音查词典，一个也没有找到。既然是动物，就有可能“看图识字”。查有附图的《Webster New Twentieth Century Dictionary》，一边翻一边看附
图，出现有动物模样的图就停下来，看看是不是所要找的词。因为图
形是非常醒目的，找起来并不费劲，很快就找到了 llama （美洲
驼）和 coyote（小狼）两个词，“burro”一词《新英汉词典》
未收入，《Webster New Twentieth Century Dictionary》虽收入了该
词，但没有附图。

又如在一篇 Hydroponics （水栽法）的消息中讲到可以水栽
多种蔬菜，用到了 celery （芹菜）和 lettuce （莴苣）两个单词，
从别的途径一时查不着，后从图解词典的 vegetable 条目去查，
很快就查到了。

查阅报刊查找“疑难词”。由于当代是信息社会，新的
词汇不断出现，来不及收入词典，但在各种各样的报刊中
却都有及时的反映（尤其是 China Daily），一般都能找到答
案。例如美国近几年在报道屡屡出现邮包炸弹事件时反复使
用 unabomber 这个词，一时不知是什么词，直到 1998 年初
抓住了投寄人是一大学教授，看了 China Daily 上的专题新
闻以后才知道如何拼写。看中文报纸知道作“匿名炸弹杀手”
解。

有些经多方努力仍找不到答案的疑难词可先放一放，随
着时间的推移和英语水平的提高，总有一天会有答案的。例
如：

在连续不断听各种各样的英语题材中解决疑难问题。例
如 VOA 1980 年在播送 military junta（南美各国政变后上台的军
政府）中的 junta 一词时，词中的 j 发 h 的音。根据这个发音
在词典上查不到，请教别人也得不到答案。1981 年某日的 VOA
节目专门回答了听众提出的这一个语音问题，才知道是 junta 这个词的一种异读。

- 根据上下文的意思推敲。现代信息社会的语言发展很快，新词层出不穷，经常会碰到一些词典里查不着的词，或者一个老的词随着时间的推移又有了新的释义等等。碰到这种情况，除了向别人请教外，只有靠自己独立判断了。所以这种根据上下文的内容判断新词的意思（或老词的新义）的做法不是图省事，而是为了锻炼一种对于英语水平较高的人来说必须具备的猜测词义的本领。

例如 demagnetize 一词在词典里只有“去磁、消磁”等解释，但是在报导古巴外逃难民去美国的消息里用了此词，显然不会与“去磁、退磁”有关，但是词典里没有别的解释。碰到这种情况可以查“magnetize”的解释，其中有“吸引”之意，据此可以推测出应该做“使失去吸引力”解。

又如 1994 年 8 月间在报导美国的棒球队员罢工时突然出现 salary cap 的说法，词典里查不到。但是根据上下文可以推测出来是限制队员工资的意思。后来的消息中又用了 The players feared the owners would finally impose a salary limitation next season 的说法，证明推测是正确的。

美国邮局的劳动强度大，条件差。1991 年发生一邮局工人因劳动待遇差又被解雇而枪杀他人的事件。此后就有 going postal 的说法，表示对于工作条件和待遇极度不满。

所以在听懂上下文意思的情况下要敢于发挥，而不拘泥于词典里是不是有此解释。退一步说，即使自己的推测与分析不合适，也没有太大关系，因为反正你从其他词典里找不到合适的解释。何况随着水平的提高，认识也会不断提高，可以找到更贴切的解
释。

对于不影响理解整体内容的疑难词，可以先放一放，而不必花太多的工夫去抠。只要坚持听下去，随着听到的信息的增多，思路也会扩大，有可能可以理解这些疑难词。因为一般说来，如果广播里用了一个新的词，播音稿的撰写人会在适当的地方加以注释。

例如 1998 年 1 月底的一则报道美国总统克林顿性丑闻消息中有 President Clinton faces Monica Gate 的用语。这句话虽然语法不复杂，但对于很少听广播的人来说恐怕很难理解 Monica Gate 的含义。但是如果连续听广播，就会知道 Monica 是指 former White House intern Monica Lewinsky（白宫实习生莫尼卡・莱温斯基），而 Gate 一词则是 scandal（丑闻）的同义词，源自前美国总统尼克松的 Water Gate（水门）事件。

一些新出现的科技英语词汇，如果不需要翻译成汉语，则完全可以直接用英语去理解，而不要去深究其汉语释义。

如同不可能学会所有的汉字一样，即使按照上面介绍的方法去学习，仍然可能碰到个别花很长时间都找不到答案的单词。对于此类单词，不必过分计较。

十一、如何对待干扰声和丢词漏词

实际使用英语时（听广播或听报告）总是或多或少有些干扰，
Secretary of State Madeleine Albright will meet with the ministers of Britain, Germany, Italy, France and Russia to discuss the violence in Kosovo and what measures should be taken if no dialog begins between the Serbs and Albanians in Kosovo.

由于播音员读 no dialog 两个词时把 no dia 两个音节紧紧连在一起，而在 dia 与 log 之间又拉得比较开，笔者刚开始时把 no dia 当成一个词，百思不得其解。后来在反复听的基础上，忽然想到可能是词与词间的音节断得不对。有了这样的想法，立即就找到正确的答案 no dialog。有了这样的猜测以后再听，的确就是 no dialog，而且是“越听越像，越听越是”
An after shock has jolted the same area of northern Afghanistan where thousands of people died in an earthquake last Wednesday.

夹在 jolted the 与 area 之间的那个词无法听出其准确发音，但是根据语法可知它应该是个形容词，根据上下文的意思可以猜测其为 same。有了这样的猜测以后再去听，似乎就是它。

也许补上去的词并不正确，但是总比空着什么都不补强，因为可以把它作为以后寻找正确答案的出发点。

十二、如何提高说的能力

随着对于“哑巴英语”的缺憾认识的深入，人们对于学生英语口语能力的要求也越来越高了。不少人觉得学了十几年的英语，应该能够达到用英语与外国人进行随心所欲地交谈，想说什么就能说什么的水平。

应该说这是一个非常好的愿望，但它却是在盲目乐观基础上产生的一种奢望罢了。

据笔者观察，对于绝大多数中国学生而言，由于不是从小生活在英语的环境里，一般难以达到这样的水平。对此我们可以做
以下分析。

首先让我们回想一下我们学习汉语的过程。中国孩子上小学前，都已经具备了相当熟练的汉语“听”“说”能力，想说什么就说什么。即使在这样强的“听”和“说”的能力的基础上，在高中毕业之前，还要学习12年的汉语。高中毕业时又有多少人敢说已经熟练地掌握了汉语呢？学习母语汉语尚且如此，更何况学习与汉语属于不同语系的英语呢？

为了解决英语教学“费时低效”的问题，有的人建议把我国中学英语词汇量增加一倍，由现在的1800个增加到3600个，同时加强听和说能力的训练。

如果教学要求真做这样的调整，英语课的难度就大大增加了。但英语课时数恐怕难以成倍增加，学生与教师的努力程度恐怕也难有大幅度的提高，所以如果不能找到一种高效的英语教学法，恐怕除了一少部分学得好的学生外，感到“英语最难学”的学生数量会大幅度增加，“哑巴英语”的状态也不会有根本的改变。

由于要求过高，有的人认为一味模仿录音带上的内容进行“说”的训练有碍“形成自己说话的风格和模式”。

与接受其他知识一样，一个人的说话风格与模式是在模仿的基础上逐步形成与发展的。如同小孩子刚学说话时主要靠模仿一样，不是一天到晚生活在英语环境中的中国学生学说英语，也主要是靠模仿。

据笔者观察，相当多的中国学生恐怕始终没有走完“模仿”这一步。有的甚至仍然还处于“哑巴英语状态”。对于他们来说，谈得上自己的说话风格和模式吗？如果一定要说他们也有自己的风格与模式的话，那只能是哑巴英语的尴尬：好不容易说出了这句话，基本上是Chinglish，别人不一定能听得明白你想说什么；或者是由于模仿不到家而引起的非驴非马或张冠李戴一类笑
话。

就笔者接触到的绝大多数非英语专业人员来说，如果能做到“基本上能模仿教材上的内容说出来”就算是出类拔萃了。英语专业人士在熟练掌握教材的风格与模式以后，也许有可能在不断“说”的实践过程中逐步形成自己说英语的风格与模式。

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在防止对口语提出过高奢望的同时，由于种种原因，不少英语学得不错的人对于英语口语存在严重的恐惧感。他们视口语为不可逾越的一道障碍，往往过于悲观，说什么“学了十几年英语，考试成绩也不错，但是见了外国人一句话也说不了”。这怎么可能呢？初中与高中课本里不是有许多对话吗？难道一句都没有记住吗？难道“What’s your name?”、“Where do you come from?”等一类平常用语也一句都不会说吗？根本不可能的。

语音正确和能朗读书面材料的人，经过了中学和大学阶段的学习，学到相当的英语知识。只是因为缺乏练习和实践，暂时处于哑巴状态。但只要胆大心细，可以很快获得一定的口语能力。“胆大”就是敢说，尤其是敢在英语水平比自己高的人面前说；“心细”就是处处留心，处处学习。例如参加技术交流时自己当译员时，碰到不会译的地方就要当众虚心向在场的人请教，看看有没有人会；如果当场的人都不会，下来以后也一定要想办法搞清楚。作为听众参加技术时，也要像译员一样，时时把听到的英语（汉语）译成汉语（英语），并与译员译出的话语对比，吸取其长处。

不少人的实践经验表明，只要坚持这样做，很快可以摆脱哑巴状态。而一旦开了口，有了自信心以后，在不断的练习和实践
中，原来积累在脑子里的无声的英语知识好像一下子都被激活似的，说的时候不知不觉地会从嘴里流出来。

退一步说，英美的文盲都会说英语，难道我们受过教育（甚至是高等教育）的中国人还学不会吗？

而且在一定意义上讲，说比听容易。因为听的时候主动权在说话人手里，他们并不会因为你听不懂某些词或某些内容而不用这些词或不讲这些内容。而你说英语时，内容是熟悉的，也只会用你熟悉的词。

有的报刊甚至称不少小摊小贩虽然没有学过英语，但却能用英语与外国人讨价还价，而学过英语的中学生和大学生却不能。

对此类报道我们可以从两个方面去理解。一是不要过高估计小摊小贩的英语口语水平，如果大中学生以他们的口语水平作为自己学习目标，可能只要花上几个小时即可赶上并超过他们，但是达到这样的水平是不是就算英语口语教学取得成功了呢？显然不能。二是说明口语并不难，消除对于英语口语的恐惧心理，鼓起勇气，开口说就是了。但是要想达到随心所欲表达的水平，则绝非一日之功，或许一辈子也不可能学会把母语汉语一样流利。

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无论教材内容怎样丰富和全面，学生都不可能把一生中用到的知识都在学校里学到，因为一来上学时间有限，二来客观世界是发展的，知识也是发展的。其他各门课的情况如此，学习英语也是如此。

有的人论及中国学生英语口语能力差时说，学了十几年英
语，大学毕业后碰到外国人问“What do you usually have for breakfast?”时，因为不会用英语说“稀饭、馒头”，由此断定学生口语能力太差。

当然，会说这些词更好，但是一时不会说又有什么值得大惊小怪的呢？退一步说，即使会说“steamed bread（馒头）、porridge（稀饭）”，就一定会说“油条、“烧饼”吗？如果所有这些都要学会，英语教材不就成了一本中英文对照的食谱了吗？

有的人在论及英语教材内容需要更新时，以中国学生学了“king（国王）、queen（王后、女王）、telephone（电话）、telegraph（电报）”，但就是不会说中国的“总理”是“premier”，不知道Internet。由此断定教材太旧了，需要更新。

笔者并不反对更新教材，尽可能在最短的时间内使学生学到最有用的词。但是话又说回来了，学了中国的“总理”英语为“premier”以后，就一定会说“prime minister 和 chancellor”吗？就是把“premier、prime minister、chancellor”都学会了，难道“外交部长、内务部长”等不需要知道吗？如果所有这些都要学会，中学与大学的英语教材不就成了一本中英文官衔对照表了吗？
其实解决这些问题的主要着眼点应该是培养学生“肯学习”和“会学习”两个方面。
会学习是指有强烈的求知欲望，碰到有什么不会的英语（不会说，不认识）时，要千方百计把它搞清楚，不达目的绝不罢休。假定每次碰到外国人问“What do you usually have for breakfast?”时不会用英语说“稀饭、馒头”，应该立即请教其他会说的中国人，就此学会“steamed bread（馒头）、porridge（稀饭）”。
实践表明，对于那些在校期间基本掌握了英语知识的人，只要肯学习，学会“说”英语并不是高不可攀的。当然，在这里仍然必须再一次强调指出，不要有“想说什么就能说什么”的过高奢望。
其次是会学。即能通过自学获取新的英语知识，不把自己禁锢在已学过的教科书的范围。碰到什么没有学过的英语知识，就本能地反应“没有在学校里学过，不会”。而只要处于这样的精神状态，其结果必然是“没有学过，所以不会。不但今天不会，而且将永远不会”。
在校学习主要是打基础，不可能什么知识都在学校里学会。今天是信息时代，发展很快，要想跟上时代步伐，必须树立终身学习的思想，时时学，事事学才行。
现代科技发展很快，新名词层出不穷。光学会 telephone（电话）、telegaph（电报）固然应付不了需要，就是把 Internet 一词加入课文中也是杯水车薪，解决不了多大问题。例如 boot 一词中学课文里学过，作“皮靴”解，但是到了电脑里却作“自我启动”解。这个释义在一词的词典可能还不一定找得到。有些新出现的词，可能国内还没有约定俗成的译名。所有这些对于那些肯学习和会学习的人来说都不是什么严重的问题，随时
注意跟踪与请教内行就是了。

4. 不要过高的估计自己的英语水平和关系的另一个问题是不打无准备。有的人在高估自己口语能力的同时，具体实用口语前却又不进行精心准备。

一位具有硕士学历和通过 CET-6 级考试的人曾经向笔者说起一次参观外国教育展览上不能表达出自己想法所带来的苦恼。她提到展览会上，有许多问题要问，但是就是说不出来。因此觉得学了十多年的英语还是不行，对自己的能力缺乏信心。

其实她的话语知识相当好，只要在去参观之前作些准备（例如准备问什么问题，英语如何表达，一次听不懂时应该如何发问等等），到了会上就一定能把想问的问题顺利地表达出来。而且只要能顺利地表达出来，就一定会增强自己的信心，觉得“自己的口语还可以”。只要照此办理几次，一有机会就进行准备，就尽量利用种种机会练习口语，自信心一定会极大的增强。

正如前面所说的，我们一般中国人“说”英语的能力难以达到随心所欲和想说什么就能说什么的水平，所以在每一次“说”之前，都必须进行精心的准备。只有这样，才有可能“说”出自己的想法，与外人进行交流。

有的大学生说他们对于求职面试中如何通过英语面试没有把握，因为不知道应该如何用英语介绍自己。对此笔者总是建议他们事先进行准备。只要英语语音掌握得不错，看着文字能够正确朗读出来的人，就能从容应对求职时的英语面试，因为它不过是把事先准备好的内容向面试的人重复背诵一遍就是
了。
其实即使面试时用汉语，不是也需要充分准备吗？准备和不准备是大不一样的。有了准备，不但能把自己的水平充分发挥出来，而且准备的过程也是一次很好的再学习和提高。

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为了进一步说明以上看法，下面举几个实例。

例一：笔者的经历

笔者 1979 年第一次出国时听不懂说不了，后来采用逆向法逐词逐句听录音带的方法提高了听力水平，1982 年随团出国访问前被指定为口语翻译。我觉得自己口语水平低，干不了，请换人。但领导坚持说我干得了，并给了我很多鼓励。于是我进行了详细的准备，拟定了一些情景对话。如：一到海关，可能会问什么，怎么回答，参观时可能会有什么问题，怎么翻译等等，并且把准备好的稿子对着录音机念，再放出来给自己听，
看像不像。尽管进行了这样的准备，可是一到国外，实际对话时完全不是那么一回事，不是听不懂就是说不了，困难极了。当时我手里拿着一个本子，有听不懂的，说不了的就立即记下来，晚上回到旅馆，再累也要查词典，看会话手册，一定要把白天不明白的地方搞懂了以后才休息。

第一次当翻译去德国某公司考察前，我进行了准备，详细阅读了我们要重点考察的即在地下的通信机箱的说明书，逐词逐句地抠了一遍，把自己不熟悉的机械零件单词，例如 washer（垫片）、bolt（螺栓）、gasket（密封圈）等逐一查了词典并反复背诵。到了德国，果然有用，听到他们讲出我出国前学会的机械方面的单词后能立即反应。

很有趣的一次是德国专家在讲解过程中突然停住，手里拿着一个防止漏气的橡胶密封圈，转向另一个德国人并用德语互相讨论。我根据当时的情景判断，可能是讲解者一时想不起来橡胶密封圈的英语应该怎么说。在他们不断用德语说好一会儿以后，我就用英语问他们是不是一想不起来这个东西的英语名称？在得到他们的肯定答复后，我告诉他们这个东西英语名称为“gasket”。他们听后惊奇地问“你能听懂德语吗？”我回答说我听不懂，是根据当时的情景猜测可能是卡在这个词上。这位德国人连声称赞我的英语水平高。其实不是因为出国前进行了精心的准备吗。由此可见，准备与不准备是大不一样的。

第一次出国时是听不懂说不出的“哑巴”英语，第二次出国就是翻译，第三次出国就把欧洲某著名公司的遥控系统改造了，不到两个小时就为国家节省六万美元。

1987 年去某国访问。出席宴会时我穿着一身中山服，我的左边是一加拿大人，右边是一丹麦人。在主人致简单的欢迎词后即进入自由交谈，内容海阔天空，无所不谈。我一般不太愿
意单独与外国人闲谈，所以只是静静地喝着饮料。大约半个小时后，他们的闲谈话题转到了我的身上。说我脸上毫无表情（poker face），既听不懂又说不了等等。我听了以后有点生气，觉得他们这样对待我也太不礼貌了，但又一想与他们萍水相逢，宴会散了以后各奔东西，没有必要和他们计较，只是急切地等待宴会结束回旅馆休息。

宴会结束前，主人提出要与每一个代表单独干杯。他来到我的面前，我一边与他干杯，一边从容地用英语和他交谈。这引起了他的惊讶，立即用英语问我：“Do you understand what we are talking about?”

我回答说：“Yes.”

他接着问：“Do you understand what we were talking about?”

我又回答说：“Yes.”

听了我不断地用“yes”回答，他或许以为我是一个yes-man（唯唯诺诺的人），只会说yes这个词。他稍一停顿后，看着我胸前刻有我名字的牌子，问道：“Mr. Zhong, I really want to know, do you do understand what we were talking about?”

我一本正经地回答说：“Yes, I do do.”

听了我的这个回答后，他立即向我就刚才的一些不礼貌的话表示道歉。此时我立即想到，如果我听不懂不会说，受到他们的奚落后可能还以为他们对你很有礼貌呢！

从这个例子也可以看出在与外国人打交道时，如果不会听不会说的话，怎么与他们交流？怎么能收到他们的尊重呢？

例二：直接用英语讲解
20世纪90年代初笔者在某学院工作时，得知几天后有外国
人来参观。按照惯例，外国人来参观时由外语教员充当翻译，从头到尾陪同。笔者考虑到不少教员具有硕士和博士学位，英语学得不错。为了提高他们的口语能力，提出不要由一个外语教员从头到尾陪同参观的方法，要求每个参观点上负责进行技术讲解的人直接用英语讲解，不再经过翻译。

要求明确后，负责讲解的人都很积极。他们把准备好的汉语讲稿自己译成英语后请英语教员修改定稿。然后不断大声朗读，直到熟练到能脱稿背诵的地步。在各参观点都准备好以后进行了一次实地模拟练习，由外语教员组成考核组进行验收。几经反复，所有十几个参观点上的讲解员都可以用英语进行讲解。

几天后的外国人来参观，他们按照事先准备的内容，从容地进行介绍，顺利完成任务。这件事使不少人消除了对于英语口语的迷信和畏惧心理，有任务时争着当翻译。

事后一位陪同外国人参观的教育部人士很有感触地说“这是我在国内大学与科研机构中第一次碰到外语水平这么高的单位”。其实英语平均水平比这个学校高的单位有的是，只不过他们没有去组织，没有机会显露出来罢了。

例三：在读硕士生承担全部口译任务

20世纪90年代初，南京某研究所培训外国人，请笔者所在学校派人去当技术讲解的口头翻译。该校在读研究生的英语课外口译活动组织得比较好，虽然平时没有与外国人直接交谈的机会，不少人具有一定的口语能力。最后根据培训内容，由多名英语水平比较高的在读硕士生承接并顺利完成了此项任务。

例四：不能用英语宣讲论文的人不能参加国际会议
第四章 逆向法与听说读写译

某年在上海举办一次国际通信学术会议，笔者所在学校不少人的论文被录取，需要到会上去宣读论文。笔者负责此项工作，受例三的启发，提出了只有通过校内模拟论文宣读考核的人才能与会。在所有论文作者都准备好了以后，又由英语水平比较高的技术人员和外语教员组成考核组逐一进行考核，通过考核的人后来都顺利地在会上宣读了自己的论文，受到会议组织者的赞扬。

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英语口语要学而时习之，即不断地复习已经掌握的口语。这里所说的复习是广义的，既指一般意义上的复习，更指再应用英语口语中的复习。从一定意义上讲，实际应用口语是最好的复习。即使经过艰苦努力确定已经掌握了英语口语以后，也不要以为从此可以一劳永逸地享用了。不是的，即使已经掌握的英语能力，一段时间不用，就会逐渐遗忘。笔者对此有深切的体会。

笔者出生于浙江浦江县，55岁以前一直不断地“听说”老家方言，所以老家方言“听说”能力极强。1987年先母去世，再也没有机会“听说”老家方言，从小养成的方言的“听说”能力逐渐衰退。1991年与一老家亲戚相会，一时间只能大体听懂他的话，而自己却只能说普通话，“听说”方言的能力大幅度下降，下降到简直令人难以置信的地步。那位亲戚非常不满，由于他听不懂普通话，每当我用普通话时，他不断地要我用老家方言，而不要“官话”，其实当时我确实不能用老家的方言顺利地表达自己的思想了，只是在三五天以后，在不断地与他交谈过程中，才把老家方言的能力重新激活起来，但是仍然不是很熟练，在那位亲戚听来，可能仍然夹杂着许多普通话的因素。
从小就说会的老家方言的“听说”能力尚且如此，何况上学以后才学的（主要其中大量的是书面知识），半会不会的英语呢？所以即使到了基本上能够用英语表达自己思想以后，也仍然要注意随时进行练习。在改革开放不断深入的今天，可供练习英语口语的机会还是很多的，听广播，参加英语角，同事之间用英语交谈等等都是切实可行的方法。否则随着时间的推移，口语能力会快速下降，最后会回到听不懂和说不了的原始水平。

十三、如何提高阅读能力

阅读英语资料是英语的重要用途之一，就大多数人而言，“阅读”的机会要比“听”和“说”大得多。所以不要因为强调摆脱“哑巴英语”而不注意阅读能力的培养。否则学了十几年的英语，即使“听”和“说”的能力再强，充其量也不过相当于英国或美国的一个文盲。而这绝不是一个受过教育的中国学生所追求的目标。

把英语资料译成汉语是阅读能力与汉语写作能力的综合，真正看懂文章的内容并具备汉语写作能力的人是一定能胜任笔译工作的，所以把英汉互译与阅读合在一起讨论。

１６１６１６１６１６

作为语言，学习英语和学习汉语有共同的规律。从大的方面看，怎么学会汉语（听、说、读、写）就怎么去学英语。

前面讨论听力问题时所论述的基本功的重要性等内容原则上都适用于阅读能力的培养，下面补充讨论一些与阅读能力有关的
内容。

快速阅读能力和抓住大意与关键词的能力是在基本功扎实的基础上培养出来的。从阅读的角度看，基本功就是基本语法及其基本词汇量。

基本语法和基本词汇量没有熟练到“化”的地步，阅读时脑子里就有一个缓慢的分析与思考过程。例如看到 calmer 以后，脑子里不能下意识地反映出它是 calm 的比较级，而以为是一个自己不认得的生词，或者说需要经过短时间思考以后才能明白是 calm 的比较级，看到 back-lit 时觉得 lit 这个词从来没有学过，以为这是生词，其实是 light 的过去式。这样的英语水平是无法实现快速阅读的。在快速阅读中如何抓住文章的大意与关键词的本领也是这样，它是在基本功非常扎实的基础上才具具备的，一词一词、一句一句抠才能搞明白一段文字的意思的人怎样能够抓住大意与关键词呢？如果一定要抓，其结果必须是与听力训练中的抓大意与听关键词一样，结果只能是乱蒙一气。即使蒙对了，也没有什么收获。

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提高阅读能力必须脚踏实地，循序渐进，必须不图虚名，不好高骛远，以提高实际英语应用能力为惟一目标。提高阅读能力最基本方法是阅读时要有“不可一词无来历，不可一句不讲究”的学习态度，力求“词词懂和句句懂”。

在学习阶段，阅读每一篇文章，只要有可能，就要“十目一行”，逐词逐句地抠，多问几个为什么，做到“不可一词无来历”和“不可一句不讲究”。阅读过程中有任何疑问，都应该打破砂锅问到底，查词典或请教他人，千万不要望文生义，以免产生错
Less than two months later, James McDivitt and Ed White went into space. Ed White would leave the protection of the spacecraft and move out into the unknown emptiness of space. When it is the time for him to leave the spacecraft, this is what the world heard: "Roger, Flight, We’re GO." Those were the words from the flight director on the ground.

由于此处的 Roger 与 Flight 两个词是大写的，国内出版的一本介绍 VOA 慢速英语的书错把它们当作两个人的名字译出来了：

…… “罗杰，弗莱特，可以开始了。”地面的飞行指挥发出了指令。

就单个句子说，这种译法似乎并没有什么大错误。但是只要上下文一对照，就会发生疑问：谁是罗杰？谁是弗莱特？是指天上的两位宇航员吗？不是，因为前段文字已经交待了，他们的名字是 James McDivitt 和 Ed White。如果把这两个词当作另外一个人的名字，可是文中根本没有提及这个另外的人，所以哪里来的罗杰・弗莱特？

其实只要查一下词典，就可以知道 Roger 是无线电通信用语，表示 “听到了” 的意思，并不是呼唤某个人的名字。接下去的 Flight 也不是人的名字，而是下一句话中所说的 flight director 的简称。所以这段话的意思应该是：

…… “听到了，我是地面飞行主任，可以开始了。”地面的飞行指挥发出了指令。
Roger, Flight was the name of the new satellite. How could that be possible?

People had studied the sky for centuries. They had used increasingly powerful telescopes to see more of the universe. Everyone knew our solar system had eight planets: (Mercury, Earth, Venus, Mars, Jupiter, Saturn, Uranus, Neptune).

The eighth planet, Neptune, was discovered in 1846. Astronomers had been trying to explain the strange orbit of the seventh planet, Uranus. After discovering Neptune, they thought they had the answer. They were sure no more planets were hidden behind it.

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是又一颗行星，怎么可能又有另外一颗行星呢？
“词组和句组”是英语的基本功，是各种高级英语能力的基础。就拿快速阅读能力来说吧，它是逐词逐句逐段文章后阅读能力的升高，绝不是边查词典边看文章的人能做到的。

由于急于求成思想的影响，也许有人会认为“词组和句组”学习方法收效太慢。其实正好相反，用这种方法学习英语，不但学得扎实，而且水平提高得速度是很快的。有时快得令自己都会感到惊讶。任何一个具有正常逻辑思维能力的人，只要坚持这样做，最后必然会有“一日十行”的快速阅读能力，令那些热中于速成的人望尘莫及。

长期坚持阅读文章时的“不可一词无来历”的学习态度，不但可以扎扎实实地提高阅读能力，而且可以养成严谨的学风，从而有助学习其他知识。

3

有的人阅读中碰到看不懂的句子或段落时，心里就很烦，往往会“绕过去”，并自我安慰说“个别句子和段落看不懂不影响理解大意”。这种做法是很不可取的，因为它严重影响阅读能力的提高。其实道理很简单，那些看不懂的内容就是提高阅读能力的台阶。把一个看不懂的内容都搞懂了，阅读能力也就一步一步登上新的高度。

有的内容初看可能不懂，而且一时也找不到恰当的译名，可以暂时放一放，说不定看了后面章节中的进一步解释后能搞清楚其含义。一般说来，一篇文章或一本书，引入新名词或新概念时，一定会在某个地方对所引入的新名词或新概念进行解释。
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对于阅读过程中碰到的疑难问题，应该从语法、逻辑与含义等方面进行反复推敲，力争准确地译出，下面举两个例子。

例一：某英汉双解计算机词典里 real-time system 的定义被译成为：
“一种能在事件结束前对其做出反应的计算机与（或）软件系统。例如，航空防撞系统必须处理雷达的输入信号，检测可能的碰撞，并在空中交通管制人员或飞行员仍有时机反应前就警告他们。”
其原文为：
A computer and/or a software that reacts to events before the events become obsolete. For example, airline collision avoidance systems must process radar inputs and warn air traffic controllers or pilots while they still have time to react.
“obsolete”一词意为“过时的”，在实时系统中，来得及反应就是“real time”，“实时”，否则就是“obsolete”，“非实时”。
以空中飞机防相撞系统为例，“事件结束前”就是“飞机相撞前”，它可以是相撞前几分钟，也可以是相撞前几秒钟。假如提前一分钟发出警告，空中交通管制人员或飞行员还来得及反应，不会相撞；若在前几十秒钟或几秒钟才发出了警告，已来不及反应而相撞。在这里，判断“obsolete”与否的标准就是一分钟。

例二：有的原文语法简单明了，但就是不能完全明白其内在含义。此时更要注意推敲或请教内行。例如 1994 年美国某电脑刊物在评论美国政府打算使用一种能监测公民通信的技术时用了以下句子：
It is 1994, not 1984, but Big Brother is still trying to listen.

这句话的语法非常简单，Big Brother 一词也能在词典里找到。译出来就是“今年是 1994 年，不是 1984 年，但是美国政府（Big Brother）仍打算监听。”

这样译当然并没有错，但作者为什么偏偏要提出不是 1984 年呢？从法律讲，1984 年时政府也是不能监听公民通信的。后经多方请教，才知此语源自 1949 年英国作家奥威尔（Orwell）写的一本名为《1984》的小说，设想到了 1984 年，老大（Big Brother）会成为控制人们思想和生活的独裁者。

了解了这个文化背景以后，就可以把这句话译为“今年是 1994 年，不是英国作家奥威尔小说《1984》所描述的 1984 年，但是美国政府（Big Brother）仍打算监听。”

5

对于阅读过程中碰到的问题，应该在原稿上做明显的标记。这样做除了便于自己有针对性地仔细推敲外，也便于请教别人时能迅速找到问题所在的位置与页码，在短时间内请教完所有问题。

6
不多，因此在学习任何一门新的学科时，很少听到有学生说名词太多而学不下去的。

阅读英语专业书刊也是一样。刚接触通读时，似乎不认得的术语很多，因而觉得难度很大，似乎难以看懂。其实只要一节一节逐词逐句地阅读下去，每碰到一个新的术语都要查词典，记住生词本上并不断复习，就会熟练掌握。

只要坚持这样做，越往下阅读碰到的新术语就越少，就越觉得容易。反之，如果前面的术语不熟练，似懂非懂地硬着头皮往下看，越最后越困难，直到最后放弃为止。

只要一般英语水平可以，又懂得专业，阅读专业英语书籍应该没有什么困难，不可能在一般英语水平比较低的情况下讨论如何阅读专业英语书刊。正如汉语水平低的人不可能顺利阅读专业汉语书籍一样，一般英语水平较低的人阅读专业英语书籍是有困难的。

除了学习专业英语课以外，还可根据自己的爱好选择一本英语书（专业书或小说均可），从封面的左上角开始，逐词逐句阅读，一直读到封底的右下角。碰到问题尽量自己解决，因为解决问题的过程就是复习与提高的过程。实在解决不了可请教英语老师，英语老师解决不了可发 email 给作者。

在从头到尾阅读一本英语书的同时，还应该经常阅读英语专业期刊，以便及时了解现代科技发展，掌握新出现的词语。
为了提高阅读和笔译能力，可以结合自己的专业，选择几篇由英美人士写的原版书，在大体上了解其内容的基础上，逐词逐句将其译出。

具备一定的笔译能力以后，可以翻译一本原版书。从书的左上角到封底的右下角，逐词逐句翻译。

翻译时有了语法或词义方面的问题要勤查词典和请教内行，不要放过任何一个能提高英语水平的机会，努力做到词词懂，句句懂。

实践经验表明，只要坚持这样做，阅读和笔译水平可以得到极大的提高。

对照原文，逐词逐句地阅读一本译作对于提高阅读与翻译能力也很有帮助。

看某些译文的某些句子或段落，有时会感到难以理解或不知所云，此时应该尽量找来原文，对照译文仔细推敲。以下是笔者碰到过的几个例子：

例一：某计算机词典介绍 RealAudio 一词时用以下一段译文：

“一种万维网上可以向客户传送事先录制好的或实况音响的软件，像万维网浏览器一样，通过在空中解压缩，因此可以按实时方式为万维网浏览器用户播放。”

与其对应的原文为：

Web software that streams prerecorded or live audio to a client,
such as a Web browser, by decompressing it on the fly so that it can be played back to the Web browser user in real time.

其中的 on the fly 是词组，可以做“在飞行中、诡诈地”等解。译文将其译为“在空中”。这就难以理解了，因为如果信号是通过有线传输的，怎么能“在空中解压缩”？很显然，此处的 on the fly 应该译为“巧妙地解压缩”。把 such as 译为“像……一样”也是不妥的。整段文字似应译为：

“一种万维网上可以向客户（例如万维网浏览器）传送事先录制好的或实时音效的软件，通过巧妙地解压缩，因此可以按实时方式为万维网浏览器用户播放。”

例二：美国某电脑杂志上有以下一段话：

This PC costs only $999, but still packs some hardware punch.

由于 punch 一词可以作“穿孔机”解，所以国内某刊物把这句话译为“该计算机仅需 999 美元，而且还配备了硬件穿孔机。”

现代的电脑里怎么还会带穿孔机呢？再仔细看看《新英汉词典》，punch 一词还可以作“能力”解，所以这句话似应译为：“该计算机仅需 999 美元，却配备了功能很强的硬件”。

例三：某书把“In its 25th anniversary issue, Computerworld ranked Martin fourth among the 25 people who have most influenced the world of computing.”一段文字译为：“在计算机世界第 25 次年会中，Martin 先生被授予计算机领域最有成就奖。”

可能该书的译者不知道 Computerworld 是一本美国电脑杂志，误以为是一个计算机学会，所以就把 25th anniversary issue 译为“在计算机世界第 25 次年会中”了。但是只要查一下词典，虽然 “issue” 的释义很多，就是没有“年会”。这里的 issue 显然指的是“（报刊）期号”解，不能作“年会”解。“ranked Martin fourth among the 25 people who have most
influenced the world of computing.” 一段文字译为 “计算机领域最有成就奖” 也是很不准确的，句子中的 fourth 一词也不能不译出。

这段文字似应译为 “在 Computerworld（计算机世界）杂志的 25 周年纪念专刊上，列出了 25 位在计算机领域最有影响的人物，Martin 先生位居第四。”

翻译前应该准备好与所译内容有关的专业英汉词典，并尽可能找来同类的汉语书籍看看，以了解一些背景知识与有关术语。

例四：一次报导足球比赛的消息时有这样一段话：

AC Milan lost 2–1 in Munich, but because the Italian side had won the first leg 1:0, the two sides tied and Milan advanced on the strength of its away goal.

第一场 AC 米兰以 1：0 赢了德国的拜仁幕尼黑队，第二场德国的拜仁幕尼黑队又以 2：1 赢了 AC 米兰队。两个队的总进球数都是两个，谁赢了？国内某报 “体坛零讯” 认为 “AC 米兰队被德国拜尔幕尼黑队淘汰”。

实际上正好相反，AC 米兰队把德国拜尔幕尼黑队淘汰了。从英语来讲就是 away 这个词的释义问题，在这里作 “客场” 解。按国际比赛规则，如果双方总的进球数相同，客场进球一个算两个，所以 AC 米兰队的总进球数少三个，而德国拜尔幕尼黑队只有两个，所以 AC 米兰队把德国拜尔幕尼黑队淘汰了。

从表面上看，发生此差错主要是因为对足球比赛的背景知识不够所致。但是句子最后的 on the strength of its away goal 是什么意思？只要认真去想一想这个问题并查查词典，就不会发生此类差错了。〈词典里 away 一词的释义中就有 “客场” 之解，
第四章 逆向法与听说读写译

10. ☐ ☐ ☐ ☐

阅读英语报纸是扩大词汇量和增加背景知识的有效途径。从学习英语的角度出发，笔者建议仍然要“逐词逐句地”。力求词词懂和句句懂。具体的方法和步骤如下：
(1) 选择自己感兴趣的版面，例如选择国际新闻作为阅读的重点，逐词逐句地读，不明白的词要查词典，并记录在生词本里。
(2) 稍后，一份报纸看半个月。
(3) 稍后，一份报纸看一个星期。
(4) 稍后，天天看报。
(5) 扩大精读的版面范围，例如在能快速阅读国际新闻版面
以后可以阅读经济新闻和体育新闻版面。
(6) 在精读的同时也可进行泛读，快速阅读某些版面的消息。

11. ☐ ☐ ☐ ☐ ☐

正如讨论听力的背景知识时所说明的那样，一个人的各种背景知识是与他受的教育程度相对应的。换句话说，别的中国学生
阅读英语书面材料时所具备的背景知识，你也有。所以不要把阅读速度慢或理解差归咎为背景知识不够。例如 PETS 四级阅读理解题有一则是关于 Australia Northern Territory 议会在经过激烈的辩论以后终于通过了允许医生施行安乐死 (euthanasia) 的法律后各方面的反应。

对于经常读报和听广播的大学生来说，一定已经从报纸上了解到了此类及各方反应，因而具备了必要的背景知识，文章中并没有什么怪僻的词，因而比较容易做出正确的回答。如果不经常看报和听广播，恐怕就难以快速地正确地理解了。

当然，有些考题中所涉及的背景知识，有的中国学生不一定具备。例如 PETS 五级阅读理解题有一篇关于三种小汽车（Audi A3、Honda Civic、Rover 216）各种性能对比的文章。对于熟悉小汽车的英美大学生来说，只要快速阅读一遍即可明白每篇文章说的是什么意思，从而做出正确的选择。但是对于大部分没有开过小汽车（甚至有的还没有坐过小汽车）的中国学生而言，只能从文字的字面意思去想象汽车内部的各种结构，从而大体理解文章的意思，因而难以快速做出正确的选择。

12********

快速阅读的要领很多，下面介绍笔者的两点体会：

(1) 在提高听力的同时提高阅读能力。前面已经提到，对于中国学生来说，“看”要比“听”容易得多。不少人不从提高听力入手，而是“以读攻读”，结果往往事倍功半，很难真正攻下“读”，达到真正阅读的目的。而从语音入手，则事半功倍，真正攻下“读”。当听力水平提高到一听就懂的水平时，脑子里两个从英语到汉语的翻译过程就会消失或大大加快，因而能如同
阅读汉语一样轻松阅读英语书面资料，大有“一日十行”之感。

例如笔者在 1980 年前 20 多年里，曾下过不少工夫，千方百计地想提高英语水平和扩大英语词汇量，以提高阅读英语书面资料的速度，但始终没有取得突破性进展。只是到了采用听写的方法，学会了 “听”、“说” 以后，阅读的速度才明显提高。

(2) 阅读时要积极思维。阅读文章时要积极思考，边看边推论，在没有看下面文字的同时就应该思考下面可能要讲什么。如果下面的内容果真与自己的推断一致，则可快速略过，不必看。如果与自己的思路不一致，则需要停下来仔细阅读。

对于文章中的 but、however、while、though 等语气转折处，要特别注意，要细细看语气转折以后讲了些什么内容。

13

扩大词汇量的方法与学习者所处的状态有关。对于正在上学的学生而言，要求他们掌握的词汇量都是课文中出现过的，所以只要学一课记一课的生词，做到会说会听会写会用，就可以很有把握应付种种考试。期中、期末考试时基本上不用在把过多的功夫花在记忆词汇上。准备中考或高考时的任务也仅仅是把已经记住的词汇量进行一下系统的复习与归纳总结，并不会发生什么扩大词汇量的问题。

完成了课程规定的英语学习以后如果想进一步提高英语水平，可以选定一个课本，像上学时一样去学就是了。碰到不认识的生词时勤查词典，并努力将其记住。只要长年坚持，词汇量就会自然而然扩大，没有必要刻意去扩大词汇量。由于此时已经熟练地掌握教学大纲规定的五六千词汇，也可有意识地采取归纳和由此及彼的方法去扩大词汇量。
为了应付某种考核的需要，例如准备 GRE 或 TOFEL 考试时，才会发生短时间内如何扩大词汇量的问题。

由于 GRE 或 TOFEL 词汇量中有许多使用频度很低的词，只是为了考试才去记忆。记忆这类词汇的目的就是为了应付考试，不论采用什么方法，只要在考试前记住就算达到目的，所以扩大此类词汇量的方法可以采用波浪式突击记忆。

(1) 归纳综合。归纳综合的方法之一是顺着某一词把与其同类的词都搞清楚。例如碰到了某个军衔的英语名称，在搞清该军衔的同时把所有的军衔都搞清楚，以便脑子里有个印象，以后碰到时知道到什么地方去找。

(2) 学习前缀和词根知识扩大词汇量。一般的前缀和在中学和大学学习过程中大体上已经掌握，学习的重点应该放在词根方面。为了在短期内扩大词汇量，可以系统地阅读有关书籍。

十四、如何提高写作能力

俗话说“熟读唐诗三百首，不会吟诗也会吟”，杜甫说“读书破万卷，下笔如有神”。从以下两个方面着手，可以有效锤炼英语写作能力。

1．

中学和大学的英语课本上的课文都是专家精心选配的，如果能够在熟读的基础上达到熟背的程度，对英语写作一定会有极大的帮助。
20 4-103

写作方法无定势，关键在于多写多练。可以通过写日记练习写作，也可以通过写论文练习写作。在写作论文之前，最好能找几篇由地道的英美人士写的同类论文，仔细研究其文章结构与用语，以其为范本进行写作。写作结束以后，一定要请英语水平高的人士修改。如此不断写作，不断提高。

十五、如何查词典

查词典是学习逆向法的重要一环，逆向法的很多优点是通过查词典体现出来的。例如在长期听写过程中，自己的发音会受到录音的影响。因为在听到一个不会的词以后，要想能猜出来并其词典里找到，首先必须准确地抓住其发音，能准确地模仿着读出来。如果抓不住其发音或模仿不了，是根本无法猜词的。

长期坚持这样做，必然能把错误发音纠正过来，从而正地读出学到的生词。又如为什么用逆向法学到的单词比一般阅读时查词典学到的记得牢？也是因为用逆向法学习时查词典运用了脑子的多个部位，而且注意力高度集中所致。所以要在思想上明确树立起词典是“第一老师”的观念，不断地向它求教。

有的人虽然也用逆向法学习英语，但是碰到生词以后不愿意自己动手去千方百计地猜词和查词典，因为他们认为查词典花的
时间很多，而得到的解答只是一瞬间，浪费了大量时间，不如和
别人或看现成的记录来得快，他们样做的结果，必然体会到
逆向法的优点，水平也不会很快提高。

查词典也是一种能力，需要训练和养成习惯。有问题时
查词典，没有问题时也可以查词典，看看你所熟悉的一些
词的释义和例句。开卷有益，一定可以从中学到不少英语知
识。

查词典的习惯是逐步养成的，无论是阅读还是听写，稍有疑
问就查词典，久而久之，才能成为习惯。

勤查词典可以防止想当然产生的误解，例如 face to face 的
意思为“面对面”，back to back 为“背对背”以后，但是 see eye to
eye (with sb.) 的意思却是“(与某人) 看法完全一致”，neck and
neck 的意思是“并驾齐驱，不分上下”。

2

在起步阶段，不断需要“猜词”，有时会发生明明猜出来的
词是对的，但就是在词典里找不着的虚假现象。这是因为自己对
英语还很不熟练，在查词典的过程中自己脑子中的词的拼写会
“走样”的缘故。例如有一位初学者在听到 latrine 这个词的发音
以后，第一次就猜对了，但没有把猜的词写在纸上，结果一边查
着一边就“走样”，latrine 的拼写变成了 laterine 和 letrine，因
而查不着。为了避免这种现象，在英语水平还不高的起步阶段，
猜出词以后，不论正确与否，都要写在纸上，然后再去查。
3

查词典时要一边读一边查。有时初学者根据发音试拼出一个词，写在了纸上，默记在心中去查词典，本来试拼出来的词是对的，但还是迷失了方向，找不着。

为什么会有这种现象呢？主要是因为初学者的英语熟练程度不高，对英语单词的“瞬时记忆”能力比较差，查着查着就记不准自己要查的词是怎么拼写了。因此即使要查的词就在眼前，也可能滑过去，而且在你一页一页翻的时候，一定会看到一些你所熟悉的词，这时你的注意力就会被这些词所吸引，不自觉的会把目光停下来去看这些词，忘记了自己本来要查的词。如果一边读一边查，就能直接去查，不会被别的词所干扰，因而容易查到，并且随时都能判断自己所查到的词是否正确，这样也就加深了记忆。

4

有些英语水平不太高的人以为英语单词和汉语单词是一一对应的，因而在查词典的时候，只看词典下面的前一、两个解释就把词典合上了。把查到的词义用到文章里去，可能“牛头不对马嘴”，根本讲不通。为了避免这种情况，查阅词典时要把词典上的全部注释和例句看完，再从中选取最切题的解释。有的时候词典上的所有解释都不太切题，这时就只能意会，不能言传了。通过这样的方法学到的英语单词知识是比较全面的，而且是比较“活”的，能在不同的场合灵活运用。

把查到的词的全部注释和例句都看完的作法非常有利于扩大词汇量，例如查到 trunk 以后，词典上的解释非常多，作为名
词解的就有：
树干，（动物或人体的）躯干，（昆虫的）胸部，大血管，神经干，（铁路，运河和电话线的）干线，大象的鼻子，（鸟，虫的）长嘴，（旅行用的）大衣箱，汽车车尾的行李箱，（复）男用运动裤，（建）柱身，（信）中继线，（船）便门，（矿）洗矿槽
作为形容词的解有：
树干的，躯干的，（铁路，运河和电话线等）干线的，箱形的，有条管的。
如果用同义词和反义词词典，应该把所有的同义词和反义词看一遍。例如，查 construct 这个词时，就可以查到同义词有：
build，erect，make，fabricate，set up，create，formulate，frame，design，devise，fashion，shape，organize，arrange 等。
反义词有：
demolish，destroy，raze，tear down，take apart 等词。
尽管这些词有不少你可能不认识，但是过了一下目，多少总会有点印象吧。长期坚持这样做，可以花较少的时间，学到更多的词。
根据发音找不到而通过别的途径找到了，应该总结一下为什么根据发音找不到，是不是自己对英语的发音规则掌握得不好，还是碰到了什么特殊的不规则发音等等。
经过这样不断的总结，可以大大丰富自己的语音知识，查词典的本领也会得到明显的提高，十有八九可以根据语音员的发音从词典里找到相应的词。
英语在发展中，新词和新的释义不断出现，有时在用的词典里找不到要查的词，或虽有，但是没有合适的释义。此时可以根据上下文的意思去理解其释义，并在随后的收听过程中加以验证。例如以下一条关于“安乐死”的消息中是这样用 mercy killing
Euthanasia Legislation passes in Holland

The draft passed on Tuesday—a carefully drafted compromise—does not legalize euthanasia but allows doctors to perform mercy killing if they comply with strict official guidelines.

从上下文可以看出，此处的 mercy killing 就是 euthanasia（安乐死），但是《新英汉词典》对于 mercy killing 的释义为“（使受刑者）减少痛苦的处决”，显然已经不太适合了。

5

水平提高到一定程度以后，要尽量用英－英词典，以便去掉脑子里从英语到汉语的翻译过程。

6

在听写过程中，最好准备两个生词本。一个是“流水生词本”，逐日记载学到的生词；另一个是“分类生词本”，每过上一段时间（比如说一个月），就把“流水生词本”上的生词分类整理，转记到“分类生词本”上，并且按照词典的方式排列。

这样做非常有利于记忆。因为再一次的书写过程就是加深记忆的过程，而且在确定一个单词分入哪一类时有一个思考的过程，也有利于记忆。在把一个词抄写到有关类别中去时，你也会自觉不自觉地看看原来已经写在上面的一些同义或近义的词，无形之中也把这些词复习了一次。
各类英语录音材料（例如 Standard English 广播）的用词量高达数万，即使都听写出来了，不太可能词词都熟记熟背，不少词听写出来以后只是有点印象。因此听写过程中经常有这样的情况：一些过去曾经花不少功夫猜出来并从词典里查到了的词有时又想不起来怎么拼写或是什么意思了，还得再花很多时间去猜去查。

为了解决这个问题，一定要边学习边编一本专供自己用的分类词典。每次听写时都把它放在旁边，碰到听不出，不会拼写的词就在里面找，如果没有就立即补上，几年下来，就等于编了一本对于自己很有用的词典了，而且它的作用不是从书店里买来的词典所能比拟的。

把新闻广播中出现的新词语和新缩写词收集在一起，无论对自己和对别人都有一定的参考价值。《听遍全世界 Radio Around the World》的第三部分 “英语广播分类词语” 就是笔者根据十几年来听写过程中积累的资料编写的，收入了大量新近出现的词语。

随着现代社会的飞速发展，新词层出不穷，国内出版的词典往往来不及收入新出现的词汇。而国外出版的 CD- ROM 版本词典几乎年年更新，使用此类词典，往往可以查到一些新的词汇。例如笔者在国内出版的纸介质词典上查不到 glitch 和 exit poll 的准确含义，但从 Microsoft 公司出版的 Bookshelf 光盘里查到了如下详细的解释：
Glitch:
1. A minor malfunction, mishap, or technical problem; a snag: a computer glitch, a navigation glitch, a glitch in the negotiation.
2. A false or spurious electronic signal caused by a brief, unwanted surge of electronic power.
3. Astronomy: A sudden change in the period of rotation of a neutron star.

Word history: It is first recorded in English in 1962 in writing of John Glenn….

Exit poll:
A poll taken of a sample of voters as they leave a polling place, used to predict the outcome of an election or determine the opinions and characteristics of the candidates’ supporters.

如果有条件上网，也可以在有关网站上查找新词汇的解释。

再新的词典也不可能把所有的新名词与组合词都收集进去，阅读与听写过程中要注意锻炼根据上下文判断新名词与组合词的含义，只要不妨碍理解，不必去深究其汉语译义。例如：
例一：经济新闻中频繁使用 technology-heavy Nasdaq、technology-weighted Nasdaq、technology-laden Nasdaq 等。虽然词
典里没有这些词语，但只要懂得 technology、heavy、Nasdaq、weighted、laden 等词的含义，不难理解这些组合词的意思，而且完全可以直接从英语去理解，没有必要译成汉语。

例二：2000 年 2 月黑客入侵 Yahoo 网站，中断工作数小时，英语广播报道此事使用了以下句子：“It has been hijacked for several hours”。此处的 hijack 一词只能意会不能言传，根据互联网的情况，似乎可译为“被迫中断工作数小时”。

例三：2000 年 4 月 27 日在报道美国宇航飞机 Atlantis 号连续三次因天气原因没有升空时，用的是 no-go。词典里没有 no-go 这个组合词，但从上下文完全可以理解该组合词的含义为“不发射”。

十六、防止急躁情绪和好高骛远

在学习的起步阶段，尤其是前两三个月，由于水平低不得不逐词逐句地抠，进度当然十分缓慢，三五分钟的录音花了三五个小时也不一定能全部听写出来。录音机翻来覆去地进带倒带，非常枯燥无味，容易使人泄气，怀疑自己能否学会。这是起步阶段中最困难的时刻，也是不少人打退堂鼓的关口。对于有志者来说，要沉得住气，要有耐心，要硬着头皮坚持下去。古语说得好：“只要工夫深，铁杵磨成针”。只要坚持逐词逐句地抠，力求词词对，句句懂，英语水平一定会很快提高。

也许有人会说这种逐词逐句抠的方法实在费力费时，太“笨”了，但它却是初学者必须经过的一个阶段。熟练了以后再返回去
看刚开始时的听写记录，自己也觉得很可笑。为什么当时连这么简单的词也听不懂？！实践经验表明，凡是脚踏实地，逐词逐句抠过来的人，都能坚持到底，达到了提高听力的目的。而那些起步后偶尔听懂了几句或似懂非懂地听懂一两篇短文，就认为慢速英语太简单，不值得下功夫的人，大多欲速不达，坚持不下去。
　　只要坚持“逐词逐句抠”和“力求词词对”，就会感到犹如小学生学语文一样，每天都能学到新的知识。这时，一定会用逆向法学慢速英语上瘾，入迷。如同猜谜语猜到谜底，智力测验找到答案一样，为抠出一个词，抠懂一句话而高兴不已，为抠不出某个词而久久不能忘怀。
　　在防止急躁情绪的同时还要防止好高骛远。有的人（尤其是学历比较高的人）在还没有打牢基础的情况下就急于提高，表面上学基础英语，但是深入不进去。因为挂在心里的是某个很高的目标（直接听 Special English 或 Standard English 广播，通过 TOEFL 考试等等）。例如在没有扎扎实实掌握慢速英语的情况下就去听写 Standard 英语广播录音，结果两头落空；慢速英语不熟练，Standard 英语广播也听不懂，越学越丧失信心。
　　为了有效地防止急躁情绪和好高骛远，读者不妨把“慢些，慢些，再慢些”写在自己的听写记录上，或者把它写成座右铭放在桌子上，以时时提醒自己。

十七、花这么多时间值得吗

或许有的人觉得用逐词逐句抠的方法提高听力和阅读能
力太费时间，在反复猜某个词，（尤其一些与自己的专业没有直接联系的生僻词）而不得其解时，容易对逆向法产生疑虑：何必花这么多功夫，看看答案不就知道了吗？与自己的专业没有直接联系的生僻词，猜不准也无关大局，猜着了也用处不大。

对此我们可从学习母语与学习外语的过程对比中得到一些启发。例如学习母语“再见”一词，从孩子只有几个月，还不会说话（或许也听不懂）的时候起就开始教，一直教到孩子知道在什么场合说“再见”为止。期间不知道教了几百遍，几千遍。

中国人上学以后才学说英语“good-bye”，不可能重复幼儿学说语言的过程。上学时首次听到“good-bye”时，脑子里一片空白，它的语音、调调和含义等等，都需要从零开始进行记忆和理解。这个过程绝不是几次或几十次所能完成的。所以从一定意义上讲，可以把猜词过程看成是从学习某个词的漫长过程的浓缩。对于自学的人来说，可以把它看成为学校学习英语长过程的浓缩。

花很多功夫去猜词而不直接看答案收获是多方面的，可以全面锻炼和提高英语能力。

首先体现在语音知识方面。假定某个词猜了 20 次才猜对，前 19 次虽然没有猜着，但也是有收获的。每猜一次都要反复听儿遍该词的声音，思考为什么上一次没有猜对？是不是有什么细微的音没有听出来？这样，每猜一次都有新收获：或者听出了一个上几次很细微的语感，或许学到了一个特殊的发音规则等等，从而一步一步向正确的答案逼近。经过这样翻来覆去的 20 次重复，对于这个词本身以及体现在它身上的语音现象一定会有深刻的印象。

其次体现在其他语言知识方面。由于被猜的疑难词是与其他
词结伴在一起出现的，为了猜到它，必须反复听包含有该词的某句话，然后把它的语音、与其他词的关系和在整个句子中的作用等方面知识综合在一起，猜测可能是什么词。在这个过程中，会翻来覆去地听到那些“会”或“熟”的词或词组，会用到那些“会”或“熟”的语法知识。经过这样不断的重复，“会”或“熟”的英语就一步一步“化”了。而对于疑难词本身，由于是经过反复听和分析才猜到的，一般情况下一猜着也就牢牢地记住了。

猜词的过程是不断假定与求证的过程，脑子一直处于积极思考状态，因而记忆效果要比机械重复朗读要好得多。

反复猜与专业无关的生僻词对于提高能力的功用很像小学生做鸡兔同笼一类比较难的应用题。在实际工作中会碰到鸡兔同笼一类的应用题吗？不会。如果真的碰到，鸡的头和脚长和兔子的完全不一样，一眼看去就知道几只鸡几只兔子，还用得着算吗？但是对于小学生来说，为了锻炼思维能力，这类应用题是必须学的，它的学习效果不是做再多的四则运算题所能代替的。

同理，我们花这么大的力气去猜一些很生僻的英语单词是为了锻炼自己的英语能力。正如逆向学习可以收到正向学习所不能收到的学习效果一样，千方百计去查一些英语单词是一种能收到很好效果的高难度学习方法。生僻英语单词的难度较大，坚持去做，收获也会很大。

十八、这或许是捷径

逆向法并不主张旷日持久地慢慢磨，它主张在起步阶段加大学习“剂量”，力争在比较短的时间内完成学习任务。每天学上半个小时或一个小时是否就够了呢？不够。不少人多次自学或
参加学习班学习英语，刚开始时，从零开始，什么都是新鲜的，每天学上半小时或一小时，效果非常明显。但是过了上一段时间（譬如说五六个月以后），用的时间还是那么些，效果却不太明显了。这是什么原因呢？

研究记忆的心理学家认为，一个记忆力正常的人，如果每天学习英语的时间短，到了一定的程度以后，每天新学到的东西和忘记的几乎差不多，也就是说，很难再有显著的进步。这就是为什么许多人三番五次地学习英语，但是水平始终没有明显提高的原因所在。

那么，每天学习多长时间合适呢？从实践的经验看，在起步阶段，必须加大“剂量”，每天至少学习 3～5 个小时，力争尽快完成起步阶段的学习任务，使自己的听力上一个台阶，达到离开词典可以大致听懂慢速英语的程度（注意！是“大致听懂”，要想轻松自如地如同听汉语一样地听慢速英语，只有完成了巩固阶段和深化阶段的全部学习任务以后才有可能）。登上这个台阶是提高听力过程中最困难的一步，一旦登上了这个台阶，前边就是坦途。

不少人迷恋于“一月通”、“百日通”一类的英语速成法，视各种速成方法为英语学习的捷径，对于从基本功入手的逆向法，则认为收效太慢。其实正相反，从基本功入手，扎扎实实打基础才是真正的捷径。

其实不论学什么知识，从总体上看，只要方法得当，扎扎实实地一步一步来是最快的。

本书介绍的这种方法既不急于求成，又在起步阶段“大剂量”地集中时间学，把英语学习渗透到日常生活中的各个角落，一步一个脚印，踏踏实实地打好基本功的学习方法，在想速成的人看来，实在是太慢了。
其实坚持这样做，由于学得扎实，为以后的进步奠定了良好的基础，而且每走一步都能看到自己的进步，因此整个学习过程就是一个“自我鼓舞，自我激励”的“良性循环”，越学越感到有趣，劲头越大。反之，急于求成，朝三暮四，频繁地变换学习途径，由于看不到明显的进步，因而越学越劲头越小，整个学习过程是一个不断“自我泄气”的“恶性循环”，英语水平也不能得到很快的提高。

学习成效的快与慢是辩证的统一。各种速成的方法看起来似乎快，但是如果在速成以后（达到某种目标以后）不紧跟着把基础知识补扎实的话，到头来终究不能学到扎实的英语知识，从而不得不一遍又一遍地去速成。所以从总体上看，急于求成的学习方法的效果不好。

本书介绍的逆向法，一时间看起来似乎是慢，但它能从根本上得到提高，取得质的飞跃，从总体上看是快。

一位 70 年代大学毕业的人在了解到了逆向法以后：“半年或一年的时间太长了”。我说你自从毕业以来，每隔一两年就要下一次决心进修英语，三番五次的进各种英语学习班或自学，花的时间恐怕远远超过半年和一年，但水平提高仍然不明显。如果从你一毕业就用逆向法扎扎实实学的话，岂不在 70 年代中期就掌握英语了吗？与你现在这种花了十几年所达到的不高的英语水平相比，逆向法是不是也可以算一种速成呢？

如果说学习英语有什么捷径的话，逆向法或许是一条捷径。
(3) Something is wrong with the rail. Click [Click] to continue.

Something is wrong with that boy. Click [Click] to continue.

Something is wrong with something (or someone). Click [Click] to continue.

Something is wrong with the CPU. Click [Click] to continue.
What is this?

egg

cock

hen

egg

egg

A Way Out

We should have a way

out

(4)

(5)

900

900

(Follow Me)

(Follow Me)

(Follow Me)

(Family Album

U.S.A.)
1990

1993

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10%~20%

70%~80%
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(1) CET-4  CET-6

(2) CET-4  CET-6

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1. 2020年
   5月15日

2. 2020年
   5月15日
Radio Around the World

Special English 1500 10

Standard English

CET  EPT  TOEFL
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(3) ๙ӈМළൈӈӈླေਸ਼ຓ၂

1๙ӈМළ
Albania: United States’ Defence Secretary William Perry says American troops may remain in the former Yugoslav republic of Macedonia after NATO peace forces leave Bosnia-Herzegovina in December. Mr. Perry spoke in Tirana after meeting with officials from Bulgaria, Italy, Macedonia, Turkey and Albania.
3

4

JVCLL 9700 VSCP Variable Speed with Constant Pitch

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32 Kbps

16 Kbps

300

600

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800

32 Kbps

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800
10.00

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website
netcast
live
56Kbps
Realplayer
China Radio International
- CRI Live English
- WWW.CRI.COM.CN/ENGLISH
- CRI Home Page
- Realplayer Connecting
- Net congestion Buffering
- Realplayer

WWW.EarthTuner.com 1400
2

- Able
- Baker
- Bob
- Charlie
- Delta
- Echo
- Foxtrot
- Golf
- Hotel
- Henry
- India
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The Communication World Website is "WWW dot Tango Romeo Sierra Charlie dot Charlie Oscar Mike slash Charlie Whiskey" WWW.TRSC.COM/CW
(2) ৷পল্লৗ

Word

In the context of cholesterol (one of the nutrients) is a chemical with many functions, including energy production. Here we will consider about cholesterol in two different perspectives. Firstly, we will discuss on cholesterol in general, and then on cholesterol with different types. Cholesterol, is a structural component of animal cell membranes and a precursor to a number of steroid hormones and bile acids. A high cholesterol diet is known to have an impact on the risk of cardiovascular disease. To avoid high cholesterol, we should reduce consumption of cholesterol to a certain level. In this context, we can also discuss the chronic effects of cholesterol. Chronic effects of cholesterol are usually associated with metabolic diseases, such as diabetes and obesity. By consuming a high cholesterol diet, we can also increase the risk of various severe diseases, which is why we should reduce cholesterol consumption. Overall, we need to be aware of the cholesterol levels in our diet and try to maintain a healthy lifestyle.
(3) \( \text{Word} \)
1. Family Album

2. Walkman

Family Album

Walkman
第二部分 慢速英语解说

1. "..."
On October 19, 1959, the first Special English program was broadcast on the Voice of America. It was an experiment. The goal was to communicate by radio in clear and simple English with people whose native language is not English. Experts said the goal was admirable, but the method would not work. They were proved wrong. The Special English programs quickly became some of the most popular on VOA. And they still are. Forty years later, Special English continues to communicate with people who are not fluent in English. But during the years its role has expanded. It also helps people learn American English. And it provides listeners, even those who are native English speakers, with information they cannot find elsewhere.

Today, Special English broadcasts around the world seven days
a week, five times a day. Each half-hour broadcast begins with ten minutes of the latest news followed by 20 minutes of feature programming. There is a different short feature every weekday about science, development, agriculture and environment, and on the weekend, about news events and American idioms.

These programs are followed by in-depth 15 minute features about American culture, history, science medicine, space, important people or short stories.

Three elements make Special English unique. It has a limited vocabulary of 1500 words. Most are simple words that describe objects, actions or emotions. Some are more difficult. They are used for reporting world events and describing discoveries in medicine and science. Special English is written in short, simple sentences that contain only one idea. No idioms are used. And Special English is spoken at a slower pace, about two-thirds the speed of Standard English. This helps people learning English hear each word clearly. It also helps people who are English speakers understand complex subjects.

Through the years, Special English has become a very popular tool for teaching English, even though it was not designed as teaching program. It succeeds in helping people learn English in a non-traditional way. Individuals record the programs and play them over and over to practice their listening skills. In countries around the world, English teachers assign Special English to their students. They praise it for improving their students’ ability to understand American English and for the content of the programs. Universities and private companies in many countries produce packages of Special English materials for student use.
2

150000 VOA Voice Standard English 1/100

1500 Special English 1/100

90 Standard English 135

1500 Special English

90 “Standard English” 1500

1500
Voyager-II Spacecraft

Neptune

Jupiter

Saturn

Uranus

Venus

Mars

Halley’s comet

3
Thorndike Teacher's Word Book

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It is a kind of war ship

- grenade
- small bomb
- mine
- buried bomb
- sweeper
that destroys floating bombs. The Monkey and Crocodile. The Fisherman and the Genius.
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2000           3000
3000           4000
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2. VOA

The second is a serious skin disease -- porphyria cutanea tarda.

3.
Radio Around the World

Special English
Standard English

Radio Around the World

4

CET-6
EPT

TOEFL

5
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3181

Wind Energy
People have used wind energy for thousands of years. You can use the wind to move a boat, to power machines that crush green (grain), or to produce electricity. One of the most common uses of wind power is to pump water. All wind energy machines, windmills, work much the same way. All include some kind of device to catch the wind. Some use cloth cells (sails), others have sheets of bamboo, are metal, or wooden blades. The blowing wind moves these cells (sails) or blades, the movement turns a shaft device, and the turning provides the energy for a water pump or other machine (machine). The windmill costs money of course, but the wind itself is free.

Windmills with cloth cells (sails) are the most popular in many developing nations. A (The)
cloth cells (sails) system need (needs) little wind to start, it is lower (low) in weight and cast (cost), and it is not difficulty (difficult) to build and fix. Generally, you can build this kind of windmill with local cloth, wood and other materials.

Another kind of windmill has many metal blades in stand (instead) of the cloth cells (sails), it turns (turns) more slowly and coaster (costs) more mony (money) than cell (sail) when meals (windmills), but (it) usually can pump water from deep (deeper) holes and (it) need (needs) to be fixed less often.

A thired (third) commen (common) kind (of) windmill has only two or three metal blads (blades). The blads (blades) look much like (the) propeller at the front (of an) airplane. They turn very fast, and (the) system usually is used to produce electricity.

Of course, people in many countries often change the design of each of this (these) different one (wind) mill (mills) to meet local needs and conditional (conditions). When the (Wind) mills are not always the best way to pump water, they work well only if there is a lot of wind, and if the water is not too far under the ground (underground). When the (Wind) mills work especially well on Irelands (islands), that (that’s) because many Ireland (islands) has (have) strong winds and water near the surface.

When the (Wind) experts worn (warn) that it is very important to manage (measure) wind sped (speeds) before building or buing (buying) a windmill. In many areas, wind speed (speeds) change greatly (greatly) during different (different) seasons. For this reason, you must manage (measure) the wind speed regularly for at least (least) one comply (complete) year before starting a windmill project
Also put the windmill directly in the path of the wind and it should be much higher than nearby trees and houses.

People have used wind energy for thousands of years. You can use the wind to move a boat, to power machines that crush grain, or to produce electricity. One of the most common uses of wind power is to pump water. All wind energy machines, windmills, work much the same way. All include some kind of device to catch the wind. Some use cross cells, others have sheets of bamboo, metal, or wooden blades. The blowing wind moves these cells or blades, a movement turns a shaft device, and this provides the energy for a water pump or other machine. The windmill costs money of course, but the wind itself is free.

Windmills with cross cells are the most popular in many developing nations. A cross cells system needs little wind to start, it is low in weight and cost, and it is not difficult to build and fix. Generally, you can build this kind of windmill with local cross, wood and other materials.

Another kind of windmill has many metal blades instead of the cross cells, it turns more slowly and costs more money than cell windmills, but it usually can pump water from deep holes and needs to be fixed less often.
A first (third) came (common) kind (of) windmill has only two or three metal blends (blades). The blends (blades) look my eye (much) like (the) propeller at (the) front of (an) airplane. They turn very fast, and (the) system usually is used to produce electricity. Of course, people in many countries often change the design of (each) of these different windmills to meet local needs and conditions. Windmills are not always the best way to pump water, they were (work) well only is (if) there is a lot of wind, and its (if) the water is not too far under the ground (underground). Windmills were (work) exceptionally well on islands, that (that’s) because many islands have strong wind (winds) and water near the surface.

—(Wind experts warn) that it is very important to measure wind speed (speeds) before building or (buying) a windmill. In many areas, wind speed (speeds) change greatly during different seasons. For this reason, you must measure the wind speed regularly or (for) at least one complete year before starting a windmill project. Although (Also) put (the) windmill directly in (the) pasts (path) of the wind and (it) (should be) much higher than nearby trees and (or) houses.
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Special English

Standard English

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Developing Skill Fluency in English

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1. עלות הרכבה

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 עלות הרכבה של 92% במספר הפריטים הוזמנה 30% במספר הפריטים.

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 Special English
MBA

2. CET-4
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CET-4 71
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**TOEFL**

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Special English

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1. **CET 4**

Step by Step: Listen to this College English (Listening Comprehension) 1999 4 16 CET 4 6 45 52 58
Trees are useful to man in three very important ways.
They try and drive it away.
A1-33

“A piece of cake” — a relatively simple task or activity. 850 — Special English

3. CET 6  TOEFL

CET 4  2000  1
The Making of A Nation

Special English News

20

Special English News

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1. The scores for the TOEFL test are reported from 1999 to 2000.

The TOEFL test is a standardized test designed to measure the language proficiency of non-native English speakers. It assesses the listening, reading, writing, and speaking skills of test-takers. The test consists of four sections: Listening, Reading, Writing, and Speaking. Each section is scored on a scale from 1 to 30, with a composite score ranging from 100 to 400.

The TOEFL test is administered in both computer-delivered and paper-delivered formats. The computer-delivered test is more common and has become the standard in many countries. It is an adaptive test, meaning that the difficulty of the questions is adjusted based on the test-taker's performance.

The test is typically taken in a university or test center setting, and the results are reported within several weeks. The scores are used by universities and other institutions to evaluate the language proficiency of international students and to make admissions and placement decisions.

In summary, the TOEFL test is a critical tool for assessing the English language proficiency of non-native speakers, and it is widely used by universities and other institutions worldwide.
null
2. **TOEFL**

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PART B

PART C

TOEFL
2000

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TOEFL

TOEFL

—637

GRE

3. TOEFL
Tape 1 Side A
1. New Global Warming Theory
2. New Evidence Supports Global Warming
3. Ozone Hole Grows
4. Giant Jellyfish Invade the Gulf of Mexico
5. 2000 Summer Olympic Games
Tape 1 Side B
6. Olympics/Drug Use
7. Green Olympic Games
8. Growing Nerve Cells from Special Stem Cells
9. Chemotherapy
10. Red Panda
11. Blood Vessels and Cancer
12. A Human-like Machine
13. Smoking and Lung Cancer

Tape 2 Side A
14. Spices
15. Kennedy Space Center Visitor Complex

Tape 2 Side B
16. Malignant Melanoma
17. Asthma Study
18. Virus Suppresses Some Cancers
19. Diabetes Increasing in US
20. Mayapple Anti-Cancer Treatment
21. Osteoporosis Drug for Men
22. New Kidney Cancer Treatment

Tape 3 Side A
23. Genetically-changed Corn Plants Can Harm Monarch Butterflies
24. World Food Prize
25. Lasker Awards
26. American Political Symbol
27. Mount Rainier/Valley Forge
Tape 3 Side B
28. Bill Gates
29. Peru/Fujimori
30. Foreign Students in USA
   Part 1 First Step
   Part 2 US Educational System
   Part 3 Online Education
   Part 4 Applications
31. NEWS(NEWS)

Tape 1 Side A

1. New Global Warming Theory

Scientists have long believed that reducing carbon dioxide gas in the atmosphere is the best way to slow the warming of the Earth. But new research suggests that reducing other gases may be a more effective way to slow climate change.

The study was presented by American space agency scientist James Hansen and a team of scientists at NASA’s Goddard Institute for Space Studies. They say that carbon dioxide levels have remained about the same during the past twenty-five years.

Yet they say the average temperature of the Earth’s surface has increased.

The researchers found that the combination of other so-called greenhouse gases traps more heat in the atmosphere than once thought. Such gases include methane, chlorofluorocarbons and ozone gases. The new research suggests that limiting carbon dioxide and other gases is the best way to prevent the Earth from getting too warm.

Carbon dioxide in the atmosphere traps heat and keeps it near
the Earth’s surface. It is produced by burning fuels that contain carbon such as coal, oil and wood.

Three years ago, one-hundred industrial nations signed an agreement designed to reduce carbon dioxide levels in the air by the year Two-Thousand-Twelve. However, many countries objected to the climate change treaty. They said efforts to meet the goals of the treaty would harm their industries.

The NASA scientists say more efforts should be made to limit the other gases. They say other greenhouse gases appear to trap more heat in the atmosphere than carbon dioxide. And technologies already exist to control most other greenhouse gases.

NASA scientists say reductions in methane, ozone and black carbon gases also would improve public health and agricultural productivity. And they say the cuts would help the world’s climate and improve the air.

Representatives of industries most affected by restrictions on carbon dioxide welcomed the findings. But some scientists fear the study might be used to ease pressure on industrial nations that produce more carbon dioxide. Others say it might be used to pressure developing countries to do more to control the release of harmful gases. But most scientists agree that reductions are needed in all areas to prevent further global warming.

2. New Evidence Supports Global Warming

A new study says that lakes and rivers in North America, Asia and Europe are freezing later and melting earlier than they did many years ago. Some scientists say the findings provide more evidence that the Earth is getting warmer.

The findings were reported by John Magnuson and a research team from the University of Wisconsin, in Madison. The researchers collected historical information from Eighteen-Forty-Six to
Nineteen-Ninety-Five about twenty-six lakes and rivers. The lakes and rivers are in the United States, Canada, Russia, Japan, Finland and Switzerland.

The researchers found that many lakes and rivers were freezing about nine days later and thawing about ten days sooner than they did one-hundred-fifty years ago. They say those changes would mean a rise in air temperatures around the world of almost two degrees Celsius every one-hundred-fifty years.

Scientists say even small changes in the Earth’s temperature can have serious effects on the environment. Most scientists think the Earth is getting warmer and that people are causing the problem.

They say people are burning more fuels that trap heat in the atmosphere, such as coal and oil. But some scientists say global warming is not real. They say it is part of the natural system unaffected by human action.

The new results alone do not prove that the Earth’s temperature is rising or that people are causing it. But scientists say their findings support the idea that the Earth is getting warmer.

The researchers collected information from historical records. They got the information from newspaper reports, fur traders’ records, ship navigation records and notes of religious events. They discovered the dates of ice formation and breakup on three continents since Eighteen-Forty-Six.

Some of the information was recorded because rivers and lakes were important for trade or transportation. People also took note of freezing or thawing as a sign of the seasons.

The researchers note that the changes in ice formation on the lakes and rivers appear to have begun before Eighteen-Forty-Six. But they say the changes were happening at a slower rate then. They say most warming during the past one-hundred-fifty years is probably the result of human activity.
3. Ozone Hole Grows

The hole in the protective ozone layer over Antarctica has grown bigger this year than at any time since scientists began measuring it fifteen years ago.

Ozone gas in the upper atmosphere blocks harmful ultraviolet radiation from the sun. Ozone helps protect people from the sun’s harmful ultraviolet rays. Too much of this radiation can cause skin cancer or damage the eyes. U-V radiation can also threaten agriculture and the environment.

Scientists say they are concerned that low ozone levels in the upper atmosphere could threaten heavily populated areas around the world.

In the Nineteen-Seventies, scientists expressed concern about man-made chemicals called chlorofluorocarbons. They said these C-F-Cs were destroying the protective ozone layer. C-F-Cs destroy ozone in the presence of sunlight. They were once widely used in aerosol sprays and in cooling equipment. But most countries agreed to stop producing C-F-Cs after a worldwide ban in the late Nineteen-Eighties.

Over the years, scientists have observed a huge loss in ozone over Antarctica. Antarctica is the ice-covered continent that covers and surrounds the South Pole. The loss of ozone takes place during its extremely cold winter season from June until September. Scientists believe that sunlight causes chemical reactions in the cold air over Antarctica that can destroy ozone. This creates a huge ozone hole. The hole gets smaller as temperatures begin to rise in November. The temperature over Antarctica affects the size of the hole each year.

The National Oceanic and Atmospheric Administration said that the ozone hole increased to more than twenty-seven-million square kilometers for a few days last month. Scientists say this is the largest size ever recorded. It is an area about the size of North America.
Record low temperatures in the upper atmosphere are believed to be the cause.

For several years, the hole has extended over populated areas at the southern end of South America. This year, cities in Chile and Argentina were hit with dangerous levels of ultraviolet radiation. And experts say it is possible that the situation could affect areas in South Africa, Australia or New Zealand.

4. **Giant Jellyfish Invade the Gulf of Mexico**

Large numbers of huge Australian jellyfish have been found in the waters of the Gulf of Mexico near the southern United States. Scientists want to know more about them and what long-term effects their presence may have.

A jellyfish is an unusual sea creature. It is not a fish. It does not have a backbone. It has a soft body shaped like a bell. And it has long string-like structures called tentacles. There are more than two-hundred different kinds of jellyfish in all of the world’s oceans. They come in all shapes and sizes.

Jellyfish are often a problem for people swimming at the beach because some of them can sting. Some jellyfish stings can be very painful. But most jellyfish are harmless to humans.

Tens of thousands of spotted Australian jellyfish have washed up on beaches off the southern coasts of Alabama, Florida, Louisiana and Mississippi. Observers say they can easily be seen from the air.

Scientists say the jellyfish have grown two times their normal size. They are more than one-half meter across and weigh at least eleven kilograms.

The huge creatures are causing problems for people living near coastal waters of the Gulf of Mexico. Swimmers are avoiding the beaches. And the jellyfish are getting caught in fishing nets and in boat engines.
Scientists say the jellyfish may have a serious effect on the environmental system in the Gulf of Mexico. Scientists fear the jellyfish are eating the eggs and young creatures of the area’s fish, shrimp and crabs. They say this may harm the valuable fishing industry in the area.

Spotted jellyfish are native to Australia. They have been moving to the Caribbean Sea for twenty years. But this is the first time they have been seen so far north. They invaded the Gulf of Mexico in early June. Experts believe the jellyfish were caught in unusual waves that moved them north to the Gulf of Mexico.

Scientists in Mississippi and Alabama are doing research to find out more about the invaders and how much they eat. They hope that increased rainfall or cold weather will kill or control the jellyfish.

Scientists do not know if the jellyfish will survive the winter. If they do, their effect on the environment of the Gulf of Mexico could be an even bigger problem next year.

## 5. 2000 Summer Olympic Games

STEVE EMBER:
This is Steve Ember.

BOB DOUGHTY:
And this is Bob Doughty with the VOA Special English program, EXPLORATIONS. The Summer Olympic Games begin this week in the city of Sydney, Australia. Today we tell about the Olympics and some of the American Olympic athletes.

STEVE EMBER:
The world’s most famous sports event is the Olympic Games. Five-million people are expected to attend the Summer Olympic
Games this year in Sydney, Australia. They include leaders and officials from many countries. About fifteen-thousand reporters are there.

More than three-thousand-million people are expected to watch the games on television. More than ten-thousand athletes from two-hundred countries will compete in twenty-eight different sports in the Summer Games. They will be trying to win medals — gold for first, silver for second and bronze for third — in about three-hundred events. New additions to the Summer Olympics this year include synchronized diving, women’s weight lifting, trampoline, women’s pole vault and the triathlon.

(OLYMPIC MUSIC)

BOB DOUGHTY:

The name of the modern Olympic Games comes from games held in ancient times. The games are said to have started in the ancient Greek city of Olympia, about two-thousand-seven-hundred years ago. The first thirteen Olympic Games were foot races during festivals held to honor the Greek god, Zeus. Winners were honored with a crown of olive leaves placed around their heads. Greece continued to hold the Games every four years for the next one-thousand years.

Then the Games stopped. The ancient Romans banned the Olympic Games when they ruled Greece. They destroyed Olympic temples and sports fields.

STEVE EMBER:

The first modern Olympic Games were held in Athens, Greece in Eighteen-Ninety-Six. French diplomat Baron Pierre de Coubertin proposed a world celebration of sports like the ancient games of Greece. He believed the international event would provide a way for athletes of all nations to become friends.
The official symbol of the Olympics shows five rings. Baron de Coubertin designed the symbol in Nineteen-Thirteen. The five rings represent the linking through sports of five parts of the world: Europe, Asia, Africa, Australia and the Americas.

The colors of the rings are blue, yellow, black, green and red. The flag of every nation competing in the games has at least one of these colors. Under the rings is the Olympics saying in Latin: “citius, altius, fortius”. The words mean in English — swifter, higher, stronger.

BOB DOUGHTY:
The Olympic flame links the old and new games. In ancient Olympia, a fire burned in honor of the god Zeus during the sports competition. Now, runners carry a flame from Olympia to every new Olympics.

This year’s fire was lit in Olympia, Greece on May tenth. Each person ran with it for one kilometer and then passed it to another runner. Before the flame reached Sydney, it was carried by more than thirteen-thousand people.

The flame was flown from Athens, Greece, to the island of Guam in the South Pacific. It then was carried by individuals who traveled by foot, boat or vehicle through the Pacific islands to Australia. This Olympic flame has traveled farther than any other.

This Friday, September fifteenth, a runner will use the flame to open the twenty-seventh Summer Olympic Games. The Olympic flame will burn during the Games. It will be put out during closing ceremonies.

STEVE EMBER:
Some of the athletes taking part in the Summer Olympics have
trained for these events since they were children. One is American swimming champion Lenny Krayzelburg. Lenny Krayzelburg was born in the former Soviet Republic, Ukraine. He started swimming when he was five years old. A coach told Lenny’s father that he could be a great athlete. The coach said Lenny was born to swim the backstroke.

The Krayzelburg family left Ukraine and arrived in the United States when Lenny was thirteen. They settled in Los Angeles, California. Lenny continued to swim in competitions.

In Nineteen-Ninety-Four, Lenny Krayzelburg’s swimming skill won him financial support to attend the University of Southern California. In Nineteen-Ninety-Eight, he became the first swimmer in twelve years to win all the backstroke races at the World Swimming Championships. Last August, he broke the American record in the two-hundred meter backstroke for the fifth time. Later in the month, he broke the world records for the two-hundred meter and one-hundred meter backstroke.

Swimming experts say Lenny Krayzelburg should win both the one-hundred and two-hundred meter backstroke races at the Summer Olympics this year. Lenny Krayzelburg says he will be unhappy if he does not win three gold medals in Sydney.

BOB DOUGHTY:

Three members of the same American family will compete in Sydney. Hazel Clark, Jearl Miller-Clark and Joetta Clark-Diggs are all members of the track and field team. Hazel and Joetta are sisters. Jearl is married to their brother, J. J. Clark. He is the coach for all three women. It is unusual for members of the same family to compete in the Olympics. But it has been done. Jackie Joyner-Kersee and her brother’s wife Florence Griffith Joyner both competed in past Olympics. But they did not compete in the same event. The Clarks do. They all compete in the eight-hundred meter women’s
foot race.

Hazel Clark is the youngest in the Clark family of runners. She was the fastest in the Olympic trials. Her brother’s wife, Jearl Miles-Clark, was second. Jearl has already won medals in two earlier Olympic Games. Joetta Clark-Diggs finished third. She is the oldest, at thirty-seven.

That was the first time three family members finished first, second and third in the same United States Olympic trials race. And this will be the first time three Americans competing in one Olympic race are from one family. Many people will be watching the eight-hundred meter race to see if the three members of the Clark family can win all three medals.

STEVE EMBER:

Another international sports event will take place in Sydney following the Summer Olympics. The Paralympic Games will be held from October eighteenth to the twenty-ninth. All the athletes who compete in the Paralympics have a physical disability. About four-thousand disabled athletes will compete this year.

One American athlete who will compete in the Summer Olympics is already a Paralympics champion. Her name is Marla Runyan. She won the one-hundred, two-hundred and four-hundred meter races and the long jump at the Nineteen-Ninety-Two Paralympics. She also won the Pentathlon competition in Nineteen-Ninety-Six. This year, she will become the first legally blind athlete in the Summer Olympic Games.

Marla Runyan suffers from an incurable eye problem called Stargardt’s Disease. It destroys part of the retina of the eye, and blocks the center of vision. Marla Runyan has been legally blind since she was nine years old. She has been taking part in track events since she was in high school.

Marla Runyan will compete in the women’s fifteen-hundred
A2-13

meter foot race at the Sydney Games. She says her goal was not to be the first legally blind Olympian. She just wanted to take part in the Olympics. But her story has helped other disabled people find the strength to try to reach their goals. And Marla Runyan says that makes her feel very good.

BOB DOUGHTY:

The Two-Thousand Summer Olympic Games will end October first, after sixteen days of competition. The next Summer Games will be held four years from now, in Athens, Greece. The Summer Olympic and the Winter Olympic Games used to be held in the same year, every four years. Now, however, they are separated.

The next Winter Games are less than two years away. The western American city of Salt Lake City, Utah is busy preparing for the Winter Olympics of Two-Thousand-Two.

Tape 1  Side B

6.  Olympics/Drug Use

STEVE EMBER

This is Steve Ember with the VOA special English program in the NEWS.

Over the next two weeks, ten-thousand athletes from two-hundred countries will compete in the Summer Games in Sydney, Australia. They will try to live by the Olympic saying, “faster, higher, stronger.” But in the world of sports, experts say too many athletes use performance-improving drugs to reach these goals.

The International Olympic Committee says drug use risks the health of athletes and violates the rules of sport. If an athlete fails a
drug test before an event, he or she is banned from the competition.

Athletes who fail a test after winning an event lose their medals. This year, the I-O-C says it is testing more Olympic athletes more often than ever. Some experts say this is still not enough. They say it is still too easy for athletes to use drugs and pass the tests.

The International Olympic Committee bans six kinds of substances and three methods of increasing performance. One group of banned drugs is anabolic steroids. These substances increase muscle strength.

Experts say that some fast-acting steroids now leave the body in just a few hours. That makes them extremely difficult to find. Another banned drug is known as EPO. Erythropoietin increases the production of red blood cells.

The resulting increase in oxygen can improve an athlete’s performance in both short and long distance events. Officials at the Sydney Olympics are testing for EPO for the first time this year.

But experts say the officials may not find any, if an athlete stopped taking the drug about a week before the Games began. Another banned substance is human growth hormone, which builds muscle size and strength. Others include beta blockers and diuretics. Beta blockers are taken to calm nerves. Diuretics increase the production of red blood cells. They also increase urine production, which can hide the presence of banned drugs.

Still another illegal way to increase production is called blood doping. Blood is taken from an athlete. Red cells are removed and cooled. One month later, the blood is put back into the athlete’s body. This increases the amount of oxygen the body carries.

The newest way that some athletes try to improve their performance is with blood substitutes. These also increase the amount of oxygen in the blood.

Many of these banned substances are dangerous. They can thicken the blood, cause an enlarged heart, or damage the
reproductive system. They can even kill.

Yet a recent United States government study said about thirty percent of Olympic athletes use illegal drugs. Winning a medal can mean fame and a chance to earn a great deal of money. Some athletes say taking drugs for a few years will not hurt them. They believe the risk to their health is a small price to pay.

7. Green Olympic Games

The Olympics in Sydney, Australia, is being called the first environmentally-friendly Games in history. Olympic organizers and environmental groups are trying to protect the environment during the summer games. Organizers say they hope these environmental efforts will be an example for other large sporting events.

Seven years ago, Sydney competed with other cities to hold the Olympics. Sydney won the Games with the support of environmental organizations like Greenpeace. City officials promised to meet the Organization’s environmental goals.

Olympic organizers have reached many of their goals. They are saving energy by increasing the use of solar power. They built structures with materials that can be treated and used again. Half of all water used during the Games comes from rainwater. And people are using buses and modern trains instead of cars to get to the Games. Even the historic Olympic torch has become cleaner.

Almost three-thousand people are involved in removing waste products twenty-four hours a day from the area of the Games. A large amount of the waste material is being reused. Paper containers for holding food are made of a cornstarch material that breaks down in the environment. This waste will be taken to a giant worm farm to be eaten by worms.

Environmental activists are praising the use of energy from the sun for houses in the Olympic Village. Athletes are staying in them
Some people have criticized the city. They say the government failed to meet its promise to clean up an Olympic center at an area called Homebush Bay. The waterway was once used by manufacturing companies to dump chemical pollution. Greenpeace says it still contains five-hundred-thousand tons of dioxin chemicals.

Environmentalists are also concerned about the use of gases in the cooling systems at the Olympic centers. They say these so-called greenhouse gases damage ozone in the atmosphere which can increase temperatures on Earth.

Organizers say most of Olympic environmental failures resulted from the lack of technology. But they say they have made progress. They hope to repeat their environmental efforts at future Olympic Games.

8. Growing Nerve Cells from Special Stem Cells

SARAH LONG: This is Sarah Long.

BOB DOUGHTY: And this is Bob Doughty with Science in the News, a VOA Special English program about recent developments in science. Today, we tell about scientists who grew nerve cells from special stem cells. We tell about cancer patients who suffer memory loss from chemotherapy treatments. And we tell about a rare red panda born in an American zoo.

SARAH LONG: American scientists have found a way to change bone marrow
cells into nerve cells like those found in the brain and the spinal cord. The discovery may lead to safe and successful treatments for nerve injuries and brain disorders.

The work is being done by Ira Black and a team of researchers at the Robert Wood Johnson Medical School in Piscataway, New Jersey. Doctor Black said he began the research to study how the body’s cells, with the same genetic material, become many different kinds of cells. Some become blood cells. Others become liver cells or brain cells.

Doctor Black wondered how this happened. What caused the cell to change into one kind or another? He hoped to learn if scientists could make the same kind of changes in cells.

BOB DOUGHTY:

Special cells called stem cells are produced in bone marrow, the material inside the large bones of the body. The stem cells move from the bone marrow to the place where they are needed. For example, if the body needs liver cells, stem cells travel to the liver. They become liver cells and do all the work that other liver cells do.

Doctor Black and his team removed stem cells from the bone marrow of rats. They put the rat stem cells into laboratory dishes and grew many more of them. Then they added a chemical called beta mercaptoethanol. Doctor Black had discovered earlier that beta mercaptoethanol had a special effect on cells. It seemed to block other chemicals that prevented cells from becoming nerve cells.

SARAH LONG:

Doctor Black said laboratory stem cells treated with beta mercaptoethanol changed within minutes. He said they looked exactly like nerve cells. They began growing long, hair-like parts, just as nerve cells do. The researchers found it was possible to change about eighty percent of the stem cells into nerve cells. Tests
showed that the newly-created nerve cells did all the chemical work that nerve cells usually do.

Doctor Black transplanted the rat nerve cells he had produced in the laboratory into the brains and spinal cords of living rats. The laboratory nerve cells survived for months in the bodies of the rats.

BOB DOUGHTY:

Other scientists praised the discovery. One was William Greenough, of the Beckman Institute for Advanced Science and Technology at the University of Illinois. Doctor Greenough said the discovery was an important step toward developing new technologies for the repair of a damaged brain.

He noted that many scientists are working with embryos or animal tissue to try to develop cells to replace damaged human cells. But the body’s defense system often rejects such foreign cells. That would not be a problem with replacement cells grown from a person’s own stem cells.

Scientists say, however, that a huge amount of work must be done before laboratory-produced nerve cells can be used to treat human injury or disease. The work done by Doctor Black’s team is described in the Journal of Neuroscience Research.

9. Chemotherapy

SARAH LONG:

You are listening to the Special English program SCIENCE IN THE NEWS on VOA. This is Sarah Long with Bob Doughty in Washington.

Chemotherapy is a common way to fight cancer. Doctors give patients powerful drugs to kill cancer cells. However, chemotherapy drugs often are poisonous to healthy cells as well. Patients often suffer unwanted side effects. Among the most common side effects
are a sick feeling in the stomach and the uncontrolled expulsion of food from the mouth. Other side effects are hair loss, a feeling of weakness and infection.

In addition, patients who have traditional chemotherapy often say they suffer from temporary memory loss and reduced thinking ability.

Tim Ahles of Dartmouth Medical School in Hanover, New Hampshire, organized a study of the problem.

BOB DOUGHTY:

Doctor Ahles compared cancer patients who had traditional chemotherapy to patients who had limited treatments. The two groups were tested for memory, reading ability, and the ability to think clearly. Doctor Ahles says his study showed that patients who had traditional chemotherapy were two times as likely as the other patients to do poorly in the intelligence tests.

Doctor Ahles presented the findings to a group of cancer patients who had chemotherapy. He says those patients felt better knowing that the study found evidence of what many of them already knew.

Doctor Ahles says almost everyone who has chemotherapy experiences problems with memory and thinking. He says the problems are most common from the middle of treatment until up to four months after the chemotherapy stops. He says the ability to think clearly begins to improve later.

SARAH LONG:

Recently, research scientists in Canada reported similar findings about chemotherapy. The findings were reported in the Journal of Clinical Oncology. Researchers from Princess Margaret Hospital in Toronto studied breast cancer patients who were given chemotherapy.

They compared the patients to other women who were not
receiving the treatment.

The Canadian researchers found the women taking the anti-cancer drugs did worse in tests of memory and language than the other women. The researchers say doctors and patients should understand the problem when making treatment decisions. However, they say this possible problem should not be used as an argument against chemotherapy treatment.

10. Red Panda

BOB DOUGHTY:

A rare Chinese red panda has been born at the Red River Zoo in Fargo, North Dakota. Officials there say the birth is believed to be the first at a North Dakota zoo. The Red River Zoo opened last year.

The cub’s mother is a female red panda called Tsaka, which means mountain in Tibetan. Its father is named Chang.

Keepers at the zoo were surprised to discover that Tsaka had given birth in June. They did not announce the birth until they were sure the panda cub would survive. Zoo officials believe the cub is probably male. They have named it Liwu which means gift in Mandarin Chinese.

About fifty Chinese red pandas live in zoos in the western part of the world. In the United States, the Knoxville Zoo in the state of Tennessee is best known for its programs to help red pandas reproduce. More pandas have been born there than at any other zoo in the country.

SARAH LONG:

The red panda is a small member of the animal family that includes the larger and more famous giant panda. The red panda is similar in size and appearance to a raccoon. Red pandas are known for their soft fur and long thick tails. Panda cubs are very small when they are born. They weigh about two-hundred grams when they are
one week old. When cubs are three months old, they start to look like adult pandas. Adults weigh about four kilograms.

BOB DOUGHTY:
The red panda lives in the Himalayan Mountains in Nepal, Bhutan, Burma and southern China. It is difficult to know for sure how many red pandas live in the wild. That is because the bamboo forests where they live are very thick.

However, there is increasing evidence that the red panda is becoming endangered. The major threats to pandas are said to be the loss of their native forests and illegal hunting. For example, widespread cutting of forests for wood and farmland in China has destroyed large areas of the pandas’ environment.

**11. Blood Vessels and Cancer**

SARAH LONG:
This is Sarah Long.

BOB DOUGHTY:
And this is Bob Doughty with Science in the News, a VOA Special English program about recent developments in science. Today, we tell of a discovery about blood vessels and cancer. We tell about a robot that eats food. And we tell why it is never too late to stop smoking.

SARAH LONG:
Scientists at the Johns Hopkins University cancer center in Baltimore, Maryland have discovered what may be a new weapon against cancer. They found forty-six genes that are active in the cells of blood vessels that supply blood to cancers. The genes are not active in any other blood vessel cells.
Scientists led by Kenneth Kinzler and Bert Vogelstein made the discovery. They found that seven of the genes seem to help in the creation of new blood vessels to cancers. So, these genes may be necessary for a cancer to get more blood. Without more blood, the cancer cannot grow.

BOB DOUGHTY:

Scientists say they may be able to use these genes to develop new cancer treatments. One such treatment might use drugs to prevent these genes from working. That could prevent a cancer from forming new vessels to get the blood it needs.

Another treatment might use poisons to destroy a protein produced by genes to make blood vessels. Scientists could attach the poison to a special antibody. It would search through the body to find only that protein that builds blood vessels to cancers.

It would put the poison in the protein to destroy it. Only that protein would be destroyed. Healthy tissue would not be harmed. But the cancer would not get the blood it needs to grow.

12. A Human-like Machine

SARAH LONG:

Scientists have tried for a long time to invent a human-like machine. Devices that can operate themselves and do some things humans can do are called robots. Now, Stuart Wilkinson has invented a robot that can eat food. This food is used to produce energy that the robot needs to work. It is the first robot to be completely powered by food. It is called a gastrobot.

Mister Wilkinson works at the American University of South Florida in Tampa. He has named his gastrobot Chew Chew. The robot has twelve legs and looks like a train. It has three parts. Each part is a meter long. Chew Chew’s stomach is a device that uses
bacteria to break down food. The bacteria, E. Coli, produce substances called enzymes, which can break down carbohydrates. The process releases electrons that are used to power a battery. In this way, chemical energy is used to produce electricity. Humans get energy from food in a similar way.

BOB DOUGHTY:

The inventor says the gastrobot is only being fed sugar right now. This is because the bacteria break down almost all the sugar and produce very little waste. The only waste produced is carbon dioxide gas and water. Chew Chew can also eat vegetables.

Scientists say the first versions of such a robot could be used to cut grass, for example. The robot could power itself with the grass it is cutting. Mister Wilkinson hopes to improve the design of the robot so that it can feed itself.

In the future, scientists hope to invent robots that can produce enough energy to power a car or a train. Another idea is an underwater robot that could eat fish. Mister Wilkinson says a gastrobot eating meat would produce the most energy. However, he says it might be dangerous to give robots their first taste of meat. They might realize that humans are meat and can be eaten too.

13. Smoking and Lung Cancer

Oxford University
British Medical Journal
14. Spices

BOB DOUGHTY:
This is Bob Doughty.

SARAH LONG:
And this is Sarah Long with the VOA Special English program SCIENCE IN THE NEWS. Today, we tell about spices and some interesting ideas about these substances.

BOB DOUGHTY:
People have used spices in food for thousands of years. Some spices are valued for their sharp taste. Others are chosen for their smell. Spices are made from plants or vegetables. Common spices include pepper, cloves, ginger, mustard, cinnamon and dill.

Spices come from different parts of plants. For example, cinnamon comes from the hard outer covering of cinnamon plants. The spice ginger comes from the part of the ginger plant that grows underground.

Spice plants grow in many countries. The Molucca islands in Indonesia, for example, are famous for producing spices such as cloves, nutmeg or mace. Vanilla comes from plants growing in south America.

Many people grow spice plants outside their homes. Then they dry the plants for later use. Some common spice plants can even be grown inside a house if they are placed in sunny areas near windows.

SARAH LONG:
Spices have influenced world history. For example, the Goth
people of Europe defeated Roman forces in a battle almost two-thousand years ago. After the fighting ended, the leader of the Goths is said to have demanded five-thousand pounds of gold and three thousand pounds of pepper.

Later, explorers like Marco Polo, Vasco de Gama and Christopher Columbus discovered new lands while seeking to expand trade with spice-growing areas in Asia. The Italian cities of Genoa and Venice became powerful because they were at the center of this spice trade. The spice trade was so important to national economies that rulers started wars in their struggle to control spices.

BOB DOUGHTY:
Spices are commonly used because they can make food taste better. Two researchers at Cornell University in the American state of New York say there is another reason for spice use in cooking.

They say spices contain substances that kill or slow the growth of dangerous bacteria in food.

It is a known fact that some spices destroy bacteria. Spices long have been used to keep food safe to eat. In the past, spices also were used to help protect the condition of dead bodies. The study reportedly was the first to investigate the idea that spices are used in cooking because they destroy dangerous bacteria.

SARAH LONG:
Researchers Paul Sherman and Jennifer Billing examined more than four-thousand-five-hundred directions for cooking meat or fish. They found these recipes in traditional cookbooks published in thirty-six countries around the world.

The two researchers studied the spices used in the recipes, and tested them against thirty kinds of bacteria. The researchers say people use spices because they make food taste good, and because spices protect people against disease.
They say people who used spices many years ago lived healthier and longer lives because the spices killed disease-causing bacteria in their food. They say the use of the spices spread in some areas because the people who used spices shared these safer cooking methods with their children and friends.

BOB DOUGHTY:

Professor Sherman and Mizz Billing found that onion and garlic are used most often in areas where weather conditions are very warm. These two spices stopped almost one-hundred percent of the bacteria against which they were tested. Hot peppers stopped the growth of eighty percent of the bacteria tested.

The researchers found that foods from warm climates contain more onion, garlic and hot peppers than foods from other areas. For example, eighty percent of the recipes from Indonesia called for garlic and onion. Seventy-seven percent called for the use of hot peppers.

But the use of spices was not as common in cooler climates. Onions appeared in fifty-six percent of the recipes from Ireland. Garlic was called for in twenty-three percent of the Irish recipes, and hot peppers in only two percent. In Norway, no recipes called for garlic and only twenty percent called for onions.

SARAH LONG:

The Cornell University researchers found that countries with warm climates generally use many different spices in many of their foods. Countries with cooler climates use fewer spices in fewer foods.

The researchers also found that spice use within large countries sometimes differed from one area to the next. Examples include the northern and southern United States, and northeastern and southwestern China. The study showed that the recipes from warmer
areas used more spices than the recipes from cooler areas.

These findings support the idea that the most effective spices are used mostly in areas where bacteria destroys foods quickly. Such areas generally are very warm.

**BOB DOUGHTY:**

Professor Sherman and Mizz Billing rejected other attempts to explain the large amount of spices in foods from, warmer climates. One possible explanation is that people in warm climates use more spices because spices cause their bodies to release sweat. It says the liquid from sweat may help to cool the skin. The researchers say that only one spice they studied, hot peppers, can cause sweating. Ant it is not one of the most popularly used spices. The researchers also note that hot pepper do not produce sweating in all people who eat them.

**SARAH LONG:**

Another explanation for the use of spices is that they hide the bad smell and taste of food already being destroyed by bacteria. The researchers rejected this idea. They say people who eat food with harmful bacteria would be more likely to get sick and die, so this method of cooking would not be passed on to others.

A third explanation for the increased use of spices in warmer climates is that people use spice plants growing near them. The study found that people do not use every spice grown in their local area. And, they do use many spices imported from other countries. For example, pepper is used in all thirty-six countries in the study, but it grows in only nine of them.

**BOB DOUGHTY:**

The American researchers say the smells and taste of spice plants probably have changed over time to protect the plants against bacteria, insects, and fungi. They say this is important because
humans are affected by many of these same enemies.

The bacteria and fungi that live on and inside dead plants can be harmful to humans. If spices kill such substances or stop their poisons, spice use might reduce the likelihood of developing food poisoning or other sicknesses.

SARAH LONG:

Not everyone agrees with some of the study findings. Critics argue that economic and cultural forces can explain spice use in many countries. Frederick Simoons is a retired American expert of world cultures. He says people very often explain things from the past in terms of modern knowledge.

Mister Simoons notes that garlic was often banned for religious leaders because garlic has a strong smell. He said such smells were not permitted in ancient times for people wishing to communicate with spiritual beings.

BOB DOUGHTY:

One interesting finding discussed by the Cornell researchers is the rate of food poisoning in Japan and Korea. Food poisoning affected about thirty of every one-hundred-thousand Japanese from Nineteen-Seventy-One until Nineteen-Ninety. But only three of every one-hundred-thousand Koreans had the problem during the same period.

The researchers were surprised by this because both countries have similar climates. They noted, however, that Korean food is spicier than Japanese. They say Korean food also calls for more spices known to have anti-bacterial effects.

The researchers do not know why Japanese recipes do not call for the more effective spices. But they say the spices used in Japanese cooking may have been enough to protect people from sickness in the past, but not now.
15. Kennedy Space Center Visitor Complex

SHIRLEY GRIFFITH:
This is Shirley Griffith.

STEVE EMBER:
And this is Steve Ember with the VOA Special English program, EXPLORATIONS. Today we tell about what visitors can see and do at the Kennedy Space Center in Cape Canaveral, Florida. It is the place where the American space agency NASA launches its space shuttles.

(SOUNDS OF THE COUNT-DOWN TO LAUNCH SPACE SHUTTLE ATLANTIS)

SHIRLEY GRIFFITH:
It is morning on September eighth, Two-Thousand. You are visiting the Kennedy Space Center. The voice you just heard is that of a NASA announcer. He is counting the seconds to the launch of the space shuttle Atlantis. The shuttle-orbiter vehicle is making its twenty-second trip into space.

Five American astronauts and two Russian cosmonauts are waiting inside the shuttle. They are about to travel three-hundred-fifty-four kilometers to the International Space Station. Their job is to prepare the station for the first people who will live there. Within days the Atlantis crew will have transported two-thousand kilograms of food, water, exercise equipment and other supplies into the station.

STEVE EMBER:
Thousands of mechanical devices must be perfect before launch director Mike Leinbach can give the command “Go!” Tests show the
equipment is working well. Yet the weather remains a worry. Air Force and NASA experts are watching carefully. Rain over the nearby Atlantic Ocean may be moving into the launch area. A storm could delay the flight for weeks.

A NASA pilot is flying an airplane around the launch area to observe the weather. This pilot reports that the shuttle can safely leave Earth. The weather experts agree.

A NASA announcer talks to the waiting crowd. He explains that scientists and engineers on the ground are testing all the spacecraft’s systems. One after another, you can hear them report that their systems are “Go!” The final count before the launch begins.

( LAST FEW SECONDS OF COUNTING AND LIFT-OFF)

SHIRLEY GRIFFITH:
You feel the ground shake. You see yellow flames and smoke shoot out from under the rocket. Atlantis climbs, followed by white smoke. The spaceship separates from the equipment that lifted it.

Atlantis is now on its way to chase the International Space Station.

STEVE EMBER:
You have seen a space shuttle launch. Now you want to learn about some of the work that made it possible. So you go to the Kennedy Space Center Visitor Complex. This large educational center is not far from the launch area. The name honors John F. Kennedy, thirty-fifth president of the United States.

The permanent visitor area opened in Nineteen-Sixty-Seven. That is when NASA was preparing to launch the first astronauts to the moon.

Since then, millions of people have walked around the seven structures of the Visitor Complex.
SHIRLEY GRIFFITH:
You take a bus to see some of the center’s most important places. One of these is called the VAB—the Vehicle Assembly Building. It is the third largest building in the world. It is one-hundred-sixty meters tall. The building covers more than three and one-quarter hectares. Rocket-lifting devices, fuel tanks and shuttles are joined here. When the spacecraft is ready, a long vehicle called a crawler carries it to one of the center’s two launching areas.

Both are only a short distance away. However, the trip takes several hours. The loaded crawler can travel only one and one half kilometers per hour.

STEVE EMBER:
Now you decide to get a close look at a rocket. So you go to an area called the Rocket Garden. A number of rockets stand in this area, noses pointed to the sky.

One of these rockets lifted the first American satellites into space in the Nineteen-Fifties. Another lifted the first American astronaut into space. Alan Shepard made that flight in Nineteen-Sixty-One. Still another rocket launched the first American to orbit the Earth — John Glenn. That happened in Nineteen-Sixty-Two.

One rocket in this area is not standing. The huge Apollo Saturn One-B lies on its side. It is the only rocket in the Garden that NASA designed. The other rockets were built as military missiles.

NASA later redesigned them for peaceful exploration of outer space.

SHIRLEY GRIFFITH:
Next, you want to see the inside of a spacecraft. So you enter the Explorer. This vehicle is a copy of a full-size space shuttle orbiter. Once inside, you may be surprised at how the astronauts are able to
work in such a small amount of space.

The pilot of an astronaut crew flies the shuttle from a crowded place called the flight deck. Shuttle crews work on experiments in an area called the middeck. They also sleep, eat and use the bathroom on the middeck.

Astronauts who work outside the spaceship repair satellites in an area behind the middeck. This is the cargo bay. The Russian space station Mir connected with shuttles in this cargo bay area.

Inside the cargo bay is a fifteen-meter-long mechanical arm. It helps the astronauts work in space. Here you will also see a curved device covered with shining gold material. In Nineteen-Ninety-Two it rescued a satellite that was traveling in the wrong orbit.

STEVE EMBER:

By now you probably have questions about the space program. You can get answers by attending a meeting with an astronaut. On this day the speaker is aerospace engineer John Fabian. He has served on two space flights.

A child from Japan asks Mister Fabian if he always wanted to be an astronaut. He says he did but he was too tall. He had to wait until spacecraft were designed with enough space for his height. The earliest American astronauts were required to be average height or less.

Mister Fabian has special advice for the many children in the Visitor Complex this day. He advises them to study hard so they can be part of an exciting future.

SHIRLEY GRIFFITH:

Children can learn about the space program from many exhibits in the Visitor Complex. For example, a colorful, often funny presentation called “Robot Scouts” tells about the activities of robots. These machines are designed to do special tasks in the space program.

Another exhibit offers a document for travel among the planets.
It asks young visitors to identify planets and space equipment like the Hubble Space Telescope. Visitors can study the exhibits and supply the answers.

Other devices in this area of the Visitor Complex give information about the planets that orbit our sun. These interactive machines provide facts in unusual way that helps visitors remember them.

STEVE EMBER:
You can also watch several educational movies about space. A movie called “Quest for Life” explores the possibility of finding forms of life on what may be two-thousand-million other planets in the universe. NASA scientists say many of these planets may have the elements required to support life.

Another movie tells about a future community in space. “L-Five, First City in Space” is the story of a human city built far from Earth. It tells some of the many dangers that the first space citizens may face. NASA scientists helped produce the film, which shows events that seem very real. For example, water from a waterfall in the movie appears to be about to flow directly on your head. You wear special eyeglasses to see the action.

SHIRLEY GRIFFITH:
The sun is going down now. Soon the Visitor Complex will close for the day. But before you leave, you visit the Space Mirror. The Mirror is a large black stone wall. It contains names of astronauts killed while training or serving in space.

Those honored here include three astronauts who served in the early days of the American Space Age. Gus Grissom, Roger Chaffee and Edward White died in a Nineteen-Sixty-Seven fire on the ground. The names of the crew who died in the space shuttle Challenger also are on the wall. Challenger exploded shortly after its launch in Nineteen-Eighty-Six. Six astronauts and school teacher Christa
McAuliffe died in the explosion.

Tape 2  Side B

16. Malignant Melanoma

Last month, United States Senator John McCain was treated for the most serious kind of skin cancer, malignant melanoma. Doctors removed the cancer in an operation. Later tests showed that the cancer had not spread from the skin to other organs.

Malignant melanoma can be cured if it is removed before it spreads to other parts of the body. But the disease can kill if it spreads.

The World Health Organization says two-hundred-thousand people around the world are found to have malignant melanoma each year. About forty-seven-thousand new cases of melanoma are found in the United States each year. The American Dermatology Association says almost eight-thousand Americans will die this year from the disease.

The cancer begins in body cells that produce a brown color. It usually first grows in a dark area of skin called a mole. Melanoma most often is recognized as a dark area with an unusual shape. An operation to remove the cancerous cells can cure melanoma if the cancer has not spread. Doctors treat melanoma that has spread with chemotherapy drugs to kill any cancer cells that were not removed in the operation. Radiation also may be used to kill cancerous cells and reduce the size of any cancerous growths. The newest kind of treatment for melanoma is the use of molecules produced by the human body. The purpose of this treatment is to improve the body’s own defenses against cancer cells.

The five-year survival rate for melanoma that has spread to the lymph nodes is thirty to forty percent. The five-year survival rate is only twelve percent if the cancer has spread to other organs such as
the liver, bones or brain.

Doctors believe too much sunlight can cause melanoma. This is especially true for people who have light skin and were burned by the sun when they were young. Some people are more likely than others to develop melanoma. These include people whose family members had the disease. They also include people who have a large number of moles on their bodies.

Doctors say people should protect their skin from the sun. They should always wear a hat and protective clothing. They should use a sun protection liquid. Doctors also say people should examine their bodies often for any changes in moles or the presence of new dark areas.

17. **Asthma Study**

New research suggests that very young babies who are with other children are less likely to suffer later from the breathing disease asthma. Asthma is a disease in which small air passages in the lungs become temporarily blocked. This causes difficulty breathing.

The disease affects an estimated seventeen-million Americans. Every year, more than five-thousand people die of asthma in the United States. It is the most common disease among children.

Day care centers are places where babies and children are cared for while their parents are at work. Researchers studied babies of different ages in day care centers. They found that babies up to six months old gained the most protection from asthma. They were only about half as likely to have asthma at age thirteen as babies who did not attend day care until later.

Babies who entered day care after the age of six months also received some protection from asthma. But they did not get as much protection as the younger babies. Children who entered day care after the age of one showed no increased protection against the disease.
The study also found that children with two or more older brothers or sisters at home also had a lower risk for asthma.

Scientists believe early experiences with bacteria and viruses may help develop a baby’s defense system against disease.

Scientists at the University of Arizona College of Medicine did the study. They studied more than one-thousand children for more than thirteen years. They also studied the substances in the children’s environment that caused breathing problems.

American health officials say asthma cases have increased more than one-hundred percent since Nineteen-Eighty. Experts say families with fewer children could result in the weakening of a child’s defense against disease. Scientists also say homes cleaned with products that fight bacteria could create the same problem.

The asthma study provides evidence for the idea that keeping a baby in an environment almost free of germs may cause problems later in life. The study was organized by the National Heart, Lung and Blood Institute. The results were published recently in the New England Journal of Medicine.

18. Virus Suppresses Some Cancers

American and British scientists are using genetically changed viruses to seek and destroy cancer cells. A new study shows that a changed cold virus injected into tumors shrinks them with lasting effects when combined with anti-cancer drugs.

The new treatment is showing promise in the treatment of head and neck cancers. Almost five-hundred-thousand people suffer head and neck cancers every year.

Viruses and cancers work by invading tissue cells and taking control of them. Using a process called gene therapy, scientists changed the genes of a virus so that it would target cancer cells. The cancer cells are killed as the virus takes over. However, the virus
does not damage normal cells.

The virus used in the study is called ONYX-Zero-One-Five. Researchers developed it to destroy cells that have a changed tumor suppressor gene called P-Fifty-Three. Changes in the P-Fifty-Three tumor suppressor gene are linked to up to seventy-percent of cancerous head and neck tumors.

Scientists report that the combination of the injected changed virus and anti-cancer drugs reduced head and neck tumors in twenty-five of thirty people tested. They said cancerous tumors disappeared in eight people. And they said in other people, the tumors shrank.

The researchers combined the virus treatment with powerful chemicals used in traditional cancer treatment. These chemicals are called chemotherapy drugs.

The scientists say that ONYX-Zero-One-Five in combination with chemotherapy is more effective than either treatment alone. They say tumors grew back in earlier studies that did not include both treatments. But, researchers say none of the tumors treated with the combination treatment had grown after six months.

Scientists say the study is one of the most successful yet using gene therapy. They also have begun testing the combination treatment on larger groups of people.

The study involved only people with cancer of the head or neck. Yet the researchers expect the virus treatment to work on other tumors that contain changed P-Fifty-Three genes. And they hope the treatment may be effective against cancers that have spread to other parts of the body.

19. Diabetes Increasing in US

A new report says the number of adult Americans with diabetes increased sharply during the Nineteen-Nineties. Diabetes increased
among adults of all races and age groups.

Diabetes is the name for several diseases with one thing in common. There is too much glucose, or sugar, in the blood. The disease develops when the body does not produce enough insulin or produces no insulin. Or the disease develops when the body cannot use insulin. Insulin is a hormone that is necessary to change sugar and other food into energy.

The report says the number of adult Americans with diabetes rose by thirty-three percent between Nineteen-Ninety and Nineteen-Ninety-Eight. The largest increase was among people between the ages of thirty and thirty-nine. There was a seventy percent increase in the disease in this age group.

Sharp increases also were noted among people in different ethnic groups. Hispanic-American men and women had a thirty-eight percent increase. Whites had a twenty-nine percent increase. Blacks had a twenty-six percent increase.

The report says sixteen-million adult Americans had diabetes in Nineteen-Ninety-Eight. This is more than six percent of the population. An additional eight-hundred-thousand Americans develop the disease each year.

Diabetes is the seventh leading cause of death in the United States. It has been linked to health problems such as heart disease, stroke, high blood pressure, and kidney disease.

About ninety percent of people with the disease have Type Two Diabetes. This form of diabetes can result from weight gain and a lack of activity. The report says the percentage of Americans who are too fat also rose rapidly during the past ten years. Experts say this is because Americans eat too much and do not exercise enough.

The report says the growing number of fat Americans will have a major effect on Type Two diabetes and other serious diseases in the future. The new report is based on a telephone study that involved one-hundred-fifty-thousand people. The Centers for Disease Control
and Prevention released the study. It was published in the journal Diabetes Care.

20. **Mayapple Anti-Cancer Treatment**

American research scientists have found a new use for a wild plant commonly found in the United States. The researchers say the mayapple plant produces a substance used for making a drug to fight cancer. They say it can produce more of the cancer-fighting substance than anything else known to scientists.

The mayapple grows in the forests of the southern and central United States. Many Americans consider the plant undesirable. However, scientists have found that the mayapple produces a substance called podophyllotoxin. Podophyllotoxin is used to produce the cancer drug etoposide. Etoposide is used to treat lung cancer and cancer of the testicles. It has been shown to restrict the activity of an enzyme necessary for the reproduction of cancer cells. This prevents the spread of the disease.

Traditionally, podophyllotoxin has been collected from the roots of podophyllum emodi. It is a wild plant that grows only in the Himalayan Mountains. However, the plant has been declared endangered because too much of it has been collected in India.

Decreasing supplies of the plant in India have resulted in export restrictions. Attempts to make copies of the cancer-fighting substance have proven costly.

Now, researchers from the United States Agriculture Department and the University of Mississippi have developed a way to get podophyllotoxin from the mayapple plant.

The researchers believe that both the mayapple and podophyllum emodi produce the substance as a form of protection against insects and other plant-eating creatures. The plants store the substance until they are attacked.

The American researchers say their method is successful
because it makes the mayapple think it is being attacked. This results in the release of large amounts of podophyllotoxin. They say their system to remove podophyllotoxin from the mayapple is fast, effective and low cost. The researchers say the mayapple plant provides a plentiful and renewable supply of the substance. And they add there may be increased demand for the mayapple plant as a crop if the method becomes widely used.

21. Osteoporosis Drug for Men

A new study shows that a drug that helps women with osteoporosis also helps men. This disease makes bones thinner and weaker. It increases chances that the bones will break. It also leads to loss of height.

Ten-million people in the United States have osteoporosis. Two million of them are men. Women with osteoporosis have been treated successfully with drugs. But there currently is no treatment approved for general use in men.

The New England Journal of Medicine reported the research. The study involved two-hundred-forty-one men with osteoporosis. They were aged thirty-one to eighty-seven. One-hundred-forty-six men received the drug Fosamax each day.

Ninety-five of the men received a pill containing no medicine. Everyone in the study took Vitamin D and calcium. The men who took Fosamax had a seven-percent increase in the thickness of the bones of their backs. They had a three-percent increase in the thickness of their hipbones. They had a two-percent increase in bone density in their bodies in general.

Men who took the false drug had a two-percent increase in thickness of the bones of their backs. However, they had no increase in their hipbones. Nor was there general improvement in their whole bodies.

During the two years of the study, one-percent of the group
taking Fosamax broke their back bones. But seven percent of those who took the false drug suffered broken bones in their back. The lead study researcher was Eric Orwoll. He works for the Oregon Health Sciences University in the northwestern city of Portland, Oregon. Doctor Orwoll says scientists have thought of osteoporosis as a women’s disease. Many older women suffer bone loss after their menstrual periods stop. He says scientists have not considered that men also suffer from osteoporosis.

Generally, fewer men than women get the disease because men have larger and stronger bones. However, men are more likely to get osteoporosis if they smoke cigarettes or drink a great deal of alcohol. They also are more likely to get the disease if they do not exercise, or if they take drugs known as steroids.

The company that makes Fosamax now is seeking government approval of the drug for men with osteoporosis.

22. **New Kidney Cancer Treatment**

National Heart, Lung and Blood Institute
Richard Childs
New England Journal of Medicine

**Tape 3 Side A**

23. **Genetically-changed Corn Plants Can Harm Monarch Butterflies**
A new study has found that pollen from genetically-changed corn plants can harm Monarch butterflies. Research scientists at Iowa State University confirmed results of an earlier study that examined the environmental effects of a product called B-t corn. However, a group that represents the genetic engineering industry disputes the findings.

B-t corn was developed by a process of genetic engineering. Genetic engineering is the technology of changing the genes of living things. The changed gene directs the plant or other organism to do things it normally does not do.

B-t corn seeds were given a gene from a bacterium that produces a poison. The poison kills harmful insects that eat the corn plants. The insects cause an estimated one-thousand-million dollars in damage to corn each year.

American farmers began using B-t corn four years ago. The plants have helped increase crop production. They also have reduced the need for farmers to use chemicals to kill harmful insects.

Today, about one-third of all corn grown in the United States is B-t corn. Many of the plants are grown in areas where monarch butterflies live.

Last year, Cornell University researchers reported B-t corn might be killing the caterpillars that turn into monarch butterflies. They said pollen from the corn could blow onto other plants the insects eat. Pollen is a reproductive substance made by plants. Monarch caterpillars feed only on milkweed plants. Milkweed commonly grows in or near cornfields.

The Iowa State researchers collected leaves from milkweed growing near cornfields. Pollen had blown onto the leaves. They fed the leaves to monarch caterpillars in the laboratory. The caterpillars that ate leaves with pollen from traditional corn survived. However, about twenty percent of the caterpillars that ate leaves with B-t pollen died.
The Biotechnology Industry Organization said twenty other unpublished studies dispute the findings. The group says those studies have shown that B-t corn has little effect on Monarch butterflies.

The Environmental Protection Agency also is studying the possible effects of B-t corn on the environment. The agency has announced that permits to sell B-t corn seed will be extended for another year.

24. World Food Prize

Two scientists who worked for years to develop high-protein corn have won the World Food Prize for this year. Evangelina Villegas of Mexico and Surinder Vasal of India will be honored next month at ceremonies in the United States.

The World Food Prize Foundation presents the award each year to honor people who have improved the quality of world food supplies.

Mizz Villegas is the first woman to be honored in the fourteen years since the World Food Prize was established.

The two scientists did their work at CIMMYT, the International Maize and Wheat Improvement Center in Mexico. The World Food Prize committee says they have worked together for the past thirty years to develop quality protein maize.

The new maize, or corn, contains a gene that increases the amount of protein in the plant. American scientists at Purdue University in Indiana first identified the gene in Nineteen-Sixty-Three. However, early efforts to produce this kind of maize failed. The plants were difficult to grow. Also, insects and disease often attacked them.

Mizz Villegas and Mister Vasal successfully used a method known as cross-breeding. They used different kinds of maize to
produce a stronger, more successful plant. The scientists found the high-protein maize could be produced at the same rate as traditional maize. And the new plants had two times the amount of two important proteins normally found in other maize. Quality protein maize is currently being tested in China, Ghana, Mexico, Vietnam and fourteen other developing countries.

Maize is an important feed grain for farm animals. It also is a major food for hundreds of millions of people. In Africa and Latin America, mothers commonly give a substance made from maize to their babies. The World Food Organization says people with diets based on normal maize do not get enough protein. W-H-O officials blame a severe lack of protein for the deaths of as many as five-million young children each year.

The International Maize and Wheat Improvement Center has done studies of the new maize in Peru and Colombia. The studies have shown that a controlled diet with the high-protein maize can help restore the health of many children. The group reports similar results in a village in Ghana and in studies in the United States.

25. Lasker Awards

Six scientists have won this year’s Albert Lasker Medical Research Awards. The Albert and Mary Lasker Foundation presented the awards last week in New York City.

Harvey Alter and Michael Houghton shared the award for medical research involving patients. Doctor Alter led the team that discovered the virus that causes hepatitis B. He works at the National Institutes of Health, near Washington, D.C.

Doctor Alter and Doctor Houghton developed methods to test blood for hepatitis. This ended the risk of people developing hepatitis after receiving blood from other people after an accident or operation.
This risk decreased from thirty percent in Nineteen-Seventy to almost no risk today. In Nineteen-Eighty-Nine, Doctor Houghton led scientists who discovered the virus that causes another kind of hepatitis, hepatitis C. He works at the Chiron Corporation in Emeryville, California.

Three scientists shared the Lasker award for basic medical research. One is Alexander Varshavsky of the California Institute of Technology in Pasadena. The others are Aaron Ciechanover and Avram Hershko of the Technion-Israel Institute of Technology in Haifa, Israel.

The three discovered the human body’s method of destroying proteins. The process of protein destruction controls normal cell growth and division. When this process does not work properly, diseases like cancer can result. Scientists also are investigating a possible link between this process and diseases of the body’s defense system.

Sydney Brenner of the Molecular Sciences Institute in Berkeley, California received a Lasker award for special achievement in medical science. The foundation honored him for fifty years of creative work in biomedical science.

For example, Doctor Brenner’s team studied the roundworm to show the birth and death of every cell in a living animal. Doctor Brenner also performed research that took the first step toward understanding human genes. He also helped calm fears that research on genetic engineering would create dangerous organisms.

To do this, Doctor Brenner drank bacteria that had been genetically weakened. The experiment proved that such substances would not threaten the public. The results were very important to the study of several deadly viruses, including the one that causes AIDS.

26. American Political Symbol
Our VOA listener question this week comes in an e-mail from China. Zhao Hengyuan asks which animals represent the two main American political parties, and why.

The two main American political parties are the Democrats and the Republicans. They are represented by a donkey and an elephant. The reason comes from political cartoons. These are drawings that express opinions about political parties, issues or candidates.

Perhaps the most famous political cartoonist in American history was Thomas Nast. He lived more than one-hundred years ago. Thomas Nast used his drawings to show dishonesty and the illegal use of power in government. His cartoons helped create public pressure on elected officials.

In Eighteen-Seventy, newspapers supporting the Democratic Party denounced a former Republican cabinet member. Thomas Nast drew a cartoon in protest. He called it “A Live Jackass Kicking A Dead Lion”. The dead lion represented the cabinet member who was no longer in power. The jackass represented the Democratic Party. “Jackass” is an old slang word for someone who is stupid or foolish.

It is also another word for donkey. The image of the donkey had been used many years earlier. Democratic President Andrew Jackson used it as his personal political symbol, after his opponents called him a jackass. Then it was used, sometimes, to mean the whole Democratic Party. It became established as the party symbol when Thomas Nast used it to represent the Democrats.

Thomas Nast himself created the elephant as a symbol of the Republican Party. He first used it in a cartoon in Eighteen-Seventy-Four. And he continued to use the elephant to represent the Republicans in many other cartoons. Soon, everyone thought of it as the Republican Party symbol. Today, after more than
one-hundred years, the donkey and the elephant continue to represent America’s two major political parties.

27. Mount Rainier/Valley Forge

STEVE EMBER:
This is Steve Ember.

SHIRLY GRIFFITH:
And this is Shirley Griffith with the VOA Special English program EXPLORATIONS. Today we tell about two areas that are popular with visitors to the United States. We tell about one of the most important places in the history of the American Revolution. It is Valley Forge National Historical Park, in the eastern state of Pennsylvania. And we tell about a place of fierce beauty. It is Mount Rainier National Park in the northwestern state of Washington.

STEVE EMBER:
The American Indians who lived in the northwest called the great mountain “Takhoma.” One tribe said it was a female monster that would eat people. Other old stories among the Indians said the mountain could produce huge amounts of fire.

In Seventeen Ninety-Two, British explorer George Vancouver became the first European to see the huge mountain. He named it after a navy friend, Captain Peter Rainier.

Today the people who live in the northwestern city of Seattle call it “The Mountain.” Mount Rainier is almost one-hundred kilometers from Seattle. Yet it can be seen from almost any place in the city. The beautiful, snow covered mountain seems to offer the city its protection.

SHIRLY GRIFFITH:
The Mountain’s offer of protection is false. Mount Rainier is not
just a mountain. It is a sleeping volcano.

Steam and heat often rise from the very top of the huge mountain, causing snow to melt. Mount Rainier is four-thousand-three-hundred-ninety-two meters tall.

Its top is covered in snow all year. More than twenty-five thick rivers of ice called glaciers cover a lot of the mountain. In some areas, these glaciers are more than one hundred meters thick.

STEVE EMBER:

Mount Rainier always has been a popular place to visit. Many people go to enjoy the beautiful forests that surround the mountain. Others go to climb the mountain.

Hazard Stevens and Philemon VanTrump became the first people known to reach the top of Mount Rainier. They reached the top in August of Eighteen-Seventy after a ten hour climb through the snow.

In Eighteen Ninety, a young schoolteacher became the first woman to reach the top. Her name was Fay Fuller. For many years after her successful climb, she wrote newspaper stories asking the federal government to make Mount Rainier a National Park.

Many people who visited the mountain also wanted it to be protected forever by the government. On March Second, Eighteen-Ninety-Nine, President William McKinley signed a law that made Mount Rainier a national park. It was the fifth national park established in the United States.

SHIRLY GRIFFITH:

Today, National Park Service experts say about ten-thousand people climb the huge mountain each year. Less than half that number reaches the top. The mountain can be extremely difficult to climb. Severe weather is possible at almost anytime. Snow and ice cover parts of the mountain all year.

More than fifty people have died trying to climb Mount Rainier.
Mountain climbing experts often use it as a difficult test for persons who want to climb some of the world’s highest mountains.

STEVE EMBER

You do not have to climb the huge mountain to enjoy Mount Rainier National Park. More than two-million people visit the park each year. Many walk on the hundreds of kilometers of paths. The paths lead through flat meadows filled with wild flowers and up through forests of large old trees. Other visitors drive around the park to experience its natural beauty. They often see black tailed deer, elk, and mountain goats.

The park is large. It is almost one-hundred-thousand hectares. Many lakes, rivers, roads, two hotels and six camping areas are inside the borders of the park.

SHIRLY GRIFFITH:

Experts agree that Mount Rainier will become a very active volcano at sometime in the future. They say the real problem is that they do not know when. They also agree that the great heat produced by an explosion of the volcano would melt the ice rivers that are part of the mountain. This could happen in only a few minutes. They say the melting ice would produce flowing rivers of mud and rock. People who live in the southern part of Seattle and in the city of Tacoma, Washington would be in danger. Experts carefully study the great mountain. They hope to be able to warn of any dangerous change. But for now, the great mountain provides a safe and beautiful place to visit in the Northwest area of the United States.

STEVE EMBER:

A very different kind of national park is found in the eastern state of Pennsylvania. It is called Valley Forge National Historical Park. It is near the city of Philadelphia.

Valley Forge also is a beautiful place. Within the park are many
different kinds of trees and flowers, huge areas of green grass, a beautiful, slow moving river. You can see many deer. Often you can come very near them. Deer do not run away because they are used to seeing people in the park.

It is not the natural beauty that made Valley Forge a National Historic Park. It is what happened there. Many other places were important in the American War for Independence, but no other place is so filled with suffering. No battle was fought at Valley Forge. Yet, more than two-thousand soldiers of the small American army died there. They died of hunger, disease and the fierce cold in the winter of Seventeen-Seventy-Seven and Seventeen-Seventy-Eight.

It was also at Valley Forge where the men of this small army learned to be real soldiers.

SHIRLY GRIFFITH:

What happened at Valley Forge began in August of Seventeen-Seventy-Seven. A British force threatened to capture the American capital at Philadelphia.

The American commander, General George Washington, moved the army to defend the city. A battle was fought at a place called Brandywine and another at Germantown. The British forces won those battles and occupied Philadelphia.

By the month of December, General Washington needed to find a place his small army could easily defend. He chose Valley Forge. More than fifteen centimeters of snow fell only a few days after the army arrived. Ice covered the rivers.

The soldiers began building very small wooden houses called log cabins. They would build more than one-thousand of these small homes.

STEVE EMBER:

The fierce winter was only one of the many problems faced by
the American army. Many of the soldiers had no shoes. Most had no winter clothing. All suffered from a severe lack of food.

Then, several diseases struck. Typhus, typhoid, dysentery and pneumonia were among the diseases that spread through the army. Most of the soldiers became sick. Many died.

General Washington wrote letters to Congress asking for help. He asked for money to buy food and clothing. But Congress had no money to give him. Several things happened to change the small army during that long and terrible winter. General Washington knew the army had been defeated in the past because of a lack of real training. A man named Baron Friedrich von Steuben had recently come from Europe. He was an expert at training soldiers. So, each day during the terrible winter, Baron von Steuben taught the men of the American army to be soldiers. He also taught them something very important. He taught them to believe in themselves.

SHIRLY GRIFFITH:

As the winter passed, the army slowly changed. New troops arrived. New equipment arrived. An alliance with France brought guarantees of military support.

The men who survived that terrible winter were no longer a group of armed citizens. They were well trained soldiers who no longer feared the enemy.

When the American army left Valley Forge on June Nineteenth, Seventeen-Seventy-Eight, the soldiers took with them the spirit that had helped them to survive. The War for Independence would continue for another five years. Terrible battles were yet to be fought.

However, the men who had survived the winter in Valley Forge knew they could win. They did.

STEVE EMBER:
computer industry each year. As the Microsoft Company grew, so did the wealth of Bill Gates. His shares in the company are worth about fifty-five-thousand-million dollars.

Mister Gates has promised to give away most of his money. He has given hundreds of millions of dollars to combat disease and improve health for people around the world. For example, he gave forty-five million dollars to the Harvard University Medical School. The money will be used to study a deadly form of the disease tuberculosis, which can not be cured by drugs. Bill Gates also says he is very interested in world health issues like AIDS and malaria. And he wants to do more to improve the health of mothers and children in developing countries.

Many computer industry experts are not happy with Bill Gates and Microsoft. They say the company is trying to control the computer industry. Smaller computer companies say it is almost impossible to compete against Microsoft.

The United States government brought legal action against Microsoft Corporation. The government says Microsoft uses unfair and illegal business dealings to compete against smaller companies. A judge ruled that Microsoft should be divided into two smaller companies. Bill Gates has appealed the decision. It could still be some time before a final decision is made about Microsoft.

29. Peru/Fujimori

President Alberto Fujimori of Peru has called for new elections and said he will not be a candidate. Mister Fujimori made the announcement after a top adviser created a political crisis.

It began with a videotape. The tape appeared to show the adviser offering money to an opposition member to join Mister Fujimori’s political party. The adviser was Vladimiro Montesinos,
chief of Peru’s National Intelligence Service. The president ordered the agency “deactivated.”

Mister Montesinos has strong links to the army. For days the powerful military said nothing about the situation. This silence worried people. Peru has a history of military overthrows. But on Thursday the armed forces expressed support for Mister Fujimori.

Critics condemned Mister Montesinos and demanded his arrest. They also demanded that President Fujimori immediately resign. But the president told a crowd of supporters that he will continue to govern until July twenty-eighth.

Mister Fujimori also held a news conference. He told reporters that he had a surprise for them about what he is going to do in Two-Thousand-Six. The reporters took this to mean that he may again seek office.

They asked President Fujimori if the United States government had urged him to resign. He said there had been no such suggestion.

The president did not answer questions about Mister Montesinos. Peru’s justice minister said Mister Montesinos would answer to the justice system. Opposition leaders say there must be a full investigation into recent government activities. And they demanded that Mister Montesinos face trial.

Late in the week, anti-government demonstrators held noisy protests outside the presidential palace in Lima. Political experts have both praised and criticized the administration of Alberto Fujimori over the past ten years. More importantly, they say, his administration has ended the years of terrorism that harmed Peru. And he helped to lower the inflation that had severely damaged the economy.

Political experts say Mister Fujimori has improved the economy by decreasing import taxes and easing government controls on business. Experts say increased investment and economic growth
helped to strengthen democracy in Peru.

But critics say President Fujimori’s plans for economic growth have now slowed. They also say his administration is not democratic. They say he has acted illegally in the past and has become a dictator.

Observers in Peru say just what President Fujimori will do in the coming weeks is not clear. They say he has survived more than one political crisis, and may do so again.

30. Foreign Students in USA

Part 1  First Step

HOST:

Today we begin a series of reports about how foreign students can prepare to study at a university or college in the United States.

Shep O’neal tells us about the first steps. A copy of this script can be found on the Special English web page at the address www.voa.gov/special.

ANNCR:

Experts agree. The most important advice is to plan early if you want to study at a college in the United States. In fact, the experts say to begin planning at least two years before you want to start your studies.

You might begin by talking with people who have studied in the United States. Their experiences could save you time and effort. Then visit an American educational advising center. There are more than four-hundred such offices throughout the world. The Public Affairs Office at the United States Embassy in your country can tell you where the nearest one is. There you will find an educational advisor to answer your questions and offer information. Every center
should have information about American colleges.

Some educational advising centers have computer programs to help. One example is a CD-ROM program called *US Academic Explorer: A Guide to Higher Education in the United States*.

The program shows an imaginary American college. It tells about each building, such as the student center and the library. It answers questions about food, housing, health care, social customs and banking. It even shows a day in the life of a student.

The CD-ROM also provides information about higher education in the United States. It shows a national map. And it includes interviews with international students. The students talk about their American college experiences. They discuss English language requirements, money, personal safety, making friends, dating and other subjects. You can hear one student discuss all these issues or hear many students answer just one question.

The CD-ROM does not contain information about any one American college or university. The advising center should have books to provide that kind of information. Many centers also have computers that can be used to search for information about American colleges on the World Wide Web. This computer information describes each college’s programs and gives an address where you can write or e-mail to get more information.

Next week, we will explain how American higher education is organized.

**Part 2  US Educational System**

HOST:

This week on our series for foreign students, we explain the structure of university education in the United States. This information can prevent costly mistakes. You would not want to begin studying at a school that could not provide the degree you
Remember, a copy of this script can be found on the Special English web page at the address www.voa.gov/special. Shep O’neal has information you will need the address as you consider American universities.

ANNCR:

Studying in the United States does not mean choosing a university that offers only the traditional four-year degree. You may want to consider a school that offers a certificate program. These programs are one year or less of training in areas such as office work, computer programming or automobile repair. When you complete the program, you receive a certificate stating the skills you have learned.

Make sure that any program you want to enter offers a certificate that is accepted by employers in your country and in the United States.

You may also choose a two-year junior college or community college. Such programs lead to an Associate degree. Some two-year programs prepare you for skilled trades or technical jobs in such areas as electronics and building. Many colleges and universities accept community college work as the first two years toward a four-year Bachelor’s degree. And a year at a community college costs much less than at a traditional four-year college.

Four-year college programs lead to a Bachelor’s degree. During the first two years, you generally take subjects such as English, history, mathematics, science and languages. What you take the last two years depends on your major area of study.

If you already have a college degree, you may be considering an American graduate school. You must continue your education in graduate school if you want to be a medical doctor, lawyer or college professor. A Master’s degree usually takes two or three years of full-time study. A Doctoral degree, or Ph. D., takes three to six years.
Some colleges, universities, hospitals and laboratories also offer a chance to do scientific research. You may want to communicate with one of them to see if you can do research in a subject in which you are interested.

Next week, we will discuss getting your higher education on a computer.

**Part 3  Online Education**

HOST:

Today we continue our series about how foreign students can attend an American college or university. Remember, this script can be found on the Special English web site at www.voa.gov/special.

One way to earn a degree at an American college is to stay at home and use a computer. But you should find out if such a degree is recognized in your country before you decide to get an education online. Shep O’Neal has more.

ANNCR:

American universities have been offering classes online through computers for a number of years. Researchers say that seventy-five percent of all American universities will offer online work by the end of this year.

Students who have taken online classes say they like them because they do not have to travel to a building at a set time to listen to a professor. Professors say they have better communication with students through e-mail notes than they do in many traditional classes.

Now, some newly created colleges are offering academic degrees online. One is Jones International University in Englewood, Colorado. It offers both bachelor’s degrees and master’s degrees. It has about one-hundred students, but is seeking many more.
The University of Phoenix in Arizona has been offering online degrees since Nineteen-Eighty-Nine. It has more than twelve-thousand students. Officials say they try to provide students with a social experience as well as an educational one. For example, in some programs, groups of the same six students progress through all their classes together. They communicate by computer.

Another online school is UNext dot com or Cardean University, near Chicago, Illinois. It began operations this past summer. It is offering business education and training now, but has plans to expand. Cardean University uses a problem-solving method of teaching. Students attempt to solve real problems in their classes online instead of reading information.

Anyone with a computer can find information about these schools and others on the Internet by using a web browser. Type the name of the school and the browser will give you its address. Each college will tell you about its programs, costs, and many other important facts.

Experts advise, however, that you do not give money to any school that says you can get a degree without doing any work. These are illegal operations.

Part 4  Applications

HOST:

We continue our series about how foreign students can attend college in the United States. Remember, this script can be found on the special English Web page. The address is www.voa.gov/special. We have already explained how to begin your search at an education advising center. And we told about studying online by computer.

Now, it is time to make a list of American colleges and universities that most interest you. Steve Ember has more.
ANNCR:
Be sure to choose more than one college. Directors of foreign student admissions at American colleges say each student should apply to at least three schools.

First, you must get applications from the colleges. An application is a form you must complete if you are asking the college to admit you as a student. You should request applications at least eighteen months before you want to begin studying in the United States.

You can find the address of the admissions office in the catalog of each college. A catalog is a book that tells all about the school.

You can also find such information on the college’s Web page on the Internet computer system.

For example, the Ohio State University provides application forms on its Web pages. You can answer all the questions on the computer and e-mail the application directly to the university. Or you can copy the application forms to your computer, print them, complete the questions and mail them. Or you can fill out a computer form to ask the university to send you an application in the mail.

If you cannot use a computer at all, write a letter to the address given in the catalog. Ask the college to send you the international admission application. Write the letter clearly. List the schools you have attended, and any degrees you already have. Explain what you want to study and what degree you are seeking. Explain when you want to begin studying.

You will receive a letter or application from each school. Complete the application and send it back. Then you must wait until the college makes its decision.

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