IMPROVING READING SKILLS

BOOK TWO

Students' Book

An Advanced English Reading Course for College Students

高级英语阅读教程 2

(学生用书) 〔美〕Helen Jorstad 汪士彬 陈大兴

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内 容 提 要

《高级英语阅读教程》是在《大学英语教学大纲》的原则指导下编写而成的，可供高等院校文、理、工各科高年级学生及研究生（相当于大学英语五、六级）使用，也可作为报考EPT和TOFEL的学生提高英语阅读水平的教材。

本书为学生用书第二册，共有16单元。每单元包括2～3篇题材相仿的课文，其中一篇为计时阅读材料。每两个单元前设有“提高阅读能力”专题，系统阐述最新阅读理论与阅读技巧。

本书的突出特点是选材具有时代感。课文均选自近几年的美国报刊和图书，有较强的知识性和趣味性。内容包括整修美国自由女神像、美国“挑战者号”航天飞机爆炸给人们带来的思考、宇航员的太空生活、观测哈雷慧星、探索飞碟奥秘、控制大气污染、战胜心脏病、计算机面前男女平等、北美的印第安人等。本书所选文章语言规范，每单元后编有较详尽的文化背景注释。

本书的另一特点是练习丰富、实用，形式新颖、多变。有快速辩认词（组）练习、通过上下文填空练习、猜词义练习等。其主旨是为了让学生掌握阅读技巧，尽快提高阅读理解能力和阅读速度。

本书配有教师用书，除提供练习答案外，还编有较详细的文化背景注释及阅读进程和教学法的说明。

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前　言

《高级英语阅读教程》是在《大学英语教学大纲》的原则指导下，为全国各类高等院校（包括外语院系）高年级学生及近期就读大学英语的研究生（相当于英语大纲规定的五级、六级）提供的英语阅读教材。

本书为学生用书第二册，是由美国明尼苏达大学海伦·乔斯塔德（Helen Jorstad）教授、南开大学大学外语教学部副教授汪士彬及在明尼苏达大学就读博士学位的研究生陈大兴合作编写的。

本书由16个单元组成，每单元都配有阅读理解练习及其他旨在提高学生阅读速度及理解能力的各类阅读技巧练习。例如，继续安排大量的通过上下文猜词义的练习，使学生牢固地掌握这一重要的阅读技巧；配备足量的旨在提高学生眼睛扫视速度的练习，训练一眼看三个或五个单词的能力，克服逐词阅读的不良习惯。这样做，阅读速度就可以成倍地增长，达到“一目十行”，“读书破万卷”的目标。另外还向读者详细介绍了行之有效的“SQ3R”学习方法及其他提高学生阅读理解能力的各种阅读技巧，并配备了相应的练习。

本书的阅读文章均选用美英近两年出版的书刊、报纸、杂志、百科全书等权威性原版著作，并获得了翻印版权。选文内容广泛，有科普知识、最新科技动态（如人造卫星、宇宙飞船、空中实验室、航天飞机等）、美苏两个超级大国在航空航天方面激烈竞争、美国风土人情和生活风俗（如对美国印地安人迁入、传宗接代与自然搏斗，顽强地生活下去的描述使读者加深了对美国土著人的了解）、动物趣闻（如憨厚调皮的猩猩、硕大聪明的鲸鱼、笨拙怪癖的大象）等。本书还有对“自由女神”这一世界奇迹的创造，修整及瞻仰等情况的描述及对人们感到迷惑不解的不明飞行物——飞碟的详尽记叙等。本书所选材料语言规范，内容活泼，通俗易懂，同时兼顾知识性、趣味性和科学性。每单元末尾简要注释了个别俚语、习语及背景知识等，对我国学生了解美国文化背景很有帮助。

本书编写过程中，得到明尼苏达大学许多单位的大力支持。打字员卡西·泽曼克（Cathy Zemke）为书稿的完成做了大量的工作。南开大学大学外语教学部为本书的出版提供了必要的协助。在此，编者一并表示衷心感谢。

由于时间仓促，错误与疏漏之处在所难免，请读者提出批评意见。

编　者

1988 年 12 月

INTRODUCTION FOR STUDENTS

This is the second book of *Improving Reading Skills*. The purpose of this book is to continue the process of helping you to read faster and with better comprehension.

As in Book One, the materials used in this book are authentic materials chosen from books, magazines, and newspapers as representative samples of general written American English. We feel that you should be continuing to develop the ability to guess new words from context whenever possible. The exercises we have provided are intended to help you do so.

You should use an English-English dictionary when instructed to do so. Our exercises suggest that you use the *Longman Dictionary of Contemporary English*. AT ALL TIMES YOU SHOULD TRY NOT TO USE AN ENGLISH-CHINESE DICTIONARY, WHETHER WORKING AT HOME OR IN CLASS.

When you have finished these materials, you should feel more ready to read independently with good speed and comprehension.

ACKNOWLEDGEMENTS:

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BUILDING READING POWER IX

WHAT DO WE KNOW ABOUT HOW PEOPLE READ?

In Book One you had several different types of exercises to help you become a better reader.

Some of the exercises included *prediction* about the content of a reading passage. To help predict the content, you looked at the headings of a passage, at the pictures, at the introduction and conclusion of the passage, and you talked about what kinds of information you might find in it — all before you read the passage at all. Activity of this type will always continue to be the most helpful of all in helping you comprehend better when you read. Research by reading experts has shown that the main factor which can help readers is the amount and type of information the reader knows before he begins. The background information you have about a topic helps you form *schemata*, or connected ideas, about the topic. Activities which help you activate and use your background knowledge can help you more than any other reading activities, at all reading stages — even the most advanced. We will continue such prediction exercises in Book Two, as well.

You had many activities in Book One that were designed to help you guess at word meanings from the context of the passage itself, and to use a dictionary for specific types of information. You also worked with prefixes and suffixes, and learned several ways to recognize definitions that were not clearly stated as definitions. In this book you will find other vocabulary-learning techniques.

In Book One you also had several types of activities which were designed to increase your reading rate; you also learned to use timed reading passages to build reading speed in ways you might not have used in earlier stages of reading. You learned about bad habits that made you read more slowly, and practiced techniques to break those bad habits. You also learned to look for the main subjects and verbs, and ignore other words which you might not have needed. Book Two will continue such exercises, and introduce others to help you increase your speed.

BUILDING READING POWER sections in Book Two will also introduce other ways to build your speed and comprehension, some similar to those you already learned, but some very different. The central focus of Book Two exercises will be on comprehension of the *complete passage*, through a variety of means.

You will learn and practice SQ3R, a studying technique that can help you to remember what you read.

Another important idea is that the author of a passage often intends more than is written. We will improve your ability to decide whether something you read is a fact or opinion, as well as to decide what the author's intention was.

You will learn more about finding key words and key ideas in reading passages in Book Two, and practice writing summaries and abstracts of what you read.

Finally, you will learn more about how an author uses tables, charts, and graphs to help give informa-

tion to the reader.

We hope that you will enjoy your journey through these materials and activities, and grow to feel more and more that you are able to comprehend more, and at the same time read faster, than when you began. Throughout the reading activities, we hope you will feel that you are *interacting with*, communicating with the author. The process of reading is actually the process of getting inside someone else's head, hearing his or her words, and learning exactly what he or she means, as well as the intention of the author in writing them. This is a great challenge — but a fascinating opportunity, as well.

Contents

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Unit Seventeen

The More We Learn, the Less We Know

Part A: Cosmic Uncertainty

This month, I'm going to break with tradition. I usually talk at length about the surprising details astronomers have been able to deduce about the universe; instead, this time I am going to focus on an elementary piece of information that they can't give us with any satisfying accuracy: the age of the universe.

Of course they have some idea. In fact, it's a pretty good estimate by scientific standards. The universe is currently believed to be somewhere between 10 and 20 billion years old. That's an uncertainty factor of two — not satisfying, perhaps, but good enough to work with. (How different scientific standards are from ordinary ones. Imagine being told that a child is between 10 and 20 years old. It would *wreak havoc* with child-labor laws.)

In the first place, there is no way to measure the age of the universe directly. What astronomers have to do is take the speed at which various objects *are receding* from us in the general expansion of the universe, factor in the distance of those objects from us and run the whole thing backward (on paper). The time it takes the galaxies to converge is the age of the universe.

It isn't hard to measure *recessional* speed — astronomers have known since 1913 that the light from galaxies is reddened, or redshifted, because they are moving away from us. The redder their light, the faster they're moving. But it is difficult to measure distances all that accurately. There is no one device astronomers can use for both near and far objects. On Earth, we can (in theory) use the same *yardstick* to measure the length of a *zucchini* and the length of an interstate highway. Failing that, we at least know how many yards there are in a mile, and we can use a car's *odometer* to nail down the distance within a few percentage points.

Clearly, we can't measure distances to heavenly bodies so easily. One way we could do it, perhaps, would be to compare the stars' apparent and actual brightness. This would work if all stars were like so many hundred-watt lights bulbs, uniform in *luminosity*. They aren't. So astronomers have to use a series of steps to estimate the distance of stars and galaxies. Each step works best at a different scale, and each is somewhat uncertain. It's the cumulative uncertainty that keeps us from knowing the size, and therefore the age, of the universe.

What are the steps? First is *parallax*, the apparent movement of foreground stars against the background as our perspective changes. You can see parallax right where you are: Hold up a finger, and look at it first with one eye, then with the other. The finger covers up a different piece of wall (or anything else) depending on which eye you use; this is because your perspective changes. In astronomy, we sight twice a year, when the Earth is on opposite sides of the sun. The distance between our "eyes" is approximately 180 million miles, and we can calculate the distances to stars that are about 100 light-years away.

Beyond that point, astronomers have to go back to the light bulb analogy. The second step makes use of the *Cepheid* variables, a special class of stars whose actual brightness varies on a regular basis, the frequency proportional to a star's brightness. (Another source of actual brightness may be a *supernova*, a star that's exploding; supernovas, too, tend to be uniform and, like the Cepheids, can be seen in some of the nearby galaxies.) For longer distances, the third step is used: galaxies themselves as standard light bulbs. We make the reasonable assumption that all spirals of a given type are about equally bright, and go from there.

The last step in the distance ladder is based on the remarkable discovery by the American astronomer Edwin Hubble that the farther away from us a galaxy is, the faster it recedes (it was Hubble who in 1923 used Cepheid variables to prove, once and for all, that galaxies lie far beyond the Milky Way). The relationship is constant out to all distances we can measure, so it is presumed to remain constant. In other words, recession speed divided by a constant number equals distance. Since our step-by-step *calibration* of the *intergalactic* distance scale is prone to error, the number — Hubble's Constant — is known only approximately.

That is not to say that astronomers refuse to give their own estimates. Some believe the universe must be at least 15 billion years old, since red stars in globular clusters orbiting the Milky Way are thought to be very nearly that old. But early last year, Marc Aaronson of the university of Arizona and Jeremy Mould of Caltech argued for a 12-billion-year figure, based on their studies of the motions of local galaxies.

On the other hand, observers reported last November on optical and radio measurements of a supernova explosion in a relatively distant galaxy. The apparent size of the expanding ball of hot gas was compared with its measured expansion speed and the results subjected to *trigonometric* analysis. The *verdict*: The universe is just under 15 billion years old. The uncertainty: about 50 percent in either direction. We'll have to wait for the Hubble Space Telescope to go into operation to get more accurate measurements of all elements in our distance scale.

— by Michael D. Lemonick.
— *Science Digest*, April, 1986.

Exercise I: PASSAGE COMPREHENSION

All statements below are true regarding the passage. Some of them are main ideas and some are "supporting details," less important than main ideas. In front of each statement, check "main" if it is a very important main idea, or check "detail" if it is less important in the text.

Main	Detail	
_____	_____	1. The universe is somewhere between 10 and 20 billion years old, some people believe.
_____	_____	2. Astronomers have not been able to declare the age of the universe with any

satisfying accuracy.

_____ _____ 3. One way to measure distances to heavenly bodies would be to compare the stars' apparent and actual brightness.

_____ _____ 4. The American astronomer Edwin Hubble discovered that the farther away from us a galaxy is, the faster it travels away from us.

_____ _____ 5. We rely on the Hubble Space Telescope to provide us with more accurate measurements of our universe.

Exercise II: CONTENT REVIEW

Match the following words in column A with the statements in column B. The first one is done for you.

A		B	
c	1. wreak	a.	Adjective form referring to "movement away from."
_____	2. havoc	b.	A stick that is one yard long and marked with smaller measures of length.
_____	3. recede	c.	To do violence or express strong feelings in violence.
_____	4. recessional	d.	To become or seem to become more distant.
_____	5. yardstick	e.	A variety of squash having an elongated shape and a smooth, thin, dark-green skin.
_____	6. zucchini	f.	Widespread damage or confusion.
_____	7. odometer	g.	An apparent change in the direction of an object, caused by a change in observational position that provides a new line of sight.
_____	8. luminosity	h.	The act of correcting or marking degrees and dividing points on the scale of a measuring instrument.
_____	9. parallax	i.	A rare celestial phenomenon involving the explosion of most of the material in a star, resulting in an extremely bright, short-lived object that emits vast amounts of energy.
_____	10. Cepheid	j.	Of the science that deals with the relationship between the sides and angles of triangles.

_____ 11.	supernova	k. An instrument that indicates distance traveled by a vehicle.
_____ 12.	calibration	l. A statement of carefully considered opinion; judgement or decision given on any matter.
_____ 13.	intergalactic	m. The condition or quality of giving light.
_____ 14.	trigonometric	n. Any of a class of intrinsically variable stars with exceptionally regular periods of light pulsation.
_____ 15.	verdict	o. Between galaxies.

Part B: Last Chance for Halley's

(if you miss seeing it now, you'll have to wait until the year 2061.)

The return of Halley's comet has been something like a presidential election. For one thing, the flood of public discussion about it began two years before the actual event. For another, say many who tried to catch a glimpse of its *hazy* head in the December and January skies, the view — if there was any view at all — was *anticlimactic* at best.

I got a look at Halley's in December and another in January, and I'll admit the sight wasn't arresting. My second look came on the night of January 10, a night advertised as one of the very best before the comet was to disappear behind the sun. I was in the mountains outside Las Vegas, the skies were very dark and clear, and I knew where to look and what to look for. I barely found it. The comet was invisible to me without binoculars, and even with them, I could have easily overlooked it. I took a few seconds to determine that I wasn't looking at a star and a few minutes to detect just the hint of a tail. I was a little disappointed; then my rented car broke down and I had to *coax* it back to the city a couple of miles at a time. On balance, I was not happy; the *perils* of astronomy are greater than I thought.

But I haven't given up, and you shouldn't either. It will take a little more work, but the reward will be correspondingly greater. Halley's comet is swinging back around the sun. By the time you read this, it will once again have become visible. It now precedes the sun through the sky, rising earlier in the morning. It will dim each day until it disappears from view, probably sometime in May. (Astronomers will continue tracking it, though. With the 200-inch telescope on Mount Palomar, they first spotted Halley's in 1982 on its way in, and they should be able to follow it for a year or two on its way out.) The comet's trip around the sun strengthened its tail, making it easier to see than it was a few months ago.

The first priority for getting a look at the comet, then, is to rise early — or stay up late. At the beginning of April you should start looking for it to the south at about 4:30 in the morning. Each succeeding day, Halley's rises, tail first, about a half hour earlier than it did the day before.

The next factor is your location. Because of the Earth's position in its orbit for this visit, those in the Northern Hemisphere are at a disadvantage. The comet will be very low in the sky

when it's brightest. The farther north you go, the lower you'll have to look. Those without a clear view of the horizon will be out of luck in any case. The answer is to go as far south as you can. For every degree of latitude you travel south, the comet will appear one degree higher in the sky. Florida isn't bad. Neither is Texas. And from Hawaii, the southernmost state in the country, Halley's will be at its highest point for viewers in the United States.

The best place to be, though, is the Southern Hemisphere. Dozens of cruise boats will head into southern seas for just this purpose, each one carrying at least one astronomer, or the equivalent. The most exclusive tours, of course, will have such *celebrities* as Isaac Asimov or Carl Sagan aboard (although Asimov's degree is in biochemistry, he may be considered an expert on almost any subject). But moist air above oceans can generate clouds all too easily, and I wouldn't want to try a long-exposure photograph from a rocking deck.

Many of the experts, therefore, recommend land trips to areas south of the equator. Comet watchers are taking trips to desert regions of South Africa and Australia, where, it is rumored but not confirmed, tens of thousands of Japanese tourists are scheduled to *converge* on Ayers Rock for a communal Halley's watch. South America is another prime spot. Dry areas on both sides of the Andes will provide some of the best viewing — be sure to avoid the rain forests, though. I've heard that the insiders consider the high plains of Peru the very best, with an ideal mix of viewing, *accessibility* and political stability.

— by Michael D. Lemonick
— *Science Digest*, May, 1986.

Exercise III: PASSAGE COMPREHENSION

Indicate whether each of the following statements is true or false according to the passage.

_____ 1. We will have another chance to see Halley's comet in this century, after this year's viewing is over.

_____ 2. There has been a lot of publicity about Halley's return.

_____ 3. The author was not very excited at seeing Halley's comet in January.

_____ 4. When the comet swings back around the sun, it would be more difficult to see because its tail would be shortened.

_____ 5. People in the northern Hemisphere are more likely to see the comet because it will be high in the sky.

_____ 6. Hawaii is the best location for observing Halley's comet within the United States.

_____ 7. The high plains of Peru will be the very best location for comet watchers, according to people who know about such things.