

Kejiyingyu zixiuduben

张鹏 译注 印嘉祥 校

科技英语自修读本

河北科学技术出版社

科技英语自修读本

张 鹏 译注

印嘉祥 校

河北科学技术出版社

责任编辑：王浩英

封面设计：克 仁

科技英语自修读本

张 鹏 译注 印嘉祥 校

河北科学技术出版社出版（石家庄市北马路45号）

石家庄市西焦印刷厂印刷 河北省新华书店发行

787×1092毫米 1/32 15.5 印张 322,000字 1988年4月第1版
1988年4月第1次印刷 印数：000001—1500 定价：3.70元

ISBN7-5375-0115-7/H·7

前 言

本书的原版书为《今日英语》第四册。《今日英语》系由全美英语教师协会主编的英语教材，全书共分六册。其中第四册涉及下列一些主要题材：机械、运输、通信、航天、医学及城市规划。本教材可供具备一定英语水平的高等院校理工科学生、教师及科研人员继续深入学习英语之用，也可供高等院校准备报考研究生、出国进修生的理工科高年级学生以及在校研究生进修科技英语之用。

本书共有 17 课，每课后均附参考译文、注释、词汇表和练习答案。为了便于读者对照阅读，译文基本上采取直译法，其中直译不易理解的句子采取意译法；注释包括文章中较复杂的语法现象、典型句子结构的分析及其翻译方法等。

本书在译注过程中，石九奎同志提出许多宝贵意见，并给予具体指导；杨光午、刘家松、夏乙琥同志对全书译文作了初校；徐乃曾、袁孝官、陈俊玉及天津纺织工学院部分研究生也曾给予具体帮助，在此一并表示感谢。

由于水平有限，此书译注中，错误及疏漏之处在所难免，欢迎读者批评指正。

编 者

1984 年 11 月

Contents

目 录

Unit 1 MACHINES AND THE MODERN WORLD

机器和现代世界.....(1)

Lesson 1 Machines in the City

城市里的机器.....(1)

Lesson 2 Machines on the Farm

农场里的机器.....(33)

Lesson 3 The Ultimate Machine;
The Electronic Computer

尖端机器：电子计算机.....(60)

Unit 2 TRANSPORTATION

运输.....(84)

Lesson 4 America on Wheels

汽车与美国.....(84)

Lesson 5 BART: An Automated Answer to the
problems of Urban Transportation

巴特：城市的自动化交通系统.....(113)

Lesson 6 Airplanes: Yesterday, Today, and To-
morrow

飞机的今昔与未来.....(139)

Lesson 7 Travel in Space, To the Moon and Beyond

宇宙航行：遨游月球与太空……………(164)

Unit 3 COMMUNICATION

通信……………(188)

Lesson 8 Television, The Modern Wonder of Electronics

电视：电子技术的新奇迹……………(188)

Lesson 9 The Telephone of Today—and Tomorrow

电话的今天和明天……………(210)

Lesson 10 Communications Satellites

通信卫星……………(251)

Unit 4 BREAKTHROUGHS IN MEDICINE

医学上的突破……………(274)

Lesson 11 The Search for New Drugs

探求新药……………(274)

Lesson 12 The Heart Laid Open,

Open-Heart Surgery

打开心脏：心脏直视手术……………(304)

Lesson 13 The Spape of Things to Come,

The New Doctor

孕育着的新事物：新式医生……………(336)

Unit 5 OUR CHANGING LANDSCAPE

日新月异景象……………(360)

Lesson 14 The Land and Its Limits

	土地及其限度	(366)
Lesson 15	Urban Renewal or Suburban Sprawl?	
	是更新市区还是扩展郊区?.....	(404)
Lesson 16	Planned Cities	
	规划的城市	(430)
Lesson 17	Tokyo Goes Underground	
	东京向地下发展	(459)

Lesson One

Machines in the City

1. Dick Mallory is a book publisher. His office on the fortieth floor of a skyscraper in the center of New York City is the world he works in.① The world he lives in is a white house on a quiet street in a suburb 30 miles from the big city. Whether he is at work in the heart of the big city② or at home in the quiet suburb, Dick's life is tied to machines. In many ways he represents modern man in the big city—modern man in the machine age.

2. In a typical working day, Dick and his wife are awakened by the buzzing of an electric alarm clock. As he pushes a button to silence the alarm,③ he turns on the radio beside his bed to hear the morning news. Then he goes to the bathroom for a quick shave with his electric shaver.

3. After dressing, Dick goes to the kitchen, where his wife has begun to prepare breakfast.④ Eggs are cooking

on the electric stove,® bread is being toasted in an electric toaster, and coffee is being made in an electric coffee maker. From the electric refrigerator Dick takes a carton of cream, another of fresh milk, and a can of frozen orange juice. He opens the can with an electric can opener and mixes the contents with® several cans of cold water. Then the orange juice is ready, and Dick and his wife can begin breakfast. During breakfast, they sometimes watch the morning news program on television.

4. After breakfast Dick gets the car out of the garage, and his wife drives him to the railroad station. The station is crowded with other commuters like himself, people who must travel 30 or even 50 miles to the city and back every day.® Some are reading the morning paper; others are talking with one another, waiting nervously for the train. If the train is late, their routine, timed to the minute,® could easily be upset. But exactly on schedule, the train arrives at the station. Forty-five minutes later it arrives in the city, still on schedule.

5. With the other commuters, Dick hurries from the train into the station. As he nears the door, it is whipped open® by an electric eye, and he passes through into the waiting room. A moment later he steps onto a moving stairway that takes him rapidly up to the street level. Buses and taxis are everywhere, but because Dick's

office is only four blocks away, he always walks.

6. Soon he is inside the sixty-story skyscraper where his company has offices. At a long bank of elevators^⑩ he waits until a green light flashes for an up car, then steps inside. He pushes the button for the fortieth floor, the door closes, and the car rises smoothly and noiselessly.

7. When the elevator reaches the fortieth floor, the door again slides open, and Dick steps into the familiar hall with its early-morning quiet, and hurries to his office. He turns on the lights and is soon at work. There is much to be done before the clerks and secretaries begin to arrive.

8. An hour later the day's routine begins with the arrival of the mail. As he reads it he usually takes notes, and on the more urgent points^⑪ picks up the telephone and calls other departments in the building and other businesses in New York. It is a matter of routine for Dick to call the company's offices in Chicago and San Francisco, and sometimes even to call its representatives in London and Paris.^⑫ Once he has the information he needs, he dictates letters into a recording machine for his secretary to type and return to him later for his signature.

9. At times Dick is aware of the workers in the outer office answering telephones, typing letters, and filing papers.^⑬ From a room next door he hears the even clicking

of a machine that is duplicating copies of schedules and instruction sheets. Other machines are taking pictures^④ of important letters and documents and producing many copies in a few minutes. From a special office nearby comes the hum of an electronic computer,^⑤ which is recording orders, billing customers, and making out the company payroll.

10. Often Dick is also aware of other sounds, the more or less muffled traffic noises that come from the street down below—the honking of horns, the blowing of whistles, the screeching of brakes. These are curiously mixed with the clang of hammers and riveting machines and with the shouts of the workmen putting up a new skyscraper next door. But Dick is used to noise—for the big city, a city of machines, must be a city of noise.

11. Although he is used to the noise, Dick usually looks forward to the end of the day, when he can return to his house in the quiet suburb.^⑥ For relaxation he may mow the lawn with his power mower; or sometimes he repairs a piece of furniture with his electric tools. He may help his young children build a pen for their pet rabbit. Or he may just sit in a comfortable chair watching television or listening to his favorite music on the record player.

12. In the office or at home,^⑦ machines are a part of the Mallorys' life. Like many other city people, they would

5. Does Dick go to the railroad station by bus or by car? _____.
6. Is the station deserted or crowded with commuters? _____.
7. Does the train arrive late or on schedule? _____.
8. Does Dick take a taxi to his office or does he walk? _____.
9. Is his office building forty or sixty stories high? _____.
10. Does Dick hurry to his office or does he take his time? _____.

Wh Questions

1. How is Dick awakened? He's awakened by _____.
2. How does he silence the alarm? _____.
3. What does he turn on after he wakes up? _____.
4. Why does he turn on the radio? _____.
5. What device opens the station door for Dick? _____.
6. What machine carries him up to street level? _____.
7. What must Dick do to get to the fortieth floor? _____.
8. What does he use the telephone for? _____.
9. What machine helps him to write letters?
10. What machine records orders, bills customers, and

makes out the company payroll? _____

Contradiction and Comment

First contradict the statement. Then supply a comment that explains why the statement is incorrect. Refer to the reading whenever you need to.

MODEL Dick walks to the station.

No, he doesn't. His wife drives him there.

1. Dick Mallory is an engineer.

No, he isn't. He's a _____.

2. His office is in Chicago. _____.

3. Dick lives in New York City. _____.

4. Dick works in the suburbs. _____.

5. Dick prepares breakfast. _____.

6. Dick drinks fresh orange juice. _____.

7. Commuters walk to work. _____.

8. The train arrived late. _____.

9. Dick could walk to work if he wanted to. _____.

10. Dick should walk upstairs to his office. _____.

MODEL Dick's wife doesn't drive a car.

Yes, she does. She drives him to the railroad station.

11. Dick doesn't walk from the station to his office.

Yes, he does. His office _____.

12. Dick doesn't depend on elevators. _____.
13. Dick doesn't make long distance calls. _____.
14. Dick doesn't dictate letters. _____.
15. The copying machines aren't fast. _____.
16. The big city isn't noisy. _____.
17. Dick can't mow the lawn. _____.
18. Dick can't repair furniture. _____.
19. Dick's children don't have any pets. _____.
20. Machines aren't a necessary part of the Mallorys' life. _____.

Toward Interpretation

1. What are some of the machines that Dick Mallory uses at home? What machines does he use to get to work? What machines does he use at work?
2. What source of power do most of the machines use? Are they quiet or noisy?
3. Name some machines useful for relaxation and pleasure.

You and Your Machines

1. What machines do you depend on during a typical day? Does anyone in your family use machines that you do not ordinarily use yourself?
2. If the electrical power were suddenly cut off in

Dick's city, how would his day be different?
How would your day be different if the power
you use failed?

3. If you could buy more machines, which ones do
you think would be most useful to you? How
would they be useful?

COMPOSITION

1. Notice that the entire reading is organized according to a time sequence; It takes Dick Mallory through a typical working day. Special time expressions are used to make this time sequence clear. In paragraph 2, the time expressions are "in a typical working day," "as," and "then." Find the time expressions used in paragraphs 4 and 8.
2. There are basically three types of time expression, subordinating conjunctions, prepositional phrases, and adverbs of time. The latter two can be used as sentence connectors. (See the composition exercises for Lesson Five). Here are some of the subordinating conjunctions commonly used to indicate time relationships,

after	now that
as	once
as long as	since
as soon as	until, till

before	when
by the time(that)	whenever
every time(that)	while

The grammatical exercises at the end of this lesson provide practice with *when* and *while*, *before* and *after*, and *until* and *since*.

When the subordinate clause begins the sentence, it is usually followed by a comma. When the subordinate clause comes at the end of the sentence, there is no comma. Look at the use of the comma in the following sentences,

When you write, you should be careful of the punctuation.

You should be careful of the punctuation when you write.

Now turn to paragraph 7 and observe the punctuation in the first and last sentences.

The *when* clause begins the first sentence, and so there is a comma after "floor," the last word of that clause. In the last sentence the *before* clause comes at the end, and so it is not set off by a comma. Rewrite these two sentences so that the *when* clause comes at the end and the *before* clause comes at the beginning. Remember to change the punctuation. Now write some sentences of your own using any of the subordinating conjunctions