



普通高等教育"九五"国家级重点教材



中国科学院研究生教学丛书

研究生英语精读

(第二版) 龚立

2. INVASION: CONOUERORS

普通高等教育"九五"国家级重点教材中国科学院研究生教学丛书

研究生英语精读

(第二版)

龚 立 主编

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内容简介

本书属于教育部立项的"普通高等教育'九五'国家级重点教材",同时还被列为"中国科学院研究生教学丛书",是一部极具创新风格的高学位教育阶段英语教材。

本书由在中国科学技术大学执教的资深教授和专家融多年成功的教学实践和研究心得编写而成。编者特别强调教材的思想含量,内容与语言并重,使学生广泛涉猎知识和全面提高英语能力二者同步。编者在对中国科学院研究生原有教育背景和目前知识结构作分析研究的基础上,有意增加文、史、哲及综合知识的含量。书中主要素材来自美国新近出版物和主导期刊,不仅收入了若干当代焦点话题,还注意到文体的多样性。全书语言纯正、时代气息浓厚。使用本书的广大研究生能够在较深的文化内涵中和较高的语言层面上品味"原汁原味"读物,并且全面提高英语的语言和文化修养。

本书适合科研院所、高等院校研究生教学使用,也可供科研人员、英语专业人员参考阅读。

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《中国科学院研究生教学丛书》序

在21世纪曙光初露,中国科技、教育面临重大改革和蓬勃发展之际,《中国科学院研究生教学丛书》——这套凝聚了中国科学院新老科学家、研究生导师们多年心血的研究生教材面世了。相信这套丛书的出版,会在一定程度上缓解研究生教材不足的困难,对提高研究生教育质量起着积极的推动作用。

21世纪将是科学技术日新月异,迅猛发展的新世纪,科学技术将成为经济发展的最重要的资源和不竭的动力,成为经济和社会发展的首要推动力量。世界各国之间综合国力的竞争,实质上是科技实力的竞争。而一个国家科技实力的决定因素是它所拥有的科技人才的数量和质量。我国要想在21世纪顺利地实施"科教兴国"和"可持续发展"战略,实现邓小平同志规划的第三步战略目标——把我国建设成中等发达国家,关键在于培养造就一支数量宏大、素质优良、结构合理、有能力参与国际竞争与合作的科技大军。这是摆在我国高等教育面前的一项十分繁重而光荣的战略任务。

中国科学院作为我国自然科学与高新技术的综合研究与发展中心,在建院之初就明确了出成果出人才并举的办院宗旨,长期坚持走科研与教育相结合的道路,发挥了高级科技专家多、科研条件好、科研水平高的优势,结合科研工作,积极培养研究生;在出成果的同时,为国家培养了数以万计的研究生。当前,中国科学院正在按照江泽民同志关于中国科学院要努力建设好"三个基地"的指示,在建设具有国际先进水平的科学研究基地和促进高新技术产业发展基地的同时,加强研究生教育,努力建设好高级人才培养基地,在肩负起发展,其国科学技术及促进高新技术产业发展重任的同时,为国家源源不断地培养输送大批高级科技人才。

质量是研究生教育的生命,全面提高研究生培养质量是当前我国研究生教育的首要任务。研究生教材建设是提高研究生培养质量的一项重要的基础性工作。由于各种原因,目前我国研究生教材的建设滞后于研究生教育的发展。为了改变这种情况,中国科学院组织了一批在科学前沿工作,同时又具有相当教学经验的科学家撰写研究生教材,并以专项资金资助优秀的研究生教材的出版。希望通过数年努力,出版一套面向21世纪科技发展、体现中国科学院特色的高水平的研究生教学丛书。本丛书内容力求具有科学性、系统性和基础性,同时也兼顾前沿性,使阅读者不仅能获得相关学科的比较系统的科学基础知识,也能被引导进入当代科学研究的前沿。这套研究生教学丛书,不

仅适合于在校研究生学习使用,也可以作为高校教师和专业研究人员工作和学习的参考书。

"桃李不言,下自成蹊。"我相信,通过中国科学院一批科学家的辛勤耕耘,《中国科学院研究生教学丛书》将成为我国研究生教育园地的一丛鲜花,也将似润物春雨,滋养莘莘学子的心田,把他们引向科学的殿堂,不仅为科学院,也为全国研究生教育的发展作出重要贡献。

22万元 12万元

5.力的决定因素是它所拥有的科技人才的数量和质量。或用类想在 21 也刻露到起实施"科裁兴国"和"可持续发展"或够。实现都几乎同志规划的幕正意露具标一一把我国建设公中逐步法国宣 2244元子是224

素殖飢食,结构合理,有能力参与图形式参与合作的科技大平。这是据立代出

中国科学就作为我国自然代系与高斯技术的社会研究与光展中心。在建

合的道路。发挥了离影林技专工工程所是主任,并可水平高的优势。给合林环

等前,中国科学院连接按照工作民间总关于中国科学区里努力建设好"三个基

也"即将你,在建设具有国际是进水平的相字研究是近如此此高新技术产业光度基地的同时,加强研究生教育,劳力建设好高级人才区文基础,在高品公正

夏我国科学技术及促进高新技术产业发展任任中国部一专国家观游 6世 周封 参数第十年章 60 对第二十二

· 模量是明完连续直转生命,也再标為研究生俱以及以近当部我國外完任

展。为了改变这种情况。中国和学院组织了一起在科学前设工作,同时又具有

才被出版。希望通过数年努力。当版一条面向 21 世纪叶成交星、但现中国社会经验社会公司工程

少基础性,同时也兼顾前沿性,使同读者序段能获并得完全目的已经系统场引

社会观察状,也就被引导进入当代科学师宪统治师。已至明定生任孝太公、古

第二版前言

自 2000 年 8 月本书第一版出版以来,至今已近七年,其间印刷八次,使用范围逐渐由中国科学院院内研究生培养单位扩展到院外一些重点高校。如果考虑到我们在正式出版前三年多的"立意、谋篇"和在中国科技大学大规模的实验教学,真可谓"十年辛苦不寻常"了。

中国科学院当年启动研究生教材建设项目时,就强调现代科技革命已对高层次人才培养提出了更新和更高的要求。因而,在相关外语学科的教材建设中,编者也应充分认识到,扎实的语言基础与良好的人文修养,丰富的知识积累,乃至良好的个性品格修养这些文化素质方面的内涵在深层次上是密不可分的,它们都在极大程度上关系到人才的研究能力和创新能力。第一版前言中阐明的就是我们对研究生英语教材编写原则的理解和具体的编写过程。我们同时还非常感谢教育部专家们的信任和推荐,使本书被纳人"普通高等教育'九五'国家级重点教材"。十年过去了,本书在中国科学院研究生院、中国科学院上海分院、中国科技大学、有关兄弟院校以及中国科学院其他分院的教学效果一直让我们深受鼓舞,这是一种有答信任、无负初衷的感觉。

在对全书内容作必要修订的基础之上,我们总结了多年来的教学实践,考虑到各地教学计划与教学安排上的差异和多数读者的实际情况,经过认真的斟酌权衡,将原来的十二课减为第二版中的十课,将部分节省下来的篇幅用于语言文化知识的拓展和语言应用能力的训练,并在书后附上了习题的参考答案。

龚 立 2007年3月

辦學對於文字及新王的思考。第一版前言 WOL 第一的春辛89gi . 計工的辦

中国科学院研究生教学丛书项目是 1996 年启动的,其中的硕/博研究生英语系列教程经过三年的编写和试用之后,按计划于今年陆续出版。这套教程已被教育部列为"普通高等教育'九五'国家级重点教材"。

面对我国外语教育迫切呼唤改革与创新的现实,我们努力将多年的实践和思考融会在这一教材建设项目中,探索构建我国高学位教育阶段英语教材建设的理论框架,注意扭转在这一层次上还依然存在着的为技能而技能的纯功利倾向。我们认为,硕/博阶段的外语教学应该强调教材的思想含量,应该反映当前的世界潮流和时代特征,应该批判性地引介西方主流文化观和价值观,从而使我们有可能从理论上给后期的、乃至全盘的外语教育作出正确的定位。

高层次的英语教材理应内容与语言并重,使学生广泛涉猎知识和全面提高英语能力二者同步,并以此增强学生对语言的兴趣和培养他们运用语言的良好习惯。我们同时还认识到,帮助学生应用分析、学会比较、引发思考、激发想象也是这一层次的外语教材应负有的使命。对已具有坚实数理基础的中国科学院的研究生,我们不仅考虑到他们的教育背景和知识结构,更考虑到他们今后的发展前景,在弘扬人文精神和科学精神的前提下,有意为之加重了文、史、哲及综合知识的含量。我们坚持认为,外语教育乃是文化素质教育的重要组成部分,在经济全球化大潮涌动的新世纪之初,对这一组成部分与素质教育的关系进行全面的理性思考,必将成为我国教育界,尤其是高等教育界的一个严肃课题。

因而,在一定的意义上,本套教程既反应出我们的一种主动的参与意识又表明了我们的某些学术观点。本套教程的主要素材来自美国新近出版物和主导期刊。我们不仅收入了若干当代焦点话题,还注意到了文体的多样性。全套教程语言纯正,时代气息浓厚。我们遵循业已阐明的编写宗旨,尽力对本书的难度加以控制,使之能较好地与我国现阶段使用者已经掌握的英语技能和基础知识相衔接,不要有多少陡峭之感。然而,我们仍然发现,在较深的文化内涵中和较高的语言层面上难免还有一些难点。我们寻思,高学位研修期间的英语学习应该算是十几年漫长的英语课堂教学的最后一课了,如果此时还不能接触当代西方较高量级的"原汁原味"读物,则要待何时?扬长补短,且又知难而进,看来应是最佳的选择。至此,话题恰好回到了本书编写的初衷上去了。我们热切期盼中国科学院内外使用本教材的专家学者和青年朋友从多方面评点这套教程,给我们以批评和指正。

本书为这套教程的精读第一册,1998年春季起,此册先在中国科学技术大学研究生院,随之在中国科学院研究生院以及中国科学院上海分院试用。试用从小范围开始,逐步扩展到千人以上的规模。试用期间,我们选择性地采用中国科学技术大学与美国英语学会在 20 世纪 90 年代初合作研究时应用的一些基本方法(该项合作的主要成果 Scientists' English 一书获国家教委第三届普通高等教育优秀教材一等奖),致力于教学过程和

教学结果的研究、分析和评估,并在此基础上不断地进行调整、修改乃至大幅度的重写重编的工作。1998年春的一稿、1999年春的二稿和1999年秋的三稿为本书在实验教学期间的几次重大修改。

值此书付梓之际,我们想借前言之一角,表示我们对中国科学院人事教育局、中国科学技术大学研究生院、中国科学院研究生院、中国科学院上海分院、科学出版社和中国科学技术大学外语系参与本书筹划、研讨和实验教学的朋友及老师表示诚挚的谢意。他们的鼓励、支持和参与使本书的实验教学和出版得以按计划推进。我们还想在此感谢我们的外籍同事 Murray Sherk 博士和 Allison Sherk 女士,他们认真地通读全书并提出一些宝贵的修改意见。

2000年6月

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ENGLISH—A WORLD LANGUAGE

Susanna McBee¹ wa ali ai shiw oa shashal samiluo

English has become to the modern world what Latin was to the ancients, dominating the planet as the medium of exchange in science, technology, commerce, tourism, diplomacy and pop culture.

Pre-reading questions:

- ★ Languages are not static but in a constant state of change. What do you know about the development of the English language?
- → Over 400 million people use English as mother tongue in the world today. How many people speak English, to some degree, as a foreign language?
- ★ If you hold the viewpoint that English has become the most important language on this planet, how will you back up your argument?

Reader's Notes

It began as a rude tongue spoken by obscure Germanic tribes² who invaded England in oared warships at the onset of the Dark Ages³. Today, 1,500 years later, the English language encompasses the globe.

When an Argentine pilot lands his airliner in Turkey, he and the ground controller talk in English.

When German physicists want to alert the international scientific community to a new discovery, they publish their findings in English-language journals.

When Japanese executives cut deals with Scandinavian 10 entrepreneurs in Bangkok, they communicate in English.

When the Soviet Union wants to make a propaganda point in the Mideast, it uses English not Russian.

When pop singers from Hong Kong to Heidelberg ring out their songs, the lyrics often as not are in English.

English has become to the modern world what Latin4 was to the ancients, dominating the planet as the medium of exchange in science, technology, commerce, tourism, diplomacy and pop culture. Indeed, so wide is its sweep that 345 million people use English as their first language and an additional 400 million as their second. "It's really amazing that one dialect spoken in one small place has become so important around the world," says Donald Bowen, professor of English at the University of California at Los Angeles. The symmetric in the symmetric and the

Initially, the language spread with the British Empire. After World War II, English with a twist-American jargon-circled the globe, boosted by U.S. economic and political power. Finally, the language captured the lead in the knowledge explosion: English is the medium for 80 percent of information stored in computers around the world.

Inevitable as "English creep" seems to be, it often bumps 20 into walls of opposition. Some Third World countries have banned it or restricted its use, denouncing it as a weapon of "cultural imperialism."

But English marches on. "If you need it, you learn it," says one expert. Ambitious people in many countries are scrambling to 25 do just that. The demand for English language broadcasts, texts and other materials has created rich markets. Yet the United States seems barely aware of them, and Britain has captured a dolor and assessment and a state of them. firm lead in many areas. Warns one book publisher, Chairman Leo Albert of Prentice-Hall International, "This is a battle for 30 people's minds, and we are lagging far behind the British."

After the new language came to England with Germanic tribes in the fifth century, it was augmented by the Scandinavian words of the Vikings⁵ in the ninth century and infused with the French of the Norman conquerors6 after 1066. Still, as recently 35

Reader's Notes

as 400 years ago, many Britons would not have bet a plugged A ded and sloping tuppence on the future of their language, bright and lively though and added it was. In 1582 a scholar named Richard Mulcaster wrote, "The English tongue is of small account, stretching no further than an asswer as O od W this island of ours, nay not there over all."

Little did he realize that in just 25 years, with the settlement dos opagonal daily and of Virginia7, the language would make a transoceanic leap from demonstration of virginia7, the language would make a transoceanic leap from demonstration of virginia7. which it would never retreat, and which it would never retreat, and an income of the control of

In the early colonial days, 5 million people spoke English, solvery and an our By the 1930s, after centuries of empire building and population 10 approximation 10 approxi growth, the number had jumped to 200 million. By the mid-1960s, after the postwar business and baby booms, the figure dailydd and a said a s had vaulted again to an estimated 400 million, counting those was more alarge who used English as a second language. Now, with the total near many to deflared to 750 million, one of every 7 people in the world claims some 15 to " aug and lo knowledge of English.

More speak Chinese—one billion people—but use of Chinese dailynd ylast all outside its populous homeland or ethnic enclaves in other countries and an enclave in other countries. is rare; 250 million Chinese, in fact, are learning English today— 1000000 our variance more than the number who speak it in the United States. I blast the shall selected on 20 visit it blast the shall selected.

English is the native language of 12 countries and an official or semiofficial tongue in 33 others where it is used to conduct at a semiofficial tongue in 33 others where it is used to conduct at least some government business. Further, it is either a required an available value subject or one widely studied in the schools of at least 56 and ages and adapted English-language 25 hooks in Kio dayanchoos budasa additional countries.

It is not only the language of aviation but with a new Britishissued set of maritime terms called "Seaspeak," it may become and whom amounts the official language of shipping, would not allowed blanck admin a discount of the weather the official language of shipping.

Millions of people overseas struggle daily to master the sound and an algorithms of people overseas struggle daily to master the irregular verbs, strange idioms and irrational spellings of 30 / spanning and English. Why? "It's the language of prestige, of practical and assessment to be a second to design." success," says Barbara Robson of the Washington-based Center for Applied Linguistics.

In Japan recently, a newspaper ad offered a high starting salary, \$18,000, to anyone who could write technical manuals in 35 lot grow attenuor

simple English. A knowledge of informal phrases is especially myoga erasy 00% as valuable. Some years ago, Sony Corporation, looking to find a most end no someouts slot in its worldwide network, placed this ad: "Wanted: Japanese does a Saci all saw a Who Can Swear in English." Japanese high school graduates, to at suggest deligated after six years of required English, often enroll in professional a 5 emo to basis aids English-language schools to qualify for better jobs. The high-tech less sold bib sold a Mitsui & Company boast that 80 percent of its 9,500 employees and add a singul lo can speak, read and write English. Toyota, Japan's top-ranked govern bloom it doubt auto maker, provides six-month in-service English courses to By the 1930s, at 01 ceremes advergere building that graphical seems 10 ls., at 01

Even in France, where officials still scoff at la langue du modern en el suppose Coca-Cola, English, especially American English, is now in. 1999 and 1991 State Secondary schools require every student to take four years or magas bordured bad of English or German. For the young, American phrases are "top as addited beau only of the pops," and on the street, signs read: "Hi-Fi," "Fast 15 and modified out Food" and "Le Scoop du Jour" meaning "Today's Special," and adapted to agree would

In Italy English is a must for many technical jobs. For and places and a example, top personnel at Telespazio, the state-owned satellite demolique at observe company, are expected to know English, and most economists at Thomas and the same at the Bank of Italy also speak it.

Despite the recession in Brazil, many job hunters "are taking their last savings and investing in English lessons because so appear and investing in English lessons because so many prospective employers want workers with a knowledge of English," says John O'Donnell, a partner in the Brasas chain of th English-language schools in Rio de Janeiro.

In the Soviet Union, more than half of the secondary-school students study English. Universities offer five-year courses. A few years ago, the Kremlin would not allow its diplomats to take posts in English-speaking countries unless their wives also spoke the language. Now such diplomats' families are routinely given 30 short courses in English before leaving on assignment.

In their rush to English, foreigners often mangle the days was a second language—just as Americans and Britons stumble over the idioms and being A and or pronunciations of other tongues. In Shanghai recently, Indian asset all tourists were told by their Chinese guide that population pressure 35000,812 and see

Reader's Notes

was so great that "the city is pouring out to the skirts." In Tokyo, or being goal sloss one can see storefront signs advertising "Hair Saloon" or listen to an other no dally all a nightclub singer croon an otherwise perfect "Moon Liver."

In Argentina, restaurants sometimes translate scrambled eggs as "revolting eggs" from the Spanish huevos revueltos. w dall 5 1-1106 and 101

An idiomatic goof sometimes leads to a diplomatic gaffe. A word a shared divine middle-echelon Soviet envoy once raised his glass after delivering NV91 all the state of the sta some elegant words at a Washington dinner party. He intended to say, "Bottoms up." But it came out, "Up your bottoms." I be a superior last mold as bloom

The flubs signal a deeper problem: The low quality of 10 more English language instruction in many parts of the world. In Switzerland, despite a growing demand for English, experts say that no more than 10 percent of the population has enough skill to write and sadden of the a letter in the language. For all the Soviet youngsters who study English, dull teaching methods leave many unable to speak it.

Resistance to English is still strong in some countries. Officialdom in France, irked by the nonstop invasion of the French language by Anglicisms, has reorganized its efforts to a tribectual and W protect and expand French, which English has displaced as the language of diplomacy. The High Commission of the French 20 manufacture and the second Language, created by President Francois Mitterrand⁸, plans to introduce new terms, supervise the media's vocabulary and produced and believe to be a supervise the media's vocabulary and produced and believe to be a supervise the media's vocabulary and produced to be a supervise the media's vocabulary and produced to be a supervise the media's vocabulary and produced to be a supervise the media's vocabulary and produced to be a supervise to be a sup executives into trying French first in dealing with foreigners. Alabama savog shiwnous

Although it is now possible in France to sue someone for additional to secure as using non-French words such as weekend or drugstore, a group 25 de la lacella de lacella of socialist deputies wants to make such usage a crime. The proposed law prompted the newspaper Le Monde9 to suggest that was a daily and daily and the widely used Anglicism sandwich could be rendered deux morceaux de pain avec quelque chose au mileu—two pieces of bread with something in the middle. Less concise but more 30 mag at 20 mg French, Le Monde observed.

Yet France seems to be fighting a rear-guard action. Even the prestigious French Academy has admitted the words holdup and gadget to its dictionary while rejecting terms such as flashback and brainstorming. A few years ago, when Culture Minister 35

Jack Lang tried to clamp a limit on the number of songs in the many or saw English on radio and television, the industry balked. In one recent week, 11 of the top 20 tunes on government radio were in as aspais dulating a English. Research English Street and Street Street

In the anti-English war, France is a cream puff compared 5 with Canada's province of Quebec10. There, a French-only policy, set in 1977, is enforced by a corps of 400 "language with molado-albeita police." Fines go as high as \$760. Recently, the language cops a show may be smore told a Montreal insurance company to stop using English date and amountable was stamps on incoming mail. The flow of investment money from a 10 France into Quebec increased, but the French-only policy has led an amount of dadard to a brain drain. Some 14,000 senior corporate executives have a stopped bashowing left Quebec since 1977. Recently, Quebec softened its policy and of the left Quebec softened its policy and the left quebec so slightly. Cities with Anglo-Saxon majorities now may use English suggest and at settled a in day-to-day government communications.

In the Third World, unwanted results have sometimes followed efforts to downgrade English. Burma's strong man Ne and an abbishable Win banned it in 1962. In 1981, after his favorite daughter volume and documents of the second secon flunked an English test required for graduate study in Britain, he has a bay second ordered instruction reinstated. But an entire generation had lost 20 lab lo appropria out in the meantime. English-speaking ability has also been decreased assurant. eroded in the Philippines, Malaysia, Nepal and Pakistan, where nationwide governments have pushed local languages at the expense of English.

Most of the world is going the other way, and teaching 25 English has become a multimillion-dollar business. So far, estados los los far, estados los los far, estados far, e British English is winning over American English as the language remove was inacogord of choice. Britain's main channels for spreading the language are A beau yellow and the British Broadcasting Corporation and a quasi-governmental as wind ab approximately agency, the British Council.

A BBC English teaching telecast, Follow Me, is seen by 100 to specify a decorate million viewers in China alone. The program's textbooks sold a million copies in Germany and Spain within the first three months and august said and of publication. America has nothing comparable, but the United States Information Agency is planning a radio-TV series with texts 35 and how Application