

МИНИСТЕРСТВО ОБРАЗОВАНИЯ И НАУКИ РОССИЙСКОЙ
ФЕДЕРАЦИИ

ФЕДЕРАЛЬНОЕ АГЕНТСТВО ПО ОБРАЗОВАНИЮ

КУРГАНСКИЙ ГОСУДАРСТВЕННЫЙ УНИВЕРСИТЕТ

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АНГЛИЙСКИЙ ЯЗЫК

МЕТОДИЧЕСКИЕ УКАЗАНИЯ

ПО РАЗВИТИЮ НАВЫКОВ

ПЕРЕВОДА И РЕФЕРИРОВАНИЯ ТЕКСТОВ

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Кафедра иностранных языков естественнонаучных специальностей
Дисциплина «Английский язык» для студентов всех курсов
специальностей ПОВТ и АС, ОТЗИ, Информатика, Физика факультетов
Математики и информационных технологий и Естественных наук.

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Предисловие

Настоящие методические указания предназначены для студентов специальностей ПОВТ и АС, ОТЗИ, Информатика, Физика.

Цель методических указаний – научить студентов читать, переводить со словарем и реферировать тексты по теме «Компьютер и интернет», расширить их знания в этой области, овладеть соответствующей лексикой.

Методические указания состоят из 3 разделов.

Раздел I включает тексты на тему «Компьютер и его применение», которые снабжены упражнениями и заданиями, позволяющими «проработать» текст, извлечь максимум сведений, расширить словарный запас студентов. Несколько текстов снабжены заданиями «Writing».

Раздел II посвящен истории создания компьютеров и живой легенде в компьютерном мире Б. Гейтсу. Тексты этой главы помогут студентам расширить свои знания о компьютерах и компьютерных технологиях. Они дают возможность выйти на обсуждение проблемных вопросов, их можно пересказывать, а также выполнять различные задания в письменной форме, например, на извлечение информации.

Раздел III посвящен юмору, связанному с использованием компьютеров, а также включает приложения (Appendix A, Appendix B), которые можно использовать и в качестве контролирующего, и в качестве вспомогательного, справочного материала.

Методические указания могут быть использованы для работы как в аудитории под руководством преподавателя, так и для самостоятельной работы студентов.

Ex. 1. Read the title of the passage, which gives you an idea of what it is about. Before you read the passage, think of some ways in which computer games might have educational benefits for children. Make a list of at least three in your notebook.

Ex. 2. Now read the passage to see if you agree with the experts. Ignore the numbers and underlining for the moment.

COMPUTER GAMES IN EDUCATION

(1) Computer games have come a long way since Pong, a high tech version of table tennis, became the first to hit the screen in 1972. The vast majority of children now regularly play games ranging from ND Mario to Mortal Kombat. One study has suggested that one teenager in fifteen devotes thirty hours a week to them, though the majority are moderate consumers.

What does it do to young minds?

For years concern has been expressed by parents and teachers about the effect of computer games on the moral and mental make-up of the next generation. Some have warned that a relentless diet of whizz-bang 'shoot-'em-ups' fosters antisocial behavior, even playground violence. Others believe that the age of the zombie is upon us.

But expert opinion is shifting radically. Psychologists in America and Britain now suggest that while computer games hold some dangers for children, they also provide opportunities their parents never enjoyed to amplify powers of concentration and memory. Researchers have also highlighted (2) the positive response of children to the way computer games reward success, thereby spurring them on to look for greater challenges - a boon if the same attitude is applied to school work; A leading academic at the University of Washington has even claimed that (3) children think differently when they play computer games, learning to deal with problems in parallel rather than in sequence. In effect, children are being trained to tackle problems in a fashion which is not only more rapid but also more effective. In the long term, (4) the facility that game players develop with computer graphics could help much in future career. It could, for example, be of particular benefit to children who go on to become engineers of scientists.

(5) Games are also now being developed for pre-school children to encourage reading and writing skills. At Lanterns, a private nursery in east London, computer games make up part of the syllabus. Each week its sixteen pupils - the youngest aged two - are treated to a whirlwind tour of cyberspace. Every day the pupils attend a special class, such as dance or drama, and on Tuesdays they have a computer workshop where they spend an hour playing games. All the children love it. There is not technophobe among them.

Ex. 3. In a paragraph of 70-90 words summarize the educational benefits of computer games, according to the writer.

Ex. 4. Now look back at the text, and use the numbers and the

underlined sections to help you to complete the notes below.

increase children's power of
potentially have a positive effect on children's by encouraging look for
greater challenges when they complete tasks
game players think and learn to deal with problems more
familiarity with could be useful for
can help to learn

Ex. 5. Using the notes from Exercise 4, write the first draft of your summary in your notebook. Since you are writing about people's opinions, you will probably need to use modal verbs (e.g. may) and expressions such as: "it is believed that" or "games are thought to".

Ex. 6. Check and edit your summary. Have you included all the information you need? Is it the right length or do you need to shorten it? Use this checklist to help you.

Methods of editing summaries

Make sure each sentence makes a new point.

Remove examples, which support your points.

Remove adjectives and adverbs.

Look for repetition and remove it.

Replace particular phrases with single words.

Replace full clauses with participle clauses.

Ex. 7. Read through your draft of your summary. Look back at the original question (ex.3), and make sure that all your points are relevant to it, then, check for spelling, punctuation or grammatical mistakes.

Ex. 1. Read the following passage about voice-controlled computers. Does the writer believe that natural conversation with a computer is a real possibility for the future?

TALKING TO COMPUTERS

One of the shared assumptions in computer research is that talking to computers is a really great idea. Such a good idea that speech is regarded as the natural interface between human and computer.

Each company with enough money to spare and enough egoism to believe that it can shape everyone's future now has a 'natural language' research group. Films and TV series set in the future use computers with voice interface to show how far technology has advanced from our own primitive day and age. The unwritten assumption is that talking to your house will in the end be as natural as shouting at your relatives.

The roots of this shares delusion lie in the genuine naturalness of spoken communication between humans. Meaning is transferred from person to person so effortlessly that it must be the best way of transferring information

from a human to another object.

This view is misguided on many different levels. First people are so good at talking and at understanding what others say because they share a common genetic heritage. Children's brains are hard-wired with a general language structure that their surrounding spoken-word environment. The old view that language is learned by copying parents and other adults has been discredited in recent years, to be replaced by the theory that words are attached to a way that grammar 'emerges', as it were, rather than is taught.

This view of human language, added to shared human experience, shows how people understand each other precisely in a conversation where a transcript would make little sense. Unfinished sentences, in-jokes, catchphrases, hesitation markers like 'er' and 'you know', and words whose meaning is only clear in the context of that one conversation are no bar to human understanding, but baffled early attempts at computer speech recognition.

Recent advances in artificial intelligence address the problem but only in part.

Pioneering linguistic research by scientists has revealed much of the underlying structure of human language, that programmers can now mimic that structure in their software and use statistical and other techniques to make up for the lack of shared experience between operator and machine.

Some of the obvious drawbacks of universal voice control have already been countered. The dreadful prospect of an office full of people talking to their machines has brought about the headset and the throat microphone; these also address the fact that people feel ridiculous talking to something which is non-human. The increasing sophistication of voice-processing and linguistic-analysis tools cuts out the dangers of inaccurate responses to input, preventing the computer from having to respond to every single word uttered, no matter how nonsensical in the overall context.

The fundamental objection to natural language interfaces is that they're about as unnatural as you can get. You might be able to order a computer about in its limited sphere of action, but it'll never laugh at your jokes, make sarcastic comments, volunteer irrelevant but interesting information or do any of the other things that make real human conversation so fascinating. If interaction is limited to didactic instruction from human to computer, why use up valuable processing time performing the immensely difficult task of decoding language correctly? To keep your hands free? For what, precisely?

There's another psychological reason why language control is difficult: the decline in domestic service throughout this century, the absence of military experience from the lives of the last two generations, and the flattering out of business management have all combined to produce a population that's not accustomed to giving crisp orders and expecting them to be obeyed.

Controlling a computer by word power works best if you imitate a drill sergeant, avoiding all 'could you's' and 'would you mind's' that most of us use

when trying to make someone to do something they'd rather not do. This modern variant of the servant problem opens up the chance of ambiguity and error when interacting with a machine.

It could be said, though, it's just as well as we've forgotten how to give orders. Slaves always have had a reputation for conspiring against their master's backs.

Ex.2. Answer the following questions about the passage.

1. Which word suggests that the writer disapproves of the aims and attitudes of large Companies?
2. What does the writer suggest by using the phrases 'shared assumptions' and 'the unwritten assumptions' when describing how computer researchers view natural language?
3. What has caused the 'shared delusion' of researchers?
4. Why do people have no difficulty understanding one another?
5. What has happened to the view that children acquire language by means of imitation?
6. What point is the writer making when he mentions 'in-jokes, catchphrases, hesitation markers' and other features of language?
7. Which phrase summarizes the fundamental problem faced by programmers, which 'pioneering linguistic research' has partly helped to solve?
8. Why have increasingly sophisticated voice-processing and linguistic-analysis tools been developed?
9. How does the writer feel that communication with computers will always be limited?
10. How has business management changed, according to the writer?
11. What does the writer imply about the attitudes of drill sergeants?
12. According to the writer, what is essential if 'ambiguity and error' are to be avoided?

Ex.3. In a paragraph of 70-90 words summarize the problems involved in making computers to react to human orders.

Look through the whole passage and write a list of the points you need for this summary. For example, which problems might relate to people and which to the efficiency of the computer system? Write the first draft of your summary.

Ex.4. Read the following paragraph, which is from a discursive composition about the Internet. Is the tone of the paragraph too indecisive, too blunt and direct, more appropriate for a report than a discursive composition?

Large numbers of people use the Internet these days at home and in the office. (1) This trend will continue as people become aware of ease with which they can send and receive information in any format and communicate with others around the world by means of e-mail. Although the benefits of this new technology are apparent, the negative aspects of the Internet (2) have been ignored. (3) People dismiss any view that is even mildly critical as being alarmist or perhaps uninformed. (4) It is unfortunate, for example, that many parents (5) do not worry about the amount of time their children spend 'surfing the net'. Even though doctors and psychologists have warned about the possibility of Internet addiction, few parents take these warnings seriously.

Ex. 5. The writer has been rather blunt in tone. We often use expressions which 'tone down' statements to avoid appearing aggressive. Rewrite the paragraph of Ex.4, using the words or phrases given below. More than one answer is possible.

To a large extent/largely, to some extent/rather, in all probability/there is every likelihood/it is likely that, seem to/ appear to, is/are apt to/tend to, there is a tendency for.

Ex. 6. Improvements in communications technology increasingly mean that people are becoming isolated from one another. Explain how you think this might be true and what could be done to deal with the problem. (About 350 words.)

Ex. 7. Read the following list of features, which could be included in the introduction of a discursive composition. Which would you include if you were writing an introduction to a composition answering the task above?

A sentence quoting the words of a famous person.

A brief outline of the situation today.

An explanation of the meaning of the title.

The aspects of technology, which will be discussed.

A detailed discussion of the benefits of improved communications technology.

A sentence, which echoes the negative aspect of technology mentioned in the question.

Ex. 8. Now read the following introduction, which was written in answer to the task. Which of the features from the list above does it contain?

Recent technological advances have meant that people nowadays are generally able to communicate much more easily and effectively than ever before. This may, of course, have benefited many people, but it has also resulted in a situation where people perhaps have become more isolated from their immediate surroundings.

Two good examples of this negative trend can be seen in the way large numbers of people seem to have become dependent on mobile telephones and the Internet as means of communication.

Ex. 9. Read the three following supporting paragraphs, which make up the body of the composition. The numbered gaps indicate places where ideas or connecting phrases have been omitted. Choose the phrase or sentence, a), b) or c) below, which best fills each of these gaps. Remember that you need to consider the passage as a whole, to do this effectively.

Increasing numbers of people are using mobile telephones to communicate with friends, family and colleagues. Wherever they may be, (1)... To a large extent, this has resulted in less meaningful face- to- face contact between people. It has also brought about a situation where meal times, social occasions and even (2) ..., are apt to be interrupted by the bleeping of a mobile phone. Needless to say, (3) ...

The Internet has likewise (4) ...Since it is possible to send and to receive almost any information you want over the Internet, the need to actually interact socially simply does not exist for some people any more. In fact, the appeal of the Internet for many may be that they can work and play from home (5) ...

Clearly, we need to be rather more aware of the effect this new technology is having on our lives and find ways to limit the damage. Mobile telephones, of course, can be turned off or left at home. It is unlikely to prove disastrous (6) ... and messages can always be left on an answerphone. Similarly, the use of the Internet can, and possibly should, be regulated. Parents in particular need to keep an eye on their children in order to prevent "Internet addiction" from developing. As with most things, common sense is what is needed most.

1.

- a) they can contact whoever they want easily and reasonably cheaply
- b) mobile telephones are both cheap and easy to use
- c) it will be possible to talk to whoever they want to

2.

- a) other important occasions
- b) when driving to work
- c) the Christmas dinner

3.

- a) it has been known for people to be woken up in the middle of the night
- b) this is both annoying and has a detrimental effect on relationships
- c) people nowadays are simply not allowed to be 'unavailable'

4.

- a) affected people's social skills
- b) had a more disastrous effect on our relationships
- c) grown over the past few years

5.

- a) and spend very little money in the process
- b) without ever having to get involved in human relationships
- c) and make many new friends in the process

6.

- a) unless a call is answered
- b) if a call is left unanswered
- c) provided a call is left unanswered

Ex. 10. Which of these conclusions is more appropriate for the composition?

A. In summing up, I feel that it would be wrong to pretend that the advantages of improved communications technology are insignificant. Nevertheless, it is true to say that there are negative aspects of this new technology and increased social isolation is perhaps the most important of these. This is something which most definitely should not be ignored.

B. In conclusion, it is obvious that this new technology is slowly destroying the fabric of society. It may even be detrimental to our health. There have been reports, for example, that mobile telephones cause cancer. We should take action now before it is too late.

Ex. 11. The following two methods of organizing the information would both be acceptable for the task we have been examining. Which method was used to write the composition above?

A.

Para. 1 — introduction

Para. 2 — mobile telephones — how they cause isolation
what could be done to deal with the problem

Para. 3 — Internet — how it causes isolation

what could be done to deal with the problem

Para. 4 — conclusion

B.

Para. 1 — introduction

Para. 2 — mobile telephones — how they cause isolation

Para. 3 — internet — how it causes isolation

Para. 4 — what could be done to deal with these problems

Para. 5 — conclusion

Ex. 12.

1. *Now write a discursive composition in answer to the following task.*

Some scientists believe that more money should be spent on space exploration.

Discuss some of the ways in which this might benefit mankind. (About 350 words.)

2. *Use the work you have done in exercises to write a relevant introduction and conclusion and to help you express your ideas clearly, but not too bluntly.*

Ex. 1. Look at the title of the text. What arguments do you think the writer might use to answer the question?

Ex. 2. Read the text quickly to see if your ideas were included.

WILL OUR CHILDREN READ BOOKS?

Before describing the hierarchy of the arts in the 21st century, it is sensible to recall the experts' forecast for the 20th century. The headline stories were the rise of cinema and then television. And these successes, it was assumed, would mean failure for older forms of entertainment and information. Since the 1950s, commentators have regularly predicted that these two new visual giants would eventually destroy theatre, radio, newspapers and books by taking over the functions of these earlier forms or eroding the time available for enjoying them.

In fact, despite the advent of multi-channel, 24-hour TV and multi-screen movie theatres, it can be said that only two cultural forms have died in the past 100 years - music hall and the letter - and the second of these was killed, not by television but by the telephone, before, in the strange way of these things, being somewhat restored by the inventions of the fax machine and e-mail. So the cultural story of the 20th century - an epoch of electronic invention and mechanical radicalism - has unexpectedly been that of the durability of traditional and particularly printed forms.

Looking forward then, we should be aware of pessimism's poor record. The book, for example, seems as obvious a candidate for redundancy now as it has since the middle of the 20th century. Where people previously assumed that tele-literacy would finish reading, they now point to computer literacy as the executioner. Yet the book, to an extraordinary degree, has learned to coexist with its visual rivals.

Most Hollywood projects derive from novels: often trashy ones, it is true, but also the classics. And not only do movies and television series descend from books, but almost routinely, they return to them as nearly every screen product has its in book. It all suggests that the desire of the viewer to follow the visual experience with a print experience is even more tenacious than ever.

The threat to the conventional book in the 21st century is though subtly

different. Where the first challengers were alternatives to reading, the current ones are alternative ways of reading: CD-ROM, computer disc, the Internet, recorded books. The smart money would bet that the standard home or library reference book is going the way of D for Dodo, simply because the new technology can make information more visually appealing. But, with regard to fiction, it seems a reasonable assumption that the portability of the standard book and the aesthetic affection that established readers still have for it as a product will confound pessimism in the future.

In fact, the arts most vulnerable to change, at least in Britain, are television and theatre. This is because both depend on state subsidy: a political idea, which must be regarded as highly unlikely to see out the next century. The effect of this will be the increased commercialism of both television and theatre. The casualties will be new theatre writing, the riskier classical repertoire and high-quality television journalism and drama for a general audience, although the last two of these may survive on cable subscription to the middle classes. The rise of television in the 20th century may not, as feared, have killed the book, but the continuing rise of popular television through the 21st century will kill high quality television programming. Clearly the twentieth century was starting both for the emergence of three new mass cultural pursuits - television, cinema and computers - and for the survival of the existing ones. This then is the big question for the 21st century. Do we now have our full cultural hand? Might it expand further? Or will there be a showdown between the old and the new? And will our children no longer read books?

Ex. 3.

A. Read the text again and answer the questions given below:

1. What factors could bring about change to 'older forms of entertainment and information'?
2. What is the meaning of 'advent' in this context?
3. What was the unexpected effect of the fax machine and e-mail?
4. What point is the writer making when he mentions the durability of printed forms of communication?
5. How have assumptions about what might discourage people from reading changed?
6. In which way are films actually encouraging people to read?
7. Why does the writer use the word 'tenacious'?
8. How is the threat to books in the 21st century seen as different from the 20th century?
9. What is the writer's view about the future of books of fiction, and why?
10. How does their dependence on state subsidy affect the future of television and theatre in Britain?
11. What is the big question for the 21st century?
12. Why do pessimists think people would stop reading books, and why

have books survived, according to the writer?

B. For the summary, follow this procedure.

1. Look back through the whole text and find: two reasons why pessimists thought that people might stop reading, three reasons the writer puts forward for why books have survived.
2. Note these reasons down briefly in your own words.
3. Use your notes to complete the task.
4. Check and edit your summary.

Ex. 4. How would you answer the question 'Will our children read books?'

Ex. 5. In the light of what you have read and talked about in the text so far, discuss the two statements below and decide which you agree with.

A. 'The development of technology and mass media has given young people today a far greater awareness and understanding of culture than their parents.'

B. 'People spend so much more time nowadays involved in passive leisure pursuits such as watching television and playing computer games that they have far less interest in cultural activities than their parents and grandparents.'

Ex. 6. Look through the text again, and make up a plan of it. Then try to retell it.

IN SEARCH OF THE REAL BILL GATES

By Walter Isaacson

HE'S THE MOST FAMOUS BUSINESSMAN IN THE WORLD.

Reams have been written about how he dominated the revolution in personal computing and is now poised to turn Microsoft into a media and Internet behemoth. But we know little about him as a person. What beliefs and values drive this man who as much as anyone? Will it determine the way we look not only at computers but at ourselves and our world? Here's an intimate look at one of the most important minds and personalities of our era.

When Bill Gates was in the sixth grade, his parents decided he needed counseling. He was at war with his mother Mary, an outgoing woman who harbored the belief that he should do what she told him. She would call him to dinner from his basement bedroom, which she had given up trying to make him clean, and he wouldn't respond. "What are you doing?" she once demanded over the intercom.

"I'm thinking," he shouted back.

"You're thinking?"

"Yes, Mom, I'm thinking," he said fiercely. "Have you ever tried

thinking?"

The psychologist they sent him to "was a really cool guy," Gates recalls. "He gave me books to read after each session, Freud stuff, and I really got into psychology theory." After a year of sessions and a battery of tests, the counselor reached his conclusion. "You're going to lose," he told Mary.

"You had better just adjust to it because there's no use trying to beat him." Mary was strong-willed and intelligent herself, her husband recalls, "but she came around to accepting that it was futile trying to compete with him."

A lot of computer companies have concluded the same. In the 21 years since he dropped out of Harvard to start Microsoft, William Henry Gates III, 41, has thrashed competitors in the world of desktop operating systems and application software. Now he is attempting the audacious feat of expanding Microsoft from a software company into a media and content company.

In the process he has amassed a fortune worth \$23.9 billion. The 88% rise in Microsoft stock in 1996 meant he made on paper more than \$10.9 billion, or about \$30 million a day. That makes him the world's richest person, by far. But he's more than that. He has become the Edison and Ford of our age. A technologist turned entrepreneur, he embodies the digital era.

His success stems from his personality: an awesome and at times frightening blend of brilliance, drive, competitiveness and personal intensity. So too does Microsoft's. "The personality of Bill Gates determines the culture of Microsoft," says his intellectual sidekick Nathan Myhrvold. But though he has become the most famous business celebrity in the world, Gates remains personally elusive to all but a close circles of friends.

Part of what makes him so enigmatic is the nature of his intellect. Wander the Microsoft grounds, press the Bill button in conversation and hear it described in computer terms: he has "incredible processing power" and "unlimited bandwidth," an agility at "parallel processing and "multitasking." Watch him at his desk, and you see what they mean. He works on two computers, one with four frames that sequence data streaming in from the Internet. The other handling the hundred of E-mail messages and memos that extend his mind into a network. He can be so rigorous as he processes data that one can imagine his mind may indeed be digital: no sloppy emotions or analog fuzziness, just trillions of binary impulses coolly converting input into correct answers.

"I don't think there's anything unique about human intelligence," Gates says over dinner one night at a nearly deserted Indian restaurant in a strip mall near his office. Even while eating, he seems to be multitasking; ambidextrous, he switches his fork back and forth throughout the meal and uses whichever hand is free to gesture or scribble notes. "All the neurons in the brain that make up perceptions and emotions operate in a binary fashion," he explains. "We can someday replicate that on a machine." Earthly life is carbon based, he notes and computers are silicon based, but that is not a major distinction. "Eventually we'll be able to sequence the human genome and replicate how nature did intelligence in a carbon-based system." The notion, he admits, is a bit frightening, but he

jokes that it would also be cheating. "It's like reverse-engineering someone else's product in order to solve a challenge."

Might there be some greater meaning to the universe? When engaged or amused, he is voluble, waving his hands and speaking loudly enough to fill the restaurant. "It's possible, you can never know, that the universe exists only for me." It's a mix of Descartes' metaphysics and Tom Stoppard's humor. "If so," he jokes, "it's sure going well for me, I must admit." He laughs; his eyes sparkle. Here's something machines can't do: giggle about their flight in the cosmos, crack themselves up, have fun.

The search for evidence about the soul that underlies Bill Gates' intellectual operating system is a task that even this boyish man might find a challenge.

"As a baby, he used to rock back and forth in his cradle himself," recalls Gates' father, a man as big and huggable as his son is small and tightly coiled. A retired lawyer, he still lives in the airy suburban Seattle house overlooking lake Washington where Bill III-the boy he calls "Trey"-grew up. (The name comes from the card term for three, though the father is now resigned to being called Bill Sr.)

His mother Mary was "a remarkable woman," Bill Sr. says. A banker's daughter, she was adroit in both social and business settings, and served on numerous boards, including those of the University of Washington, the United Way, US West and First Interstate Bancorp. After her death in 1994, the city council named the avenue leading into their neighborhood after her.

"Trey didn't have a lot of confidence in social settings," says his father. "I remember him fretting for two weeks before asking a girl to the prom, then getting turned down. But Mary did. She was a star at social intercourse. She could walk into a room..." He has the same toothy smile as his son, the same smudgy glasses covering twinkling eyes. But now, for just a moment, he is starting to tear up. His mind does not seem like a computer. He folds his arms across his stomach and starts to rock, gently.

He gets up to show some more pictures of Mary and of her mother. Both loved cards, and they would organize bridge games, as well as Password and trivia contests, after the big family dinners they held every Sunday. "The play was quite serious," Bill Sr. recalls. "Winning mattered."

As he wanders through the house, he points out more framed pictures of his son: Trey, the towheaded Cub Scout; Trey with sister Kristi, a year older, who now has the joy of being his tax accountant; and with Libby, nine years younger, who lives a few blocks away raising her two kids; with Bill Sr. and his new wife Mimi, the director of the Seattle Art Museum; and hugging his wife Melinda while listening to Willie Nelson play at their New Year's Day 1994 wedding in Hawaii.

"He's busy guy," says Bill Sr., "so we don't see him a lot, but we spend holidays together." Thanksgiving was in Spokane, Washington, at Kristi's house, Christmas playing golf in Palm Springs, California, where Bill Sr. and Mimi have a place. They communicate mainly by E-mail. Just this morning he

got one describing a photocopier Trey bought him for his birthday.

He lumbers over to a table where he has gathered some pictures of summer vacations they used to take with friends at a cluster of rental cabins known as Cheerio on the Hood Canal, about two hours away. There were nightly campfires, family skits and the type of organized competitive games the Gates family loved. "On Saturdays there was a tennis tournament, and on Sundays our Olympics, which were a mixture of games and other activities," Bill Sr. recalls. "Trey was more into the individual sports, such as water skiing, than the team ones."

In 1986, after Microsoft became successful, Gates built a four-house vacation compound dubbed Gate away for his family. There his parents would help him replicate his summer activities on a grander scale for dozens of friends and co-workers in what became known as the Microgames. "There were always a couple of mental games as well as performances and regular games," says Bill Sr. as he flips through a scrap-book. These were no ordinary picnics: one digital version of charades, for example, had teams competing to send numerical messages using smoke-signal machines, in which the winners devised their own 4-bit binary code.

"We became concerned about him when he was ready for junior high," says his father. "He was so small and shy, in need of protection, and his interests were so very different from the typical sixth grader's." His intellectual drive and curiosity would not be satisfied in a big public school. So they decided to send him to an elite private school across town.

Walking across the rolling quad of the Lakeside School, Bill Sr. points out the chapel where he played the lead in Peter Shaffer's *Black Comedy*. "He was very enthusiastic about acting. But what really entranced him was in there," he says, pointing to a New England - style steepled classroom building. With the proceeds from a rummage sale, the Mothers' Club had funded a clunky teletype computer terminal.

Learning BASIC language from a manual with his pal Paul Allen, Trey produced two programs in the eighth grade: one that converted a number in one mathematical base to a different base, and another (easier to explain) that played tic-tac-toe. Later, having read about Napoleon's military strategies, he devised a computer version of Risk, board game he liked in which the goal is word domination.

Trey and Paul were soon spending their evenings at a local company that had bought a big computer and didn't have to pay for it until it was debugged. In exchange for computer time, the boys' job was to try (quite successfully) to find bugs that would crash it. "Trey got so into it," his father recalls, "that he would sneak out the basement door after we went to bed and spend most of the night there."

The combination of counseling and the computer helped transform him into a self-assured young businessman. By high school he and his friends had started a profitable company to analyze and graph traffic data for the city. "His confidence increased, and his sense of humor increased," his father says. "He

became a great storyteller, who could mimic the voices of each person. And he made peace with his mother."

"In ninth grade," Gates recalls over dinner one night, "I came up with a new form of rebellion. I hadn't been getting good grades, but I decided to get all As without taking a book home. I didn't go to math class, because I knew enough and had read ahead, and I placed within the top 10 people in the nation on an aptitude exam. That established my independence and taught me I didn't need to rebel anymore." By 10th grade he was teaching computers and writing a program that handled class scheduling, which had a secret function that placed him in classes with the right girls.

His best friend was Kent Evans, son of a Unitarian minister. "We read *Fortune* together; we were going to conquer the world," says Gates. "I still remember his phone number," Together with Paul Allen, they formed the official-sounding Lakeside Programmers Group and got a job writing a payroll system for a local firm. A furious argument, the first of many, ensued when Allen tried to take over the work himself. But he soon realized he needed the tireless Gates back to do the coding. "OK, but I'm in charge," Gates told him, "and I'll get used to being in charge, and it'll be hard to deal with me from now on unless I'm in charge." He was right.

To relieve the pressures of programming, Evans took up mountain climbing. One day Gates got a call from the headmaster: Evans had been killed in a fall. "I had never thought of people dying," Gates says. There is a flicker of emotion. "At the service, I was supposed to speak, but I couldn't get up. For two weeks I couldn't do anything at all."

After that he became even closer to Paul Allen. They learned an artificial - intelligence language together and found odd jobs as programmers. "We were true partners," Gates says. "We 'd talk for hours every day." After Gates went off to Harvard, Allen drove his rattletrap Chrysler cross-country to continue their collaboration. He eventually persuaded Gates to become that university's most famous modern dropout in order to start a software company, which they initially dubbed Micro-Soft (after considering the name Allen & Gates Inc.), to write versions of BASIC for the first personal computers. It was an intense relationship: Gates the workaholic code writer and competitor, Allen the dreamy visionary.

Over the years they would have ferocious fights, and Allen would, after a Hodgkin's disease scare, quit the company and become estranged. But Gates worked hard to repair the relationship and eventually lured Allen, who is now one of American's biggest high-tech venture-capital investors (and owner of the Portland Trail Blazers), back onto the Microsoft board. "We like to talk about how the fantasies we had as kids actually came true," Gates says. Now, facing their old classroom building at Lakeside is the modern brick Allen/Gates Science Center. (Gates lost the coin toss.) Steve Ballmer, big and balding, is bouncing around a Microsoft conference room with the spirit of the Harvard football-team manager he once was. "Bill lived down the hall from me at Harvard sophomore year," he says. "He'd play poker until 6 in the morning, then

I'd run into him at breakfast and discuss applied mathematics." They took graduate-level together, but Gates had odd approach toward his classes: he would skip the lectures of those he wasn't, then spend the period before each exam cramming. "He's the smartest guy I've ever met," says Ballmer, 40, continuing the unbroken sequence of people who make that point in an interview.

Ballmer nurtured the social side of Gates, getting him to join one of the college's eating clubs (at his initiation Gates gave a drunken disquisition on an artificial-intelligence machine), playing the video game Pong at hamburger joints and later wandering with him to places like the old Studio 54 nightclub during visits to New York City. "He was eccentric but charismatic," says Ballmer.

When Microsoft began to grow in 1980, Gates needed a smart non-techie to help run things, and he lured Ballmer, who had worked for Procter & Gamble, to Seattle as an equity partner. Though he can be coldly impersonal in making business decisions, Gates has an emotional loyalty to a few old friends. "I always knew I would have close business associates like Ballmer and several of the other top people at Microsoft, and that we would stick together and grow together no matter what happened," he says. "I didn't know that because of some analysis. I just decided early on that was part of who I was." As with Allen, the relationship was sometimes stormy. "Our first major row came when I insisted it was time to hire 17 more people," Ballmer recalls. "He claimed I was trying to bankrupt him." Gates has a rule that Microsoft, rather than incurring debt, must always have enough money in the bank to run for a year even with no revenues. (It currently has \$8 billion in cash and no long-term debt.) "I was living with him at the time, and I got so pissed off I moved out." The elder Gates smoothed things over, and soon the new employees were hired.

"Bill brings to the company the idea that conflict can be good thing," says Ballmer. "The difference from P&G is striking. Politeness was at a premium there. Bill knows it's important to avoid that gentle civility that keeps you from getting to the heart of an issue quickly. He likes it when anyone, even a junior employee, challenges him, and you know he respects you when he starts shouting back." Around Microsoft, it's known as the "math camp" mentality: a lot of cocky geeks willing to wave their fingers and yell with the cute conviction that all problems have a right answer. Among Gate's favorite have phrases is "That's the stupidest thing I've ever heard," and victims wear it as a badge of honor, bragging about it the way they do about getting a late-night E-mail from him.

The contentious atmosphere can promote flexibility. The Microsoft Network began as a proprietary online system like CompuServe or America Online*. When the open standards of the Internet changed the game, Microsoft was initially caught flat-footed. Arguments ensued. Soon it became clear it was time to try a new strategy and raise the stakes. Gates turned his company around in just one year to disprove the maxim that a leader of one revolution will be left behind by the next.

During the bachelor years in the early 80s, the math-camp mentality was accompanied by a fraternity-boy recreational style. Gates, Ballmer and friends would eat out at Denny's, go to movies and gather for intellectual games like advanced forms of trivia and Boggle. As friends started getting married, there were bachelor parties involving local strippers and skinny-dipping in Gates' pool. But eventually, after Gates wed, he took up more mature pursuits such as golf. "Bill got into golf in the same addictive way he gets into anything else," says Ballmer. "It gets his competitive juice flowing."

It's a rainy night, and Gates is bombing around in his dark blue Lexus. He loves fast cars. When Microsoft was based in Albuquerque, New Mexico, in its early years, he bought a Porsche 911 and used to race it in the desert; Paul Allen had to bail him out of jail after one midnight escapade. He got three speeding tickets - two from the same cop who was trailing him - just on the drive from Albuquerque the weekend he moved Microsoft to Seattle. Later he bought a Porsche 930 Turbo he called the "rocket," then a Mercedes, a Jaguar XJ6, a \$60,000 Carrera Cabriolet 964, a \$380,000 Porsche 959 that ended up impounded in a customs shed because it couldn't meet import emission standards, and a Ferrari 348 that became known as the "dune buggy" after he spun it into the sand.

Despite this record, Gates is not wearing a seat belt. (A dilemma: Is it too uncool to use mine?) He rarely looks at you when he talks, which is disconcerting, but he does so when he's driving, which is doubly disconcerting. (I buckle up. As his mother and others have learned, it's not always prudent to compete.) He turns into a dark drive with a chain-link fence that slides open as the Lexus approaches. It's nearing midnight, and the security guard looks a bit startled. Gate's home of the future has been under construction for more than four years, and is not expected to be completed until mid-year. Built into a bluff fronting Lake Washington, it has 3,700 sq m of space and will cost about \$40 million. Looming against the night sky are three connected pavilions of glass and recycled Douglas fir beams, looking a bit like a corporate conference center masquerading as a resort.

Gates swings into a valued 30-car garage carved into the hillside. In the corner, like a museum piece, sits his parents' red Mustang convertible that he drove as a kid. "The first pavilion is mainly for public entertaining," he says as he picks his way past construction debris down four levels of stairs. Despite the hour, three technicians are working in the ground-floor reception hall, with its view of the Olympic Mountains across Lake Washington, adjusting two-dozen 100-cm monitors that will form a flat-screen display covering an entire wall. "When you visit, you'll get an electronic pin encoded with your preferences," he explains. "As you wander toward any room, your favorite pictures will appear along with the music you like or a TV show or movie you're watching. The system will learn from your choices, and it will remember the music or pictures from your previous visits so you can choose to have them again or have hierarchy guidelines, for when more than one person goes to a room." Like Gates himself, it's all very fascinating, fun and a little intimidating.

Moving into the center pavilion, Gates shows off what be the library. A mammoth carved wooden dome hangs just above the floor, waiting to be raised into the cupola. (I wonder: Does this grand chamber dispel my fear that he will relegate print to museum status? Or inadvertently confirm it?) He has hired a New York rare-books dealer to stock the library for him. His current reading is eclectic. "On a recent trip to Italy," he says, "I took the new Stalin biography, a book about Hewlett-Packard, Seven Summits [a mountaineering book by Frank Bass and the late Disney president Frank Wells] and a Wallace Stegner novel." He's also a fan of Philip Roth's, John Irving's, Ernest J. Games', and David Halberstam's, but his all-time favorite novels are the schoolboy standards *The Catcher in the Rye*, *The Great Gatsby* and *A Separate Peace*. A nearby room will be filled by an enormous trampoline; at the office he sometimes surprises colleagues by joyfully leaping to touch the ceiling, and he finds bouncing on a trampoline as conducive to concentration as rocking.

The only completed part of the house is the indoor pool under the family quarters. A sleek lap pool reflecting images from a wall snakes through glass into an outdoor Japanese bath area. The security guard reappears and warns, "Be careful of what you do in there, since the boats on the lake can see inside." As the door to the pool-room closes, Gates doubles over in laughter. Does he come in here often at night? "Sometimes with Melinda," he says. We wander out to the deck, and the wind slams the door shut. It's locked. Gates tries to call the guard, but he's disappeared to a distant part of the estate. So he leads the way past bulldozers into trenches that will someday become an estuary and stocked trout stream. At the moment, however, it's a quagmire that proves impassable. Remarkably, Gates is able to avoid looking sheepish. After a few more minutes of shouting, he attracts the guard's attention. Gates chose the austere and natural architectural style before he got married, but Melinda is now putting her own imprint on it. "The exposed concrete is going to have to go," he says, expressing some concern about how the architect might take this.

Gates met Melinda French 10 years ago at a Microsoft press event in Manhattan. She was working for the company and later became one of the executives in charge of interactive content. Their daughter Jennifer was born last April. Melinda, 32, is no longer at Microsoft, and she is active in charity work and on the board of Duke, where she studied computer science as an undergraduate and then got a graduate degree in business. Like Gates, she is smart and independent. Like his mother, she is also friendly and social, with an easy manner of organizing trips and activities. But she zealously guards her privacy and doesn't give interviews.

"I used to think I wouldn't be able all that interested in the baby until she was two or so and could talk," says Gates as he shows off the more intimate family quarters. "But I'm totally into it now. She's just started to say 'ba-ba' and have a personality."

Melinda is Catholic, goes to church and wants to raise Jennifer that way. "But she offered me a deal," Gates says. "If I start going to church - my family was Congregationalist - then Jennifer could be raised in whatever religion I

choose." Gates admits that he is tempted, because he would prefer she have a religion that "has less theology and all" than Catholicism, but he has not yet taken up the offer. "Just in terms of allocation of time resources, religion is not very efficient," he explains. "There's a lot more I could be doing on a Sunday morning."

If Ballmer is Gates' social goad, his intellectual one is Nathan Myhrvold (pronounced Meer-voll), 37, who likes to joke that he's got more degrees than a thermometer, including a doctorate in physics from Princeton. With a fast and exuberant laugh, he has a passion for subjects ranging from technology (he leads Microsoft's advanced-research group) to dinosaurs (he's about to publish a paper on the aerodynamics of the apatosaurus tail) to cooking. He sometimes moonlights as a chef at Rover's, a French restaurant in Seattle.

When he arrives there for dinner, owner Thierry Rautureau comes out to hug him and pour champagne. There follows a procession of a dozen courses, from black truffles and pureed celery root in smoked game consomme to venison with obscure types of mushrooms, each with different vintage wines. (The bill for two comes to \$390, and picking it up assuages my discomfort that Gates had insisted on putting the previous evening's \$37 tab at the Indian restaurant on his MasterCard.)

"There are two types of tech companies," Myhrvold says in between pauses to inhale the aroma of the food. "Those where the guy in charge knows how to surf, and those where he depends on experts on the beach to guide him." The key point about Gates is that he knows - indeed loves - the intricacies of creating software. "Every decision he makes is based on his knowledge of the merits. He doesn't need to rely on personal politics. It sets the tone."

Myhrvold describes a typical private session with Gates. Pacing around a room, they will talk for hours about future technologies such as voice recognition (they call their team working on it the "wreck a nice beach" group, because that's what invariably appears on the screen when someone speaks the phrase "recognize speech" into the system), then wander onto topics ranging from quantum physics to genetic engineering. "Bill is not threatened by smart people," he says, "only stupid ones."

Microsoft has long hired based on IQ and "intellectual bandwidth." Gates is the undisputed ideal: talking to most people is like sipping from a fountain, goes the saying at the company, but with Gates it's like drinking from a fire hose. Gates, Ballmer and Myhrvold believe it's better to get a brilliant but untrained young brain - they're called "Bill clones" - than someone with too much experience. The interview process tests not what the applicants know but how well they can process tricky questions: If you wanted to figure out how many times on average you would have to flip the pages of the Manhattan phone book to find a specific name, how would you approach the problem?

Gates' intellect is marked by the ability, as he puts it, to "drill down." On a visit to Time Inc.'s new-media facility, he answered questions from a collection of magazine editors as if by rote, but on his way out he asked to see the Internet servers and spent 45 minutes grilling the claqué of awed techies there. Broad

discussions bore him, he shows little curiosity about other people, and he becomes disengaged when people use small talk to try to establish a personal rapport. Even after spending a lot of time with him, you get the feeling that he knows much about your thinking but nothing about such things as where you live or if you have a family. Or that he cares.

In that regard he is the opposite of, say, Bill Clinton, who brackets the other end of the baby boom: Gates analytically rigorous and emotionally reserved, the President equally smart but intellectually undisciplined and readily intimate. They played golf on Martha's Vineyard once, and the President, as usual, worked hard at bonding emotionally and being personally charming and intimate. He expressed sorrow about the death of Gates' mother, shared the pain of the recent death of his own mother and gave golfing tips to Melinda. But Gates noticed that Clinton never bore in or showed rigorous curiosity about technological issues. Though he vaguely considers himself a Democrat, Gates stayed neutral in the presidential election.

Warren Buffett, the Omaha Nebraska, investor whom Gates demoted to being merely the second richest American, seems an unlikely person to be among his closest pals. A jovial, outgoing 66-year-old grandfather, Buffett only recently learned to use a computer. But as multibillionaires go, both are unpretentious, and they enjoy taking vacations together. Buffett's secretary apologetically explains that Buffett isn't giving interviews these days and at the moment is traveling, but she promises to pass along the request. Less than three hours later, Buffett calls to say he happens to be in the Time & Life Building with some free time between meetings in Manhattan, and he would be happy to come by to be interviewed. He likes to talk about Gates.

His favorite story is about the 1995 excursion to China that Bill and Melinda organized for seven couples. "For part of the trip we stayed on a ship in the Yangtze with five decks that normally accommodates hundreds of people," he says with the glee of a kid describing Walt Disney World. "Each evening Melinda arranged different activities." There was karaoke singing in the ship's ballroom, performances of quickie versions of Shakespeare plays," and a trivia quiz on such things as how many meals we'd eaten, with prizes that Melinda and Bill handed out." When relaxed, Buffett says, Gates has a fun sense of humor. In the Forbidden City they were given a show of huge ancient scrolls that were silently rolled and unrolled by women trained for the task. "There's a \$2 fine," Gates whispered, "if you return a scroll not rewound."

When Gates decided to propose to Melinda in 1993, he secretly diverted the chartered plane they were taking home from Palm Springs one Sunday night to land in Omaha. There, Buffett met them, arranged to open a jewelry store that he owned and helped them pick a ring. That year Gates made a movie for Buffett's birthday. It featured Gates pretending to wander the country in search of tales about Buffett and calling Melinda with them from pay phones. After each call, Gates is shown checking the coin slot for loose change. When she mentions that Buffett is only the country's second richest man, he informs her that on the new *Forbes* magazine list Buffett had (at least that one year) regained the top spot.

The phone suddenly goes dead. "Melinda, Melinda," Gates sputters, "you still there? Hello?"

Last October Gates brought Melinda and their new daughter to visit Buffett and his wife in San Francisco. They ended up playing bridge for nine hours straight. Another marathon session in Seattle started in the morning and lasted - with a break for Melinda to pick up lunch at Burger King - until guests started arriving for dinner. "He loves games that involve problem solving," Buffett says. "I showed him a set of four dice with numbers arranged in a complex way so that any one of them would on average beat one of the others. He was one of three people I ever showed them to who figured this out and saw the way to win was to make me choose first which one I'd roll." (For math buffs: the dice were non-transitive. One of the others who figured it out was the logician Saul Kripke.)

Their relationship is not financial. Buffett, who does not invest in technology stocks, bought 100 shares of Microsoft just as a curiosity back when he met Gates ("I wish I'd bought more," he laughs), and Gates describes his investment with Buffett as "only" about \$ 10 million ("I wish I'd invested more," he likewise jokes). But Gates shares Buffett's interest in the media world and even likes to joke that he has created a digital encyclopedia called Encarta that now outsells *World Book*, which is controlled by Buffett. So far Microsoft has mainly treated content as something that its software managers can create from scratch. But given the relative cheapness of some media stocks compared with that of Microsoft, Gates may someday look for some big acquisitions (he was in serious talks about taking a \$2billion state in CNN* before Time Warner merged with Turner Communications), and Buffett would be a useful partner.

Another of Gates' vacation companions is Ann Winblad, the software entrepreneur and venture capitalist he dated during the 1980s. They met in 1964 at a Ben Rosen-Easter Dyson computer conference and started going on "virtual dates" by driving to the same movie at the same time in different cities and discussing it on their cell phones. For a few years she even persuaded him to stop eating meat, an experiment he has since resolutely abandoned.

They were kindred minds as well as spirits. On a vacation to Brazil, he took James Watson's 1,100-page textbook, *Molecular Biology of the Gene*, and they studied bioengineering together. On another vacation, to a Santa Barbara, California, ranch, she took tapes of Richard Feynman's lectures at Cornell, and they studied physics. And on a larger excursion with friends to central Africa, which ended at some beach cottages on an island off Zanzibar, among their companions was anthropologist Donald Johanson, known for his work on the human ancestor Lucy, who helped teach them about human evolution. In the evenings on each trip they would go to the beach with four or five other couples for bonfires, Hood Canal-style games and a tradition they called the sing-down, where each team is given a word and has to come up with songs that feature it. Winblad remembers Gates disappearing on a dark beach after his group had been given the word sea, and then slowly emerging from the mist singing a high-pitched solo of *Puff, the Magic Dragon*.

They broke up in 1987, partly because Winblad, five years older, was more

ready for marriage. But they remain close friends. "When I was off on my own thinking about marrying Melinda," Gates says, "I called Ann and asked for her approval." She gave it. "I said she'd be a good match for him because she had intellectual stamina." Even now, Gates has an arrangement with his wife that he and Winblad can keep one vacation tradition alive. Every spring, as they have for more than a decade, Gates spends a long weekend with Winblad at her beach cottage on the Outer Banks of North Carolina, where they ride dune buggies, hang-glide and walk on the beach. "We can play putt-putt while discussing biotechnology," Gates says. Winblad puts it more grandly. "We share our thoughts about the world and ourselves," she says. "And we marvel about how, as two young overachievers, we began a great adventure on the fringes of a little-known industry and it landed us at the center of an amazing universe."

After a recent whirl of travel that included a speech in Las Vegas and a meeting in Switzerland, Gates detoured to a secluded resort in New York's Adirondacks to spend a weekend with Melinda and Jennifer. There they played with 1,000-piece jigsaw puzzles from a craftsman in Vermont who makes them for customers like Gates. Melinda has helped broaden her husband. Instead of studying biotechnology together, they find time to take singing lessons.

Gates is ambivalent about his celebrity. Although he believes that fame tends to be "very corrupting," he is comfortable as a public figure and as the personification of the company he built. Like Buffett, he remains unaffected, wandering Manhattan and Seattle without an entourage or driver. Nestled into a banquette one Sunday night at 44, a fashionable Manhattan restaurant he is talking volubly when another dinner approaches. Gates pulls inward, used to people who want his autograph or to share some notion about computers. But the dinner doesn't recognize him and instead asks him to keep his voice down. Gates apologizes sheepishly. He seems pleased to be regarded as a boyish cutup rather than a celebrity.

The phone in Gates' office almost never rings. Nor do phones seem to ring much anywhere on the suburban Microsoft "campus," a cluster of 35 low-rise buildings, lawns, white pines and courtyards that resemble those of a state polytechnic college. Gates runs his company mainly through three methods: he bats out a hundred or more E-mail messages a day (and night), often chuckling as he dispatches them; he meets every month or so with a top management group that is still informally known as the hoop (Bill and the Office of the President); and most important, taking up 70% of his schedule by his own calculation, he holds two or three small review meetings a day with a procession of teams working on the company's various products.

There is a relaxed, nonhierarchical atmosphere as the seven young managers of the "WebDVD" group, all in the standard winter uniform of khakis and flannel shirts, gather in a windowless conference room near Gates' office. They have been working for almost a year on a digital video disc intended to provide content along with Web browsing for television sets, and he wants to review their progress before leaving for Japan, where he will meet with such potential partners as Toshiba.

Craing Mundy, the veteran Microsoft exec who oversees all non-computer consumer products, lets the younger team members lead the discussion. Gates quickly flips ahead through the desk of papers and within minutes has the gist of their report.

He starts rocking, peppering them with questions that segue from the politics of their potential partners, the details of the technology, the potential competition and the broad strategy. The answers are crisp, even as Gates drills down into arcane details. No one seems to be showing off or competing for attention, but neither do any hesitate to speak up or challenge Gates. To a man (and they all are), they rock when they think.

"Does this allow scripting in HTML?" he asks, referring to the authoring language used to create Websites. They explain how. He challenges them about why it requires four megabytes of memory. They explain; he drills down more; they finally prevail. There is an intense discussion of layers, sectors, modes error corrections and MPEG-2 video-compression standards. "Our basic strategy must be processor agnostic," Gates decrees. Everyone nods. Then he shifts without missing to get Philips and other manufactures and the moviemakers to agree on a standard?" We'll get to that in a minute, he's told. He wants to get to it now. There is a rapid discussion of the internal politics of Philips, Sony, Time Warner (the corporate parent of this magazine), Matsushita and Toshiba, along with their respective Hollywood alliances.

Gates doesn't address anyone by name, hand out praise or stroke any egos. But he listens intently, democratically. His famous temper is in check, even when he disagrees with someone's analysis of the DVD's capability to handle something called layering. "Educate me on that," he says in challenging the analysis, and after a minute or so cuts off the discussion by saying, "Send me the specs."

Gates does not hide his cutthroat instincts. "The competitive landscape here is strange, ranging from Navio to even Web TV," he says. He is particularly focused on Navio, a consumer-software consortium recently launched by Netscape and others designed to make sure that Windows and Windows CE (its consumer-electronics cousin) do not become the standard for interactive television and game machines. "I want to put something in our product that's hard for Navio to do. What are their plans?" The group admits that their intelligence on Navio is poor. Gates rocks harder. "You have to pick someone in your group," he tells Mundy, "whose task it is to track Navio full time. They're the ones I worry about. Sega is an investor. They may be willing to feed us info." Then he moves on to other competitors. "What about the Planet TV guys?" Mundy explains that they are focusing on video games, "a platform we haven't prioritized." Gates counters, "We can work with them now, but they have other ambitions. So we'll be competitive with them down the line."

Though the videodisk is not at the core of Microsoft's business, this is a competition Gates plans to win. The group argues that the \$10-perunit royalty is too low. "Why charge more?" he asks. They explain that it will be hard to make a profit at \$10, given what they are putting in. Gates turns stern. They are missing the big picture. "Our whole relationship with the consumer electronic guys hangs in the balance," he declares. "We can get wiped." Only the paranoid survive. "The strategic goal here is getting Windows CE standards into every device we can. We don't have to make money over the next few years. We didn't make money on ms-dos in its first release. If you can get into this market at \$10, take it." They nod.

"If we weren't so ruthless, we'd be making more creative software? We'd rather kill a competitor than grow the market?!?" Gates is pacing around his office, sarcastically repeating the charges against him. "Those are clear lies," he says coldly.

"Who grew this market? We did. Who survived companies like IBM, 10 times our size, taking us on" The ticks off the names of his rivals at Oracle, Sun, Lotus, Netscape in an impersonal way. "They're every bit as competitive as I am." "We win because we hire the smartest people. We improve our products based on feedback, until they're the best. We have retreats each year where we think about where the world is heading." He won't even cop a plea to the charge that Microsoft tends to react to competitors' ideas - the graphical interface of Apple, the Web browser of Netscape - more than it blazes new trails of its own. "Graphical interfaces were done first at Xerox, not Apple. We bet on them early on, which is why Microsoft Office applications became the best."

Gates is enjoying this. Intellectual challenges are fun. Games are fun. Puzzles are fun. Working with smart people is super fun. Others may see him as ruthless, cold or brutal; but for him the competition is like a sport, a blood sport perhaps, but one played with the same relish as the summer games at Hood Canal. He sprawls on a couch, uncoils and pops open a Fresca. Though rarely attempting the social warmth of his mother (he doesn't actually offer me a Fresca but acquiesces when I ask), Gates has as intensity and enthusiasm that can be engaging, even charming. He takes a piece of paper and draws the matrix of strategies he faces when creating applications to compete with World Perfect and Lotus. See what an exciting puzzle it was? His language is boyish rather than belligerent. The right stuff is "really neat" and "super cool" and "hardcore", while bad strategies are "crummy" and "really dumb" and "random to the max".

His office is rather modest, sparsely decorated and filled with standard-issue furniture. The biggest piece of art is a huge photo of a Pentium processor chip. There are smaller pictures of Einstein, Leonardo da Vinci and Henry Ford, though he admits that he has little admiration for the latter. The few personal pictures include one of the original dozen Microsoft employees (most with scruffy beards, except him), one of Ann Winblad on a trip to Germany, and one with Melinda and nine friends on a 1995 vacation to Indonesia. There are no pictures of Jennifer displayed, but he pulls a snapshot out of his desk showing him proudly cradling her.

He hopes to be running Microsoft for another 10 years, he says, then promises to focus as intensely on giving his money away. He says he plans to leave his children about \$10 million each. "He will spend time, at some point, thinking about the impact his philanthropy can have," Buffett says. "He is too imaginative to just do conventional gifts." Already he's given \$34 million to the University of Washington, partly to fund a chair for human genome-project researcher Leroy Hood; \$15 million (along with \$10 million from Ballmer) for a new computer center at Harvard; and \$6 million to Stanford. An additional \$200 million is in a foundation run by his father, and he has talked about taking over personally the funding of Microsoft's program to provide computers to innercity libraries, to which he's donated \$3 million in book royalties. "I've been pushing him gently to think more about philanthropy," his father says. "I think his charitable interests will run, as they do now, to schools and libraries."

Asked about his regrets, Gates talks about not getting a Microsoft E-mail application to the market quickly enough. "We were too busy, and at a retreat where I wrote our next priorities on a board, everyone said I had to take one off, so we took off

E-mail." It is hard to get him to delve more personally. But especially since Jennifer's birth, friends say, he has begun to reflect more on his life and what he might end up contributing. He speaks of the promise of computing, not just in business terms, but, in social ones. "Everyone starts out really capable," he says. "But as you grow and turn curious, either you get positive feedback by finding answers or you don't, and then this incredible potential you have is discouraged. I was lucky. I always had a family and resources to get more and more answers. Digital tools will allow a lot more people to keep going the next step rather than hitting a wall where people stop giving them information or tell them to stop asking questions.

He has also become less enamored with pure intelligence. "I don't think that IQ is as fungible as I used to," he says. "To succeed, you also have to know how to make choice and how to think more broadly."

So has family life dulled Gates' intensity? "Well, predictably, he's pumped and focused on Jennifer," says Ballmer. "He showed a picture of her at our last sales conference and joked that there was something other than Netscape keeping him awake at nights. He may be a bit less exhausting and a bit more civil. But he still pushes as hard, still keeps score." Gates likes repeating Michael Jordan's mantra, "They think I'm through, they think I'm through", and the one Intel's chief executive Andrew Grove used as a book title, "Only the paranoid survive." As Ballmer says, "He still feels he must run scared." Gates puts another spin on it, "I still feel this is super fun."

And what about his feeling that there is nothing unique about the human mind, that intelligence can someday be replicated in binary code? Has watching a daughter learn to smile at a father's face changed that at all? At our last meeting, these questions don't seem to engage him. As I wander out of his office, he offers none of life's standard see-you-again-someday pleasantries, but he agrees that I should feel free to E-mail him. So I pose the questions, along with some more mundane technical ones, in a message a few days later. Answers to the tech issues come promptly. But he ignores the philosophical ones. Finally, weeks later, a note pops up in my mailbox, dispatched from storm-swept Seattle:

"Analytically, I would say nature has done a good job making child raising more pleasure than pain, since that is necessary for a species to survive. But the experience goes beyond analytic description... Evolution is many orders of magnitude ahead of mankind today in creating a complex system. I don't think it's irreconcilable to say we will understand the human mind someday and explain it in software-like terms, and also to say it is a creation that shouldn't be compared to software. Religion has come around to the view that even things that can be explained scientifically can have an underlying purpose that goes beyond the science. Even though I am not religious, the amazement and wonder I have about the human mind is closer to religious awe than dispassionate analysis."

SOME INTERESTING SAYINGS OF FAMOUS PEOPLE

We hope that these sayings will be interesting for you to read and translate. Make up dialogues to express your agreement or disagreement.

"But words are things, and a small drop of ink,
Falling like dew, upon a thought, produces
That which makes thousands, perhaps millions, think."

— Lord Byron (1788-1824), English poet

"The difference between the almost right word and the right word is really a large matter
- 'tis the difference between the lightning bug and the lightning."

— Mark Twain (1835-1910), U.S. author

"The true university of these days is a collection of books."

— Thomas Carlyle (1795-1881), Scottish essayist, historian

"Words are, of course, the most powerful drug used by mankind."

— Rudyard Kipling (1865-1936), British author, poet

"If I knew exactly where I get my ideas, I'd have more of them."

— Steven Kravitz, Comedian

"I had a monumental idea this morning, but I didn't like it."

— Samuel Goldwyn

"Creation is a drug I can't do without."

— Cecil B. DeMille

"Nothing is so powerful as an idea whose time has come."

— Victor Hugo

"Man's mind stretched to a new idea never goes back to its original dimensions."

— Oliver Wendell Holmes Jr.

"An idea that is not dangerous is unworthy of being called an idea at all."

— Oscar Wilde

"My guess is that well over 80% of the human race goes through life without having a
single original thought."

— H. L. Mencken

"Writing is easy; all you do is sit staring at a blank sheet of paper until the drops
of bloom on your forehead."

— Gene Fowler

SOME JOKES ABOUT COMPUTERS

Computer Term Dictionary

586: The average IQ needed to understand a PC.

State-of-the-art: Any computer you can't afford.

Obsolete: Any computer you own.

Microsecond: The time it takes for your state-of-the-art computer to become obsolete.

G3: Apple's new Macs that make you say, "Gee, it's three times faster than the computer I bought for the same price a microsecond ago."

Syntax Error: Walking into a computer store and saying, "Hi, I want to buy a computer and money is no object."

Hard Drive: The sales technique employed by computer salesmen, especially after a Syntax Error.

Keyboard: The standard way to generate computer errors.

Mouse: An advanced input device to make computer errors easier to generate.

Floppy: The state of your wallet after purchasing a computer.

Portable Computer: A device invented to force businessmen to work at home, on vacation, and on business trips.

Disk Crash: A typical computer response to any critical deadline.

System Update: A quick method of trashing ALL of your software.

THE COMPUTER MANUAL

Your New Computer

Congratulations. You have purchased an Anthrax/2000 Multimedia 615X Personal Computer with Digital Doo-dah Enhancer. It will give years of faithful service if you ever get it up and running. Also included with your PC is a bonus pack of pre-installed software: "Lawn Mowing Planner", "Mr. Arty Farty", "Blank Screen Saver" and "East Africa Route Finder" which will provide hours of pointless diversion while using up most of your spare memory.

So turn the page and let's get started!

Getting Ready

Congratulations. You have successfully turned the page and are ready to proceed.

Important Meaningless Note: The Anthrax/2000 is configured to use 80386, 214j 10 or higher processors running at 2,472 hertz on variable speed spin cycle. Check your electrical installations and insurance policies before proceeding. To prevent internal heat build up, select a cool, dry environment for your computer. The bottom shelf of your refrigerator is ideal.

Unpack the box and examine its contents. (Warning: do not open box if contents are missing or faulty as this will invalidate your warranty. Return all missing contents in their original packaging with a note explaining where they have gone and a replacement will be sent within twelve working months.)

The contents of the box should contain some of the following: monitor with mysterious De Gauss button; keyboard with 2 1/2 inches of flex; computer unit; miscellaneous wires and cables not necessarily designed for this model; 2,000 page "Owner's Manual"; "Short Guide To Owner's Manual"; "Quick Guide To The Short Guide To The Owner's Manual"; "The Laminated Super-Kwik Set-Up Guide For People Who Are Exceptionally Impatient Or Stupid"; 1,167 pages of warranties, vouchers, notices in Spanish, and other loose pieces of paper; 292 cubic feet of packing material.

Something They Didn't Tell You in the Shop

Because of the additional power needs of the pre-installed bonus software, you will need to acquire Anthrax/2000 auxiliary software upgrade pack, a 50 megahertz oscillator, 2,500 mega-gigabytes of additional memory and an electrical substation.

Setting up

Congratulations. You are ready to set up. If you have not yet acquired a degree in electrical engineering, now is the time to do so.

Connect the monitor cable (A) to portside outlet unit (D); attach power offload unit sub-orbiter (Xii) to the coaxial AC/DC servo-channel (G); plug three-pin mouse cable into keyboard housing unit (make extra hole if necessary). Alternatively plug all the cables into likely looking holes, switch on and see what happens.

Additional Important Meaningless Note: The wires in the ampule modulator unit are marked as follows according to international convention: blue = neutral or live yellow = live or blue blue and live = neutral and green black = instant death (except where prohibited by law.)

Switch the computer on. Your hard drive will automatically download (allow three to five days). When downloading is complete, your screen will say "Yeah, what?"

Now it is time to install your software. Insert disc A (marked "Disc D" or "Disc G") into drive slot B or J and type "Hello! Anybody home?" At the DOS command prompt, enter your license verification number. Your license verification number can be found by entering, your certified user number, which can be found by entering your license verification number. If you are unable to find your license verification or certified user numbers call the software support line. (Please have your license verification and certified user numbers handy as the support staff cannot otherwise assist you.)

If you have not yet committed suicide, insert Installation Diskette 1 in drive slot 2 or vice versa and follow the instructions on your screen. (Note: owing to software modification some instructions will appear in Romanian.) At each prompt, reconfigure the specified file path, double click on the launch button icon and type "C:/>" followed by the birthdates of all the people you have ever known.

Your screen will now say "Invalid file path. Whoa! Abort or continue?" Warning: selecting "continue" may result in irreversible file compression, loss of

memory and a default overload in the hard drive. On the other hand, selecting "abort" will require you to start the whole tedious, maddening process over again. Your choice.

When the smoke has cleared insert Disc A2 (marked "Disc A1") and repeat as directed with all 187 of the other discs.

When installation is complete, return to file path and type your name, address and credit card number and press "send". This will automatically register you for our free software prize "Blank Screensaver IV: Nighttime in Deep Space" and allow us to pass your name to lots of computer magazines, on-line services and other commercial enterprises who will be getting in touch with you shortly.

Congratulations. You are now ready to use your computer. Here are some simple exercises to get you off to a flying start.

Writing a Letter

Type "Dear" and follow it with the name of someone you know. Write a few lines about yourself, and then write "yours sincerely" followed by your own name. Congratulations.

Saving a File

To save your letter, select file menu. Choose Retrieve from sub-directory A, enter a backup file number and place an insertion point beside the macro dialogue button. Select secondary text box from the merge menu and double click on the supplementary cleared document window. Assign the tile cascade to the merge file and insert in a text equation box. Alternatively write the letter with a pen and put it in a drawer.

Advice on Using the Spread-Sheet Facility

Don't.

Troubleshooting Section

You will have many, many problems with your new computer. Here are some common problems and their solutions.

Problem: My computer won't turn on.

Solution: Check your computer is plugged in; check to make sure the power button is in the ON position; check cables for damage; dig up underground cables in your garden to check for damage; drive into the country and check electricity pylons for fallen wires; call hotline.

Problem: My keyboard doesn't seem to have any keys.

Solution: Turn the keyboard the right way up.

Problem: My mouse won't drink its water or go on its spinning wheel.

Solution: Try a high protein diet.

Problem: I keep getting a message saying "Non-System General Protection

Fault".

Solution: This is probably because you are trying to use the computer. Switch the computer to OFF mode and any annoying messages will disappear.

Problem: My computer is a piece of useless junk.

Solution: Congratulations. You are now ready to upgrade to an Anthrax/ 3000 Turbo model or a pen and paper.

APPENDIX A. TEST YOURSELF

KEEP ON STUDYING!

Chose the right variant.

1. The computer is:

- a) An electric machine
- b) An electronic machine
- c) A racing machine
- d) An ambulance machine

2. The software is:

- a) Information in the form of data and programs
- b) A gallery of pictures
- c) A musical performance
- d) Selected stories

3. The CPU is:

- a) The "stomach" of the computer
- b) The "lever" of the computer
- c) The "eyes" of the computer
- d) The "brain" of the computer

4. The main memory is:

- a) The selection which holds factories
- b) The selection which holds the instruction of data which are currently processed by the CPU
- c) The section which holds entertainments
- d) The section which holds the automatic cash dispensers

5. The peripherals are:

- a) Physical units attached to computer
- b) Physical units attached to airplanes
- c) Physical units attached to cars
- d) Physical units attached to irons

6. The input device is:

- a) The fax
- b) The monitor
- c) The mouse
- d) The printer

7. The output device is:

- a) The keyboard
- b) The scanner

c) The monitor

d) The mouse

8. Multitasking means:

a) Access to a minicomputer through terminals

b) Doing a number of tasks at the same time

c) Connection to a "host" computer by a network so that many users have access to data and programs

d) Results produced by a computer

9. What is RAM?

a) Random Access Memory

b) Read American Memory

c) Read Apple Memory

d) Read Advanced Memory

10. What is ROM?

a) Temporary memory

b) Constant memory

c) Slow memory

d) Quick memory

11. What is a bit?

a) Basic unit of memory

b) Secondary unit of memory

c) Light unit of memory

d) Hard unit of memory

12. What is the ASCII code?

a) The American Code of Standard for Information Interchange

b) The American of the Standard Code for Interchange Information

c) The American Standard Code for Interchange Information

d) The American Standard Code for Information Interchange

13. How many bits together are called byte?

a) 11 bits together

b) 10 bits together

c) 9 bits together

d) 8 bits together

14. Correct the mistakes in the meaning of prefixes.

a) Deci = two

b) Mega = small

c) Giga = very small

d) Mini = large

e) Micro = very large

f) Bi = ten

g) Tri = many

h) Multi = three

15. What does SIMMS (Single In-Line Memory Modules) mean?

a) Current boards contain RAM chips

b) Current boards contain ROM chips

- c) Keyboards contain letters, numbers and other symbols
- d) Chessboards contain chess figures

16. Floppy disk are so called because:

- a) they consist of wooden material
- b) they consist of metallic material
- c) they consist of fabric material
- d) they consist of flexible plastic material

17. What does "CD-ROM" stand for?

- a) It stands for Compact Read-Only Memory Disk
- b) It stands for Compact Disk Memory Read-Only
- c) It stands for Compact Memory Read-Only Disk
- d) It stands for Compact Disk Read-Only Memory

//. Read and correct.

1. Read the following definition about the keyboard find out the mistakes and correct them.

- a) Alphanumeric keys: arranged in the same order as a type-writer
- b) Function keys: cursor and other keys usually used within word processors to page up and down in a long document or to edit text (using Inset or Delete keys)
- c) Numeric keypad: used to issue commands or to produce alternative characters in key combinations for example, the Alt key.
- d) Editing keys: used by various programs to instruct the PC to perform specific tasks, such as Save, Copy, Cut, Paste, Help etc.

2. Find out and correct the mistakes in the following statements:

- a) Mainframes are smaller and less powerful than minicomputers
- b) Minicomputers are smaller than microcomputers. They are used as personal computer in the home or as workstations for group work.
- c) Microcomputers are the largest and most powerful computers. This central system provides data, information and computing facilities for hundreds of terminals connected together in a network

3. Read the following information about the printers, find out the mistakes and correct them.

- 1) Daisywheel printers produce output at great speed and with a very high resolution of 300/600 dpi. They scan the image with a laser beam and transfer it to paper with a special ink powder.
- 2) Dot-matrix printers use heat, a special kind of paper and electro-sensitive methods. They are silent and considered to be expensive
- 3) Ink-jet printers can be regarded as an attractive alternative. They do not print on regular paper, but on photographic paper or microfilm. They can produce output with a resolution of over 2000 dots per inch.
- 4) Laser printers were very common a few years ago. They used a sort of wheel with solid characters that rotated and hammered against the ribbon, but they couldn't print pictures or diagrams, and were very slow and noisy.

5) Terminal printers use pins to print the dots required to shape a character. They print text, graphics, and nowadays some of them can print up to 450 characters per second; however, they produce relatively low-resolution output - 72 or 144 dots per inch.

6) Photosetters operate by projecting small ink droplets onto paper to form the required image. This type of printer is quite fast silent and not so expensive as a laser printer.

7) Plotters are a special kind of printer. They use ink and fine pens held in a carriage to draw very detailed designs on paper. They are used for construction plans, engineering drawings and other technical illustrations.

///. Read the notes about two input devices. Then describe them to your partner. He/she has to guess what you are describing.

- a) It scans text and pictures and sends digitized image to computer
- b) It allows you to control computer vocally and spoken commands do what is normally done with keyboard/mouse
- c) It controls the cursor and selects items on the screen, works like upside-down mouse and ball on top turned round with figures.
- d) It lets you interact with computer. You move pressure-stylus across the surface of a tablet and create graphics.

ANSWERS:

I. 1 — b; 2 — a; 3 — d; 4 — b; 5 — a; 6 — c; 7 — c; 8 — b; 9 — a; 10 — b; 11 — a; 12 — d; 13 — d; 14 — a; 15 — a) ten; b) large; c) very large; d) small; e) very small; f) two; g) three; h) many; 16 — d; 17 — d;

II. 1 a) right; b) used by various programs to instruct the PC to perform specific tasks, such as Save, Copy, Cut, Paste, Help, etc.; c) Set of numeric or editing keys. The Num Lock key is used to switch from numbers to editing functions; d) cursor and other keys usually used within word processor to page up and down in a long document or to edit text, using Insert or Delete keys;

II. 2 a) Mainframes are the largest and the most powerful computer; b) Minicomputers are smaller and less powerful than mainframes. They are used as file servers for terminals; c) Microcomputers are smaller than mainframes and minis and carry out their processing on a single microchip;

II. 3 1) — 4; 2) — 5; 3) — 6; 4) — 1; 5) — 2; 6) — 3; 7) — right;

III. a) scanner; b) voice recognition device; c) stationary device; d) graphics tool.

APPENDIX B. TIPS FOR TRANSLATION

Главной задачей любого перевода является передача содержания подлинника средствами другого языка с соблюдением строя последнего и, по возможности, с сохранением стиля оригинала. Необходимо понять, насколько допустимо в русском (английском) языке то или иное словосочетание, правильно

ли «звучит» предложение на фоне общего контекста. Для того, чтобы перевод был литературным и в то же время точным, необходимо сочетать два подхода к переводу текста. Первый - буквальный, максимально приближенный к тексту, второй - это литературная обработка текста. Первый способствует глубокому пониманию оригинального текста, второй позволяет убрать «лишние» слова, добавить нужные, эквивалента которым нет в подлиннике.

Чтобы перевод получился литературным и точным, необходимо провести работу над текстом в несколько этапов:

1. Прочитав текст первый раз без словаря, составьте общее представление о тексте: о ком или о чем идет речь, место действия, время действия и т. п.

2. Повторное чтение поможет Вам более точно определить незнакомые слова, уяснить детали повествования. На этом этапе можно составить список незнакомых слов. Параллельно активизируйте свой собственный словарный запас.

Опасайтесь «ложных друзей переводчика», слов, которые при внешнем сходстве расходятся по своему значению.

Actual	Фактический (но не актуальный)
Especialy	Особенно (но не специально)
Intelligent	Умный (но не интеллигентный)
Prospect	Перспектива (но не проспект)

3. Работа со словарем является следующим этапом, который будет значительно легче, если Вы поняли общий смысл текста, если значение некоторых слов Вы определили, исходя из контекста. Значительные трудности при переводе с английского на русский и с русского на английский вызывает многозначность слов, когда бывает непросто подобрать нужное значение слова для данного контекста. Например, cash, bus, clock — компьютерные термины. Запомните! Переводу подлежат не слова, а понятия и значения слов. Текст не является простой суммой слов, которые достаточно просто перевести одно за другим для того, чтобы все понять, поэтому необходим следующий этап работы над переводом текста.

4. Синтаксический анализ предложения.

5. Написание черновика перевода. На этом этапе можно собрать все, что Вы обнаружите в словаре, записать несколько вариантов перевода, вычеркнуть лишнее и добавить слова или словосочетания, характерные для русского или английского языка.

6. Это заключительный этап Вашей работы - составление текста перевода. Постарайтесь придать ему литературную форму, но не забывайте о близких к оригиналу формулировках. Ваш перевод должен показать Ваше умение хорошо формировать высказывание на русском или английском языке и Вашу способность глубоко понимать иноязычный текст.

Приведенное выше изложение этапов написания перевода является основой для выработки собственных принципов работы. Главный принцип, которым следует руководствоваться, это - практика, поэтому авторы

предлагают Вам поработать с подборкой текстов, при переводе которых Вы будете совершенствовать свои навыки работы с текстом.

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АНГЛИЙСКИЙ ЯЗЫК

МЕТОДИЧЕСКИЕ УКАЗАНИЯ
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ПЕРЕВОДА И РЕФЕРИРОВАНИЯ ТЕКСТОВ
ПО СПЕЦИАЛЬНОСТИ ДЛЯ СТУДЕНТОВ
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