William H. Gates
Chairman
Microsoft Corporation

William (Bill) H. Gates is chairman of Microsoft Corporation, the worldwide leader in software, services and solutions that help people and businesses realize their full potential. Microsoft had revenues of US$39.79 billion for the fiscal year ending June 2005, and employs more than 61,000 people in 102 countries and regions.

On June 15, 2006, Microsoft announced that effective July 2008 Gates will transition out of a day-to-day role in the company to spend more time on his global health and education work at the Bill & Melinda Gates Foundation. After July 2008 Gates will continue to serve as Microsoft's chairman and an advisor on key development projects. The two-year transition process is to ensure that there is a smooth and orderly transfer of Gates' daily responsibilities. Effective June 2006, Ray Ozzie has assumed Gates' previous title as chief software architect and is working side by side with Gates on all technical architecture and product oversight responsibilities at Microsoft. Craig Mundie has assumed the new title of chief research and strategy officer at Microsoft and is working closely with Gates to assume his responsibility for the company's research and incubation efforts.

Born on Oct. 28, 1955, Gates grew up in Seattle with his two sisters. Their father, William H. Gates II, is a Seattle attorney. Their late mother, Mary Gates, was a schoolteacher, University of Washington regent, and chairwoman of United Way International.

Gates attended public elementary school and the private Lakeside School. There, he discovered his interest in software and began programming computers at age 13.

In 1973, Gates entered Harvard University as a freshman, where he lived down the hall from Steve Ballmer, now Microsoft's chief executive officer. While at Harvard, Gates developed a version of the programming language BASIC for the first microcomputer - the MITS Altair.

In his junior year, Gates left Harvard to devote his energies to Microsoft, a company he had begun in 1975 with his childhood friend Paul Allen. Guided by a belief that the computer would be a valuable tool on every office desktop and in every home, they began developing software for personal computers. Gates' foresight and his vision for personal computing have been central to the success of Microsoft and the software industry.

Under Gates' leadership, Microsoft's mission has been to continually advance and improve software technology, and to make it easier, more cost-effective and more enjoyable for people to use computers. The company is committed to a long-term view, reflected in its investment of approximately $6.2 billion on research and development in the 2005 fiscal year.

In 1999, Gates wrote *Business @ the Speed of Thought*, a book that shows how computer technology can solve business problems in fundamentally new ways. The book was published in 25 languages and is available in more than 60 countries. *Business @ the Speed of Thought* has received wide critical acclaim, and was listed on the best-seller lists of the *New York Times*, *USA Today*, the *Wall Street Journal* and Amazon.com. Gates' previous book, *The Road Ahead*, published in 1995, held the No. 1 spot on the *New York Times*' bestseller list for seven weeks.

Gates has donated the proceeds of both books to non-profit organizations that support the use of technology in education and skills development.

Top row: Steve Wood (left), Bob Wallace, Jim Lane. Middle row: Bob O'Rear, Bob Greenberg, Marc McDonald, Gordon Letwin. Bottom row: Bill Gates, Andrea Lewis, Marla Wood, Paul Allen. ***December 7, 1978.***

In addition to his love of computers and software, Gates founded Corbis, which is developing one of the world's largest resources of visual information - a comprehensive digital archive of art and photography from public and private collections around the globe. He is also a member of the board of directors of Berkshire Hathaway Inc., which invests in companies engaged in diverse business activities.

Philanthropy is also important to Gates. He and his wife, Melinda, have endowed a foundation with more than $28.8 billion (as of January 2005) to support philanthropic initiatives in the areas of global health and learning, with the hope that in the 21st century, advances in these critical areas will be available for all people. The Bill and Melinda Gates Foundation has committed more than $3.6 billion to organizations working in global health; more than $2 billion to improve learning opportunities, including the Gates

William H. Gates III

Before Microsoft

by John Mirick

Family and Early Childhood

On October 28, 1955, shortly after 9:00 p.m., William Henry Gates III was born. He was born into a family with a rich history in business, politics, and community service. His great-grandfather had been a state legislator and mayor, his grandfather was the vice president of a national bank, and his father was a prominent lawyer. [Wallace, 1992, p. 8-9] Early on in life, it was apparent that Bill Gates inherited the ambition, intelligence, and competitive spirit that had helped his progenitors rise to the top in their chosen professions. In elementary school he quickly surpassed all of his peer's abilities in nearly all subjects, especially math and science. His parents recognized his intelligence and decided to enroll him in Lakeside, a private school known for its intense academic environment. This decision had far reaching effects on Bill Gates's life. For at Lakeside, Bill Gates was first introduced to computers.

First computing Experience

In the Spring of 1968, the Lakeside prep school decided that it should acquaint the student body with the world of computers [Teamgates.com, 9/29/96]. Computers were still too large and costly for the school to purchase its own. Instead, the school had a fund raiser and bought computer time on a DEC PDP-10 owned by General Electric. A few thousand dollars were raised which the school figured would buy more than enough time to last into the next school year. However, Lakeside had drastically underestimated the allure this machine would have for a hand full of young students.

Bill Gates, Paul Allen, and a few other Lakeside students (many of whom were the first programmers hired at Microsoft) immediately became inseparable from the computer. They would stay in the computer room all day and night, writing programs, reading computer literature and anything else they could to learn about computing. Soon Gates and the others started running into problems with the faculty. Their homework was being turned in late (if at all), they were skipping classes to be in the computer room and worst of all, they had used up all of the schools computer time in just a few weeks. [Wallace, 1992, p. 24]

In the fall of 1968, Computer Center Corporation opened for business in Seattle. It was offering computing time at good rates, and one of the chief programmers working for the corporation had a child attending Lakeside. A deal was struck between Lakeside Prep School and the Computer Center Corporation that allowed the school to continue providing it's students with computer time. [Wallace, 1992, p. 27] Gates and his comrades immediately began exploring the contents of this new machine. It was not long before the young hackers started causing problems. They caused the system to crash several times and broke the computers security system. They even altered the files that recorded the amount of computer time they were using. They were caught and the Computer Center Corporation banned them from the system for several weeks.

Bill Gates, Paul Allen and, two other hackers from Lakeside formed the Lakeside Programmers Group in late 1968. They were determined to find a way to apply their computer skills in the real world. The first opportunity to do this was a direct result of

their mischievous activity with the school's computer time. The Computer Center Corporation's business was beginning to suffer due to the systems weak security and the frequency that it crashed. Impressed with Gates and the other Lakeside computer addicts' previous assaults on their computer, the Computer Center Corporation decided to hire the students to find bugs and expose weaknesses in the computer system. In return for the Lakeside Programming Group's help, the Computer Center Corporation would give them unlimited computer time [Wallace, 1992, p. 27]. The boys could not refuse. Gates is quoted as saying "It was when we got free time at C-cubed (Computer Center Corporation) that we really got into computers. I mean, then I became hardcore. It was day and night" [Wallace, 1992, p. 30]. Although the group was hired just to find bugs, they also read any computer related material that the day shift had left behind. The young hackers would even pick employees for new information. It was here that Gates and Allen really began to develop the talents that would lead to the formation of Microsoft seven years later.

Roots of Business Career

Computer Center Corporation began to experience financial problems late in 1969. The company finally went out of business in March of 1970. The Lakeside Programmers Group had to find a new way to get computer time. Eventually they found a few computers on the University of Washington's campus where Allen's dad worked. The Lakeside Programmers Group began searching for new chances to apply their computer skills. Their first opportunity came early the next year when Information Sciences Inc. hired them to program a payroll program. Once again the group was given free computer time and for the first time, a source of income. ISI had agreed to give them royalties whenever it made money from any of the groups programs. As a result of the business deal signed with Information Sciences Inc., the group also had to become a legal business [Wallace, 1992, p. 42-43]. Gates and Allen's next project involved starting another company entirely on their own, Traf-O-Data. They produced a small computer which was used to help measure traffic flow. From the project they grossed around $20,000. The Traf-O-Data company lasted until Gates left for college. During Bill Gates' junior year at Lakeside, the administration offered him a job computerizing the school's scheduling system. Gates asked Allen to help with the project. He agreed and the following summer, they wrote the program. In his senior year, Gates and Allen continued looking for opportunities to use their skills and make some money. It was not long until they found this opportunity. The defense contractor TRW was having trouble with a bug infested computer similar to the one at Computer Center Corporation. TRW had learned of the experience the two had working on the Computer Center Corporation's system and offered Gates and Allen jobs. However thing would be different at TRW they would not be finding the bugs they would be in charge of fixing them. "It was at TRW that Gates began to develop as a serious programer," and it was there that Allen and Gates first started talking seriously about forming their own software company [Wallace, 1992, p. 49-51].

In the fall of 1973, Bill Gates left home for Harvard University [Teamgates.com, 9/29/96]. He had no idea what he wanted to study, so he enrolled as prelaw. Gates took the

standard freshman courses with the exception of signing up for one of Harvard's toughest math courses. He did well but just as in high school, his heart was not in his studies. After locating the school's computer center, he lost himself in the world of computers once again. Gates would spend many long nights in front of the school's computer and the next days asleep in class. Paul Allen and Gates remained in close contact even with Bill away at school. They would often discuss ideas for future projects and the possibility of one day starting a business. At the end of Gates's first year at Harvard, the two decided that Allen should move closer to him so that they may be able to follow up on some of their ideas. That summer they both got jobs working for Honeywell [Wallace, 1992, p. 59]. As the summer dragged on, Allen began to push Bill harder with the idea that they should open a software company. Gates was still not sure enough to drop out of school. The following year, however, that would all change.

The Birth of Microsoft

In December of 1974, Allen was on his way to visit Gates when along the way he stopped to browse the current magazines. What he saw changed his and Bill Gates's lives forever. On the cover of Popular Electronics was a picture of the Altair 8080 and the headline "World's First Microcomputer Kit to Rival Commercial Models." He bought the issue and rushed over to Gates's dorm room. They both recognized this as their big opportunity. The two knew that the home computer market was about to explode and that someone would need to make software for the new machines. Within a few days, Gates had called MITS (Micro Instrumentation and Telemetry Systems), the makers of the Altair. He told the company that he and Allen had developed a BASIC that could be used on the Altair [Teamgates.com, 9/29/96]. This was a lie. They had not even written a line of code. They had neither an Altair nor the chip that ran the computer. The MITS company did not know this and was very interested in seeing their BASIC. So, Gates and Allen began working feverishly on the BASIC they had promised. The code for the program was left mostly up to Bill Gates while Paul Allen began working on a way to simulate the Altair with the schools PDP-10. Eight weeks later, the two felt their program was ready. Allen was to fly to MITS and show off their creation. The day after Allen arrived at MITS, it was time to test their BASIC. Entering the program into the company's Altair was the first time Allen had ever touched one. If the Altair simulation he designed or any of Gates's code was faulty, the demonstration would most likely have ended in failure. This was not the case, and the program worked perfectly the first time [Wallace, 1992, p. 80]. MITS arranged a deal with Gates and Allen to buy the rights to their BASIC.[Teamgates.com, 9/29/96] Gates was convinced that the software market had been born. Within a year, Bill Gates had dropped out of Harvard and Microsoft was formed.

Bill Gates Links

As you might know Bill Gates has been quite busy since forming Microsoft. Here are a few links to keep you abreast to what he and Microsoft are up to these days.

- Bill Gates Biography: A short biography from the people at Microsoft
- The Road Ahead: The homepage of Gates's 1996 book
- Speeches: Links to Bill Gates's speeches that can be found on the web
- More speeches: More on line speeches
- Interview: An interview that Bill gave to Upside magazine
- How rich is Bill NOW!: Self-explanatory

Bibliography

Wallace, James. 1993. Hard Drive: Bill gates and the Making of the Microsoft Empire, HarperCollins Publishers, New York, NY.

TeamGates.com. Sept 29, 1996, Bill's Life, http://www.teamgates.com/library/life.htm

T. Carlson. Sept 29, 1996. Altair 8800, http://www.ncsc.dni.us/fun/user/tcc/cmuseum/altair.htm

Profile: Bill Gates

Bill Gates has created the world's largest company, he is the world's richest man and he has become the biggest charitable giver in history.

Gates had sold his first computer program by the age of 17

He may be a college drop-out and "computer geek" but rivals have often underestimated his abilities in the cut throat world of business.

Despite the wealth and ruthless domination of the global computer industry, Gates maintains it is the programming itself which is his abiding passion.

He stood down as chief executive of Microsoft in 2000, to focus on software development and the new challenges of the mobile internet age.

The one-time high school computer enthusiast - whose worth passed the $100bn mark in 1999 - said he wanted to immerse himself again in the work he loves most.

Early fascination

Gates, has come to be known for his aggressive business tactics and confrontational style of management.

He, and his company, have attracted a vast army of critics and enemies in recent years as their domination of the IT world has grown.

He was born on 28 October, 1955, growing up with two sisters in Seattle. Their father, William H. Gates II, is a Seattle attorney, and their late mother, Mary Gates, was a schoolteacher.

Gates began computing as a 13-year-old at the city's Lakeside school.

By the age of 17, he had sold his first program - a timetabling system for the school, earning him $4,200.

It was at Lakeside that he met fellow student Paul Allen, who shared his fascination with computers.

During Gates' stint at Harvard, the two teamed up to write the first computer language program written for a personal computer.

The PC's maker, MITS, liked their work and the two friends established Microsoft in 1975, so-called because it provided microcomputer software.

Self-made billionaire

A year later, Gates dropped out of Harvard, once it became clear that the possibilities for Microsoft were bright.

The big break came in 1980 when an agreement was signed to provide the operating system that became known as MS-DOS, for IBM's new personal computer.

In a contractual masterstroke, Microsoft was allowed to licence the operating system to other manufacturers, spawning an industry of "IBM-compatible" personal computers which depended on Microsoft's operating system.

That fuelled further growth, prompting the company to float in 1986, raising $61m.

Now a multi-millionaire, Allen had already stepped back from the frontline. But Gates continued to play the key role in the company's growth, with his vision for networked computers proving central to Microsoft's success.

However, his judgement has not always appeared flawless.

While sales and profits rocketed in the early 1990s, he was seen to have misjudged on a grand scale the possibilities and growth of the internet.

Outside of Microsoft he also has interests in biotech companies, sitting on the board of the Icos Corporation and has a stake in Darwin Molecular, a subsidiary of British-based Chiroscience.

Family man

He founded Corbis Corporation, which is developing a digital archive of art and photography from public and private collections around the globe.

His books, The Road Ahead and Business @ the Speed of Thought have both hit the best seller lists.

Gates married Melinda on New Year's Day 1994.Together they have three children - Jennifer Katharine, born in 1996, Rory John, born in 1999, and Phoebe Adele, born in 2002

He met his wife in 1987 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.

Other interests listed on his official website are reading and playing golf and bridge.

Gates and Melinda have been giving increasing amounts of money to charity, with his father running a foundation.

It has been endowed with billions to support initiatives in the areas of global health and education.

It is the world's second richest philanthropic organisation, and within shouting distance of the world number one, The Wellcome Trust in the UK.

William H. Gates

born: 28 October 1955
died:

Entrepreneurs and American Economic Growth

William H. Gates

Sources for the Lecture:

- Carroll, Paul (1993). ***Big Blues: The Unmaking of IBM***. New York: Crown.
- Manes, Stephen and Paul Andrews (1993). ***Gates: How Microsoft's Mogul Reinvented an Industry -- and Made Himself the Richest Man in America***. New York: Doubleday.
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- Zachary, G. Pascal (1994). ***Showstopper! The Breakneck Race to Create Windows NT and the Next Generation at Microsoft***. New York: Free Press.

I. Youth

A. Born **28 October 1955** in Seattle, Washington. His father was WHG III but he changed his name to WHG Jr. when he went into World War II (did not want to be teased about his "high-tone" name. His mother was Mary Maxwell Gates from a prominent Seattle family. They were married in 1951.

B. His trademark rocking back and forth started in his childhood. He was very smart and bored in school. His maternal grandmother Adelle Maxwell taught him a variety of card games and she was also fiercely competitive.

C. In 1968 at age 13 as an 8th grader while at Lakeside School (a private exclusive school for boys) he got access to a Teletype connected by a 110 baud modem to a GE MARK II time-sharing system that only had BASIC

(Beginner's All-Purpose Symbolic Instruction Code). The teletype combined a keyboard, a printer, and a paper tape punch and reader. It cost $89 per month to rent the teletype and $8 an hour for on-line fees (about $450 and $40 in 1998 dollars, respectively). Gates quickly became an avid programmer and one of the main users of the system.

D. Also at Lakeside was Paul Allen who was in the 10th grade and also an avid programmer. That same year Gates & Allen get access to a PDP-10 run by a private company in Seattle. The company offered free time to the Lakeside school kids to see if they could crash the system. Gates proved to be particularly adept at doing so.

Paul Allen and Bill Gates, 1977

DEC PDP-10

E. While Gates became a wizard at BASIC, Allen borrows the DEC manuals and learns the instruction set, the macro assembler, and the Monitor (program that controls the hardware and the input/output) of the PDP-10! When the free time ran out Gates and Allen figure how to get free time on the PDP-10 by logging in as the system operator.

F. It was about this time 1968-69 that Gates' develops his reputation in school for not suffering fools gladly. "That's the stupidest thing I've ever heard of!" became one of his catchphrases. One that he uses frequently to this day.

G. When the private company running the PDP-10 Gates & Allen were using goes bankrupt in March of 1969, Allen went over to the University of Washington and began using a Xerox computer by pretending he was a graduate student. Gates soon followed and they used the UofW computer until an intolerant professor caught them at it and they were barred.

H. Gates & Allen then went to another room in the building and began using a CDC Cyber 6400 designed by Seymour Cray. It ran nothing but batch using a card-reader.

I. Lakeside got two small DEC computers on loan later in 1969 and Gates obtained a paper tape with an assembler and the source code for BASIC for a PDP-8. He used it to begin work on a BASIC interpreter.

J. In the fall of 1970, Gates & Allen, and their friends Ric Weland and Kent Evans (killed in a hiking accident in 1972), get access to a PDP-10 in Portland, Oregon, and agree to write an accounting program in COBOL in exchange for free computing time. Gates & Allen finish the project on time in June 1972 (Allen was in college by then - WSU at Pullman).

K. In the spring of 1972 Gates agrees to help Lakeside develop scheduling software for its classes. The software was written in FORTRAN and was finished on time in June 1972 with the aid of Allen.

L. In the Fall of 1972 when Gates was a Senior at Lakeside and Allen was in college, they decide to build a computer using an INTEL 8008 chip. Their idea was to build a computer to count traffic. Gates had dubbed the company Traf-O-Data (it never made much money). Allen used the USW IBM System 360 computer to build a software simulator of the 8008! This would allow Gates & Allen to write software for the 8008 chip on the IBM computer!

M. Christmas 1972 Gates & Allen are hired by TRW to write software for a real time data analysis system for the Bonneville Power Administration. The software was to run on DEC PDP-10s. (Gates was able to treat his programming adventure as a "senior project.")

II. Early Business Career: 1975 - 1980

A. In the Fall of 1973 Gates enters Harvard where he was an indifferent student. He discovers Pong in 1974 and becomes obsessed with Atari's follow-on game Breakout (written by Steve Jobs and Steve Wozniak in 4 days).

B. Gates meets Steve Ballmer in the fall of 1974 at Harvard.

Steve Ballmer and Bill Gates

C. Allen moves to Boston to work at Honeywell in the fall of 1974.

D. That December, the January, 1975 issue of Popular Electronics hit the

newsstands with its front cover picture of the Altair 8800 Computer. The computer kit was made by MITS (Micro Instrumentation and Telemetry Systems) which was located in Albuquerque, NM.

MITS Altair 8800 Computer

E. The Altair used the Intel 8080 chip and had 256 Bytes of RAM. Programs had to be entered by flipping toggle switches on the front of the computer. The computer did not come with a terminal so most people hooked up a teletype to it in order to use it (you also needed an I/O card and a card to plug the I/O card into).

F. Gates and Allen saw their opportunity. If they wrote BASIC for the 8080 MITS machine then they could make money selling it not only to Altair users but also to other 8080 based computers that were almost certainly going to emerge to compete with the Altair.

G. Their big advantage was that they had Allen's Intel 8008 simulator that they were confident could be quickly converted to an 8080 simulator and

used to develop the BASIC Interpreter. After signing an agreement with their collaborator on the Traf-O-Data project freeing them to write software for unrelated projects, Gates and Allen write MITS on 2 January 1975 offering MITS a BASIC Interpreter for the Altair.

H. Allen immediately went to work on the 8080 simulator and Gates designed the BASIC and began writing the assembly language code. Monte Davidoff, a freshman at Harvard who they met accidentally, was hired to write the floating-point mathematical code.

I. By mid-February 1975 the BASIC was running on the 8080 simulator. They arranged to take the BASIC to New Mexico for a demonstration. It had never run on the Altair or any 8080 chip yet - just on the simulator running on Harvard's PDP-10!

J. The night before Allen was to fly down Gates stayed up all night checking the code before making the paper tape. The next morning Allen flew to Albuquerque and realized in mid-flight that he did not have a loader (the software to make the Altair talk to the teletype so the paper tape with the BASIC could be put into the computer). Allen wrote the loader in machine code on the flight down.

K. At MITS Allen entered the loader by flipping switches (binary code!) on the front panel, loaded the paper tape and the BASIC worked! (The future billionaire had to borrow $40 for his motel bill!) Gates and Allen had a deal and Allen was made "Vice President and Director of Software" at MITS.

L. On 22 July 1975 Gates (then 19 years old) and Allen sign a deal with MITS for $3000 plus a royalty for each copy of BASIC sold. MITS got the exclusive right to sublicense the software but agreed to use its "best efforts" to commercialize the program.

M. Also in July 1975 Gates & Allen form a partnership, Micro-Soft, with Gates 60% and Allen 40%. Gates argued for the larger share based upon the fact that Allen was a full time employee of MITS. Their initial investments were $910 and $606 respectively (60-40).

N. This first business venture of Gates & Allen typified how Microsoft operated for many years. In the words of Stephen Manes & Paul Andrews: "Announcing a product that didn't exist, developing it on the model of the best version available elsewhere, demonstrating an edition that didn't fully work, and finally releasing the product in rather buggy form after a lengthy delay."

O. In October 1975 MITS decides to bring out the Altair 680 which used the Motorola 6800 processor. Gates & Allen, in a pattern that was to repeat time and time again, see an opportunity to rework an existing product

(BASIC) for a new market. Allen wrote a simulator for the 6800 and Ric Weiland (another of their friends from Lakeside) rewrote Gates's BASIC for it.

MITS Altair 680 Computer

P. Micosoft income for 1975: $16,005.

Q. Gates became increasingly upset with the widespread piracy of Microsoft's during the early 1975-76 period. His response was his famous "An Open Letter to Hobbyists" that was sent out to every major computer publication in February 1976. In it he decried the practice which he regarded as simple theft and his statement caused a huge uproar.

R. One of the many (mostly hostile) responses Gates received was a suggestion that BASIC simply be put into ROM (Read Only Memory). Computer code burned into silicon rather than being on a paper tape would be very hard to pirate. Gates and Allen eventually become convinced that ROM-based software was the way to go but in the meantime they decide to begin selling BASIC outright to manufacturers on a non-exclusive basis for a flat fee.

S. Because MITS only had rights to the 8080 version of BASIC, Gates and Allen licensed the 6800 BASIC to MITS for a flat fee of $31,200 to be paid at $1300 a month for two years. In late 1976 Microsoft makes deal with Commodore International to put its BASIC in ROM in the Commodore PET (Personal Electronic Transactor - the first computer "straight out of the box!").

Commodore Personal Electronic Transactor (PET), 1977

T. Micosoft income for 1976: $104,216 with pretax profit $22,496.

U. In November 1976 Allen quits MITS and Gates quits Harvard in February 1977 so that both work at Microsoft full time. On 3 February 1977 Gates & Allen make a new deal: Gates 64% Allen 36%.

V. During 1977 MITS, which was in the process of being taken over by Pertec, refused to license the 8080 BASIC to potential customers. On 20 April 1977 Gates & Allen sent a letter to MITS protesting their lack of making "best efforts" to commercialize the program. MITS responded by getting a judge to restrain Microsoft from disclosing 8080 BASIC code to any 3rd party and taking Microsoft to arbitration to force them to abide by the contract. Microsoft's income begins drying up that summer. They get bailed out in August by a $10,500 payment for the 6502 BASIC from Apple Computer for the Apple II.

Apple II Computer, 1977

W. At the beginning of September 1977 the arbitrator ruled that MITS had violated the contract with Microsoft and terminated the exclusive license. Microsoft was now free to sell its BASIC to all comers.

X. The result was a flurry of deals to sell BASIC -- the most important was to Radio Shack. Gates left "hooks" in the BASIC code that went into ROM in the TRS-80. This allowed Microsoft to load extra functions from cassette or disk and gave it an advantage over other software writers. This became a standard practice at Microsoft for many years.

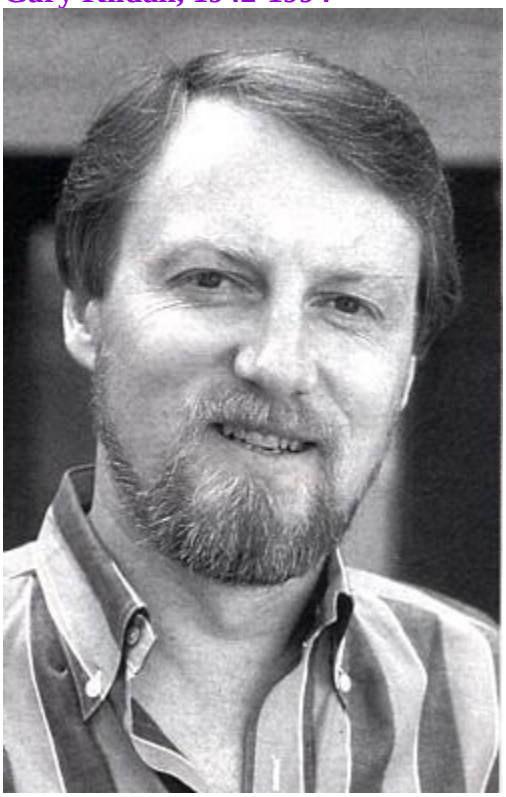
Radio Shack TRS80, 1977

Y. That fall, Gates and Marc McDonald come up with the File Allocation Table (FAT) during the development of a version of BASIC for NCR. This later was crucial to Standalone BASIC.

Z. During November 1977 Gates considers moving Microsoft to California and merging with Digital Research. Gary Kildall had released CP/M

(Control Program for Microcomputers) that summer. Microsoft had just developed its first version of FORTRAN but it required an operating system -- CP/M -- in order to run (BASIC could serve as its own crude operating system). So a merger seemed like a good idea to Gates but it never got past some initial feelers.

Gary Kildall, 1942-1994



AA. For 1977, Microsoft revenue was $381,715 with a net income of $112,471.

BB. Management at Microsoft was at best chaotic. Neither Gates nor Allen had ever managed a business and Microsoft simply was not organized. Microsoft did not own a word processor and its records were kept in a ledger book. Callers were often directed to "the person who wrote the BASIC". Differences of opinion were settled by shouting matches. Gates would yell and scream about how stupid some idea or approach was and instruct everyone on how to do it better.

CC. Gates' approach worked primarily because he was the hardest worker of them all. He had no social life and often slept on the floor in the office when he was into a project. Later he always had a housekeeper that took care of all mundane aspects of his life - buying groceries, paying bills, etc. He was famous for losing credit cards. His main vice was driving very fast cars in a very dangerous way and collecting multiple speeding tickets.

DD. Late 1978 work begins on BASIC for the new Intel 8086 chip.

EE. December 1978 Microsoft moves to Bellevue, Washington. Sales for calendar 1978, $1,355,665.

FF. By March 1979 Microsoft had 48 OEM (Original Equipment Manufacturer) customers for 8080 BASIC, 29 for FORTRAN, and 12 for COBOL, and PASCAL and APL were under development.

GG. Dan Bricklin and Bob Frankston develop VisiCalc, the first spreadsheet and demonstrate it in May 1979. Gates comes close to buying the company that had the rights to VisiCalc but the deal falls apart.

Bob Frankston and Dan Bricklin, 1979

HH. In June 1979 at the National Computer Conference in NY Microsoft's Standalone BASIC was shown running on Tim Paterson's {who later wrote DOS} 8086 Seattle Computer CPU. Tim Paterson also worked on Paul Allen's "SoftCard" idea for Microsoft. It ran CP/M on the Apple and was a highly successful product for a time. Indeed, the SoftCard was the single most popular platform to run CP/M!

Tim Paterson, author of QDOS

II. In August 1979 H. Ross Perot of EDS tries to buy Microsoft. Gates flies to Dallas and meets with EDS officials but is not impressed with their vision for microcomputers. Perot thought Gates wanted too much for the company and Gates was not really interested in selling. Perot regards his failure to meet Gates' price as his biggest business error.

JJ. In June 1980 Steve Ballmer comes to work at Microsoft for $50,000 per year and 5-10% of the Company depending upon revenue growth. His job as assistant to the President and he immediately begins to run the company in a much more business-like and orderly manner. Ballmer's downside was that, if anything, he was even more confrontational than Gates! And, he, unlike Gates, would get personal!

III. The Early DOS Period: 1980 - 1984

A. In late 1980 it was not clear to anyone which 16-bit chip would catch on in the market - Intel 8086, Zilog's Z-8000, Motorola 68000, National 16000. Gates decided to cover his bets with UNIX! His reasoning was that UNIX was a portable operating system and if it took off Microsoft could develop its languages for UNIX rather than for each separate chip. His idea was to modify UNIX to run on the various 16-bit chips then sell it along with his software.

B. Consequently, Gates licensed UNIX from AT&T for $2,000,000 and developed a 16-bit version of UNIX called XENIX.

C. Beginning in 1978 IBM had begun looking closely at the new microcomputer market and had teams investigating IBM's entry into the market. In 1980 they launched a secret project they unofficially dubbed the "Manhattan Project" to develop a personal computer.

D. On 21 July 1980 Jack Sams, head of the Software side of IBM's secret personal computer project, contacts Microsoft and on 22 July 1980 they meet with Gates and Ballmer in Redmond. Gates & Ballmer immediately agree to sign a non-disclosure agreement. Without tipping its hand, the IBM people were interested in seeing if Microsoft could deliver the software they needed and whether they were organized and professional enough to meet deadlines. The IBM people concluded that Microsoft could deliver.

E. Almost at the same time IBM decided on an "open architecture" approach. The IBM PC was to be designed around an open hardware bus not unlike the Altair's or the Apple II's and the specifications were to be published. IBM correctly concluded that this would encourage third parties to add value to the new systems. By publishing the software specifications, IBM would stimulate outside developers to come up with new and different applications.

F. On 21 August 1980 IBM agrees to buy Microsoft's product line of languages - BASIC, FORTRAN, COBOL, Pascal - for the IBM PC for $600,000. Microsoft had been working on 8086 16-bit versions of all of its software so they were almost ready to be delivered anyway (IBM had

decided to use the 8088 chip - a cheap version of the 8086 with an 8-bit data path).

G. IBM needed a 16-bit operating system for its PC. Gates tells the IBM people that DR is almost ready with CP/M-86 and he calls Gary Kildall about IBM's interest. Gates sent the IBM people down to see Kildall but Kildall's wife who handled the business refused to sign the nondisclosure agreement and after many fruitless hours, the IBM people left (Kildall was not at the meeting, he had flown off to see a customer).

H. Despite the many legends about this episode, CP/M-86 was not yet ready to go. Kildall also knew that IBM would demand a license that entitled them to modify CP/M-86 and he was not certain that it was a good idea to license away his only product (his only other product was PL/1) for a flat fee.

I. As fate would have it, Tim Paterson of Seattle Computer developed Quick and Dirty Operating System (QDOS) in 1980 for the 8086 computer that he had assembled. In part he cloned CP/M and in part he cloned old DEC operating systems. He also used a File Allocation Table (FAT) to handle the disk.

J. In early August 1980 Rod Brock of Seattle Computer wrote Paul Allen offering a cross-licensing agreement - 86-DOS in exchange for the right to use Microsoft's languages that were being developed for the 8086 chip!

K. On 25 September 1980 Paul Allen wraps up a deal with Seattle Computer for their 86-DOS. Microsoft paid an up front fee of $10,000 to gain the right to distribute 86-DOS to an unlimited number of end users. For an additional fee of $10,000 per company, or $15,000 if source code was included, Microsoft could sublicense 86-DOS to OEM customers. The deal was nonexclusive so that Seattle Computer could also license 86-DOS.

L. On 6 November 1980 Microsoft signs the deal with IBM. IBM was prohibited from licensing Microsoft's software to 3rd parties but Microsoft itself was free to do so! Microsoft also got royalties for all its software.

M. 1 July 1981 Microsoft Corporation is formed -- Gates 53%, Allen 31%, Ballmer 8%, Raburn 4%, Simonyi & Letwin 1.5% each.

N. In July 1981 Microsoft wakes up to the fact that they were sitting on a potential gold mine. Seattle Computer had already been approached by one company who wanted to license 86-DOS. Microsoft buys DOS outright on 27 July 1981 for $50,000 in "the deal of the Century". Seattle Computer got a royalty free license and could license DOS to buyers of its own computers only. Seattle Computer also got a price break on all Microsoft languages. At the time Brock thought it was a good deal since

he did not want to be in the software business. Tim Paterson, who was working for Microsoft on MS-DOS, read the agreement and thought it was a fair deal.

O.

P. **Evolution of DOS/WINDOWS**

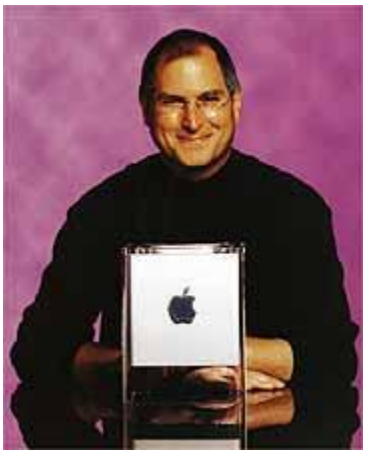
Q.

R. **August 1981 DOS 1.0**
S. **March 1983 DOS 2.0**
T. **August 1984 DOS 3.0**
U. **November 1985 WINDOWS 1.0**
V. **October 1986 DOS 4.0**
W. **October 1987 WINDOWS 2.0**
X. **December 1987 OS/2 1.0**
Y. **October 1988 OS/2 1.1**
Z. **May 1990 WINDOWS 3.0**
AA. **June 1991 DOS 5.0**
BB. **March 1992 OS/2 2.0**
CC. **April 1992 WINDOWS 3.1**
DD. **May 1993 OS/2 2.1**
EE. **July 1993 NT 3.1**
FF. **September 1994 NT 3.5**
GG. **October 1994 OS/2 3.0**
HH. **June 1995 NT 3.51**
II. **August 1995 WINDOWS 95**
JJ. **August 1996 OS/2 4.0**
KK. **August 1996 NT 4.0**
LL. **June 1998 WINDOWS 98**
MM. **February 2000 WINDOWS 2000**

NN. 12 August 1981 IBM announces the Personal Computer. Gates & Allen are not invited to the rollout.

OO. That same month Steve Jobs visits Microsoft for the first time and gives a mesmerizing speech about his vision for computing (the Reality Distortion Field). In October Gates travels to Cupertino to see an early mockup of the Macintosh Computer.

Steve Jobs

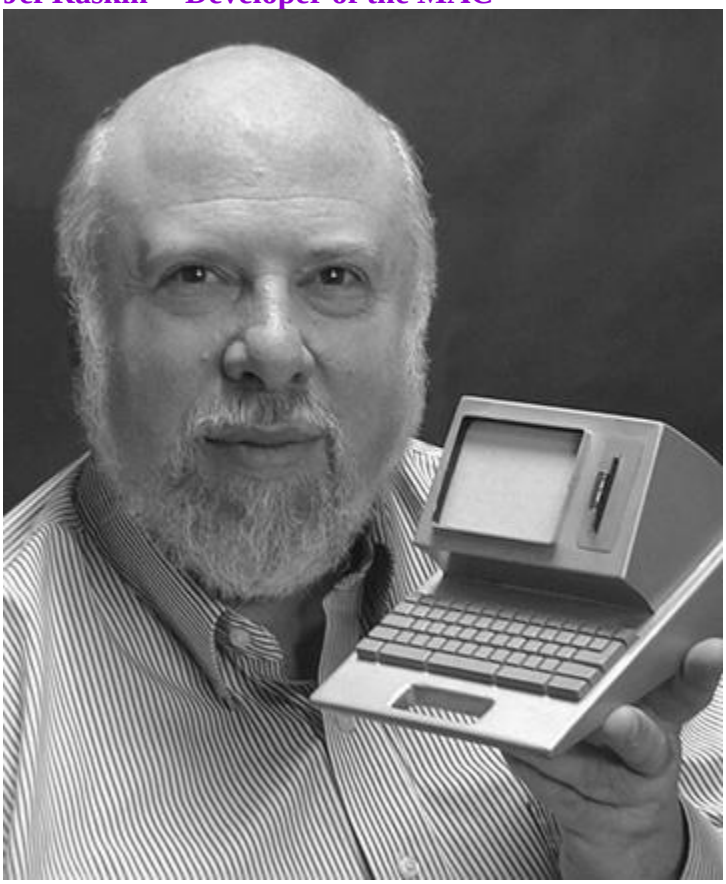


PP. Jobs had initially opposed the Mac within Apple for two years on the assumption that the Apple Lisa (being developed by ex-PARC alumni) would be far superior. (Jobs had toured PARC in 1979 and immediately set out to build a GUI [graphics user interface] computer.) After being kicked out of the Lisa project Jobs switched allegiance to the Mac project being run by Jef Raskin (another PARC alumnus).

The Apple Lisa

QQ. Gates makes a deal with Jobs & Apple to supply software for the Macintosh. Microsoft and Apple sign a contract on 22 January 1982 to provide a spreadsheet, a business graphics program, and a database. Microsoft was prohibited from distributing software that used a Mouse before 1 January 1984! Gates was later to take advantage of that deadline. He was convinced after viewing the Apple Mac that GUI was the future.

Jef Raskin -- Developer of the MAC



RR. Gates and Jobs - for different reasons - were both keen to get a spreadsheet program to compete with VisiCalc. Gates realized that the market was shifting away from languages and toward applications, and Jobs wanted his own spreadsheet program so he did not have to pay royalties to VisiCalc. This first Microsoft spreadsheet was called Multiplan.

SS. In 1981 Apple had total sales of $334M and profits of $39.4M, Microsoft, $15M gross and $1.5M net was a bit player. That same year Apple sold 150,000 computers and IBM sold 200,000 computers.

TT. In late 1981 and early 1982 most analysts expected CP/M-86 for the IBM PC to kill DOS off the moment it became available. However, IBM charged $240 for CP/M-86 when it did come on the market in the spring of 1983 and by then it was too late. The experts misread the market. However, the situation was crystal clear independent software developers (a pattern that would repeat itself with WINDOWS 3.0). They were writing a flood of new DOS programs and virtually none for the CP/M-86.

UU. In the beginning Gates almost gave MS-DOS away - often charging less than half the official price of $95,000 to OEM customers. This allowed

Gates to get MS-DOS established before the ever-so-slow Gary Kildall could get CP/M-86 onto the market.

VV. Gates clearly formulated his DOS strategy very early on. At a computer forum in May 1981 he said: "Why do we need standards? … It's only through volume that you can offer reasonable software at a low price. Standards increase the basic machine we can sell into…..I really shouldn't say this, but in some ways it leads, in an individual product category, to a natural monopoly: where somebody properly documents, properly trains, properly promotes a particular package and through momentum, user loyalty, reputation, sales force, and prices builds a very strong position within that product."

WW. A second aspect of Gates' overall strategy revealed itself in early 1982 when Compaq built the first legal IBM-compatible computer by reverse engineering IBM's ROM BIOS (Read Only Memory Basic Input Output System). Microsoft gave both MS-DOS and PC-DOS code to Compaq to ensure it could develop a fully compatible computer.

XX. BASIC was more problematic because it was both on disk and in ROM. Gates solved this problem by assigning a separate team of BASIC programmers to the Compaq project and as Compaq fed back changes they needed in BASIC, Gates simply incorporated them into the new editions of the ROM BASIC that Microsoft provided IBM! This kept everything legal.

YY. In late 1982 Paul Allen contracts Hodgkins disease and resigns from

Microsoft just before the release of DOS 2.0. March, 1983, DOS 2.0 released along with the IBM XT. Paul Allen had fought vigorously for drastically upgrading DOS and after a classic screaming match with Gates Allen prevailed. DOS 2.0 contained a laundry list of UNIX like features and was drastically re-written.

DOS 2.0

ZZ. By 1982 Microsoft had 200 employees and sales of $32,000,000.

AAA. By the fall of 1982 Microsoft has as many programmers on the Mac project as Apple did. Gates and his programmers (the "Smart Guys") were convinced that the Mac was the computer of the future and the software development was proceeding at a breakneck pace. Simultaneously, Gates and Allen were pondering how to build a GUI for the IBM PC as early as February 1982.

BBB. At the fall 1982 Comdex Lotus 1-2-3 was released. Although 1-2-3 bypassed DOS and worked directly with the IBM PC hardware (in order to get enough memory), this only served to reinforce the IBM PC standard and started a flood of PC specific software.

CCC. Also at the fall 1982 Comdex VisiCorp (owners of VisiCalc the "Killer Ap" for the Apple II) displayed VisiOn a MAC/SINDOWS-like GUI.

DDD. Gates begins the development of WINDOWS (called Interface Manager) to head off VisiOn. Interface Manager was classic Gates: Vaporware - do a demo, sign the contracts, get the code done later. In April 1983 a phony "smoke-and-mirrors" demo was done. Microsoft promoted Interface Manage throughout 1983 with great zeal (allegedly tying its purchase to the purchase of DOS in clear violation of antitrust law). On 10 November 1983 Microsoft announced Windows with great fanfare in New York City to try to head off VisiOn. IBM refuses to endorse Windows and actively works against Microsoft's interests.

EEE. Gates was determined not to miss the applications boat again - he missed it with DOS he was not going to miss it with the coming change to a GUI. He was determined that Windows was going to be the new standard and that Microsoft would have the inside track on applications development.

FFF. To implement this strategy Microsoft developed its own Mouse and released it in June 1983. Microsoft engineers figured out how to power the mouse through the Serial Port and the concept was eventually patented.

GGG. At first there was no software at all that worked with the Mouse but by November 1983 Microsoft released WORD. WORD supported the Mouse and had plenty of features that took advantage of it.

HHH. This activity by Microsoft made Jobs and Apple nervous for obvious reasons. Gates argued that the contract Microsoft signed to work on the Mac project did not prevent Microsoft from working on an overall operating environment and the contract expired 1 January 1984 in any case. Gates and Jobs formally rescinded their old agreement for applications development on 15 January 1984 - just one week before the release of the Mac.

III. VisiOn comes out in September 1983 and turns out to be an expensive dud. Once again Microsoft benefited from inept competition.

JJJ. Mitch Kapor of Lotus was not inept however. Lotus was riding high because of 1-2-3 and Lotus made more money than Microsoft in 1983.

Bill Gates, Mitch Kapor, Fred Gibbons, 1984

KKK. Gates was so worried about Lotus's Symphony -- an integrated "be-all, end-all" product - he re-directs the development of Excel from a DOS spreadsheet to the MAC to head off Lotus.

LLL. Late in 1983 Borland releases Turbo Pascal for only $49.95 and eats Microsoft's lunch. It featured an integrated editor-compiler and quickly became the standard severely cutting into Microsoft's language market.

Turbo Pascal

MMM. In 1983 Microsoft sales were $55,000,000.

NNN. By 1984 about 10,000,000 personal computers where shipping a year and most of them had DOS on them. By this time Microsoft had switched to per-machine deals with vendors. Microsoft would give computer makers a price break on DOS if they would also buy BASIC for a large number of machines (most makers way overestimated what their market share would be). Per-machine deals made it virtually impossible for competitors to crack the DOS monopoly. Vendors that were already paying a royalty for DOS on every machine were not going to offer a different operating system except as a high-priced option!

OOO. Microsoft in effect collected a bounty, a tax virtually every time anybody bought a DOS machine from someone other than IBM! It was a vast money machine that expanded even further in May 1984 when Phoenix Software Associates was able to reverse-engineer the IBM PC ROM BIOS

and would sell its ROM BIOS chip to all comers. The market exploded as a result.

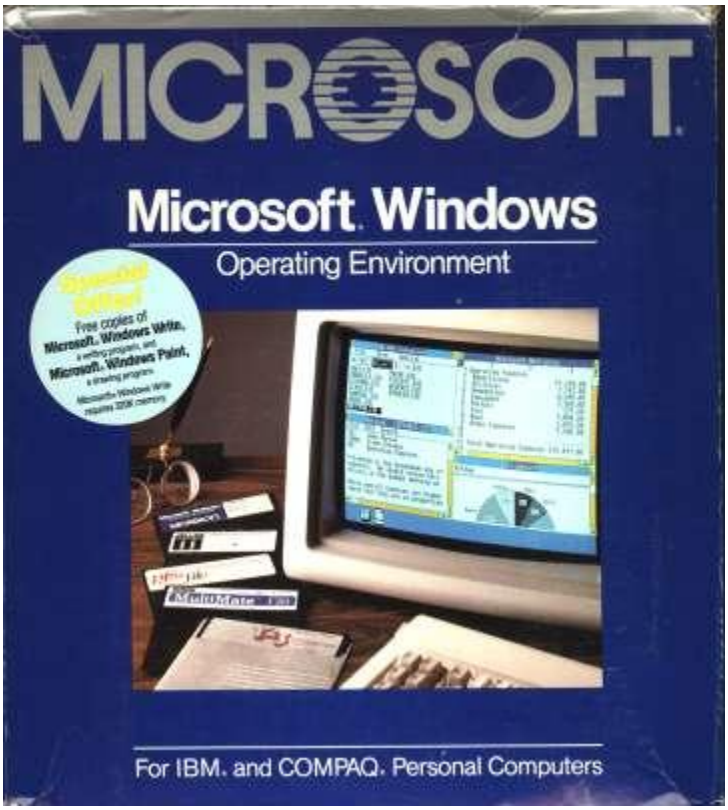
PPP. In August 1984 AT with 80286 and DOS 3.0 was released. The keyboard of the AT has a new key - SysRq (system request). This was an attempt by IBM to distance itself from Microsoft by enabling it to run other operating systems by simply hitting the SysRq key. Part of this effort was TopView, which was supposed to allow multi-tasking, and was clearly intended to block Windows and other similar products.

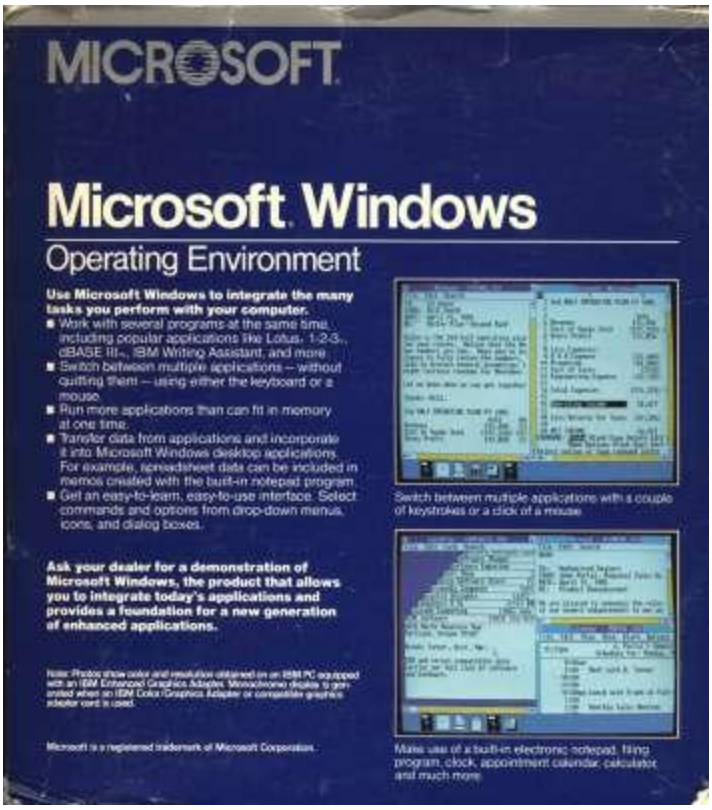
QQQ. Fiscal 1984 Microsoft sales were $100,000,000.

IV. The Triumph of Windows: 1985 - 1993

A. January 1985, Windows is now about 2 years late. Neil Konzen, Microsoft's Mac wizard, is brought in to get it moving. Further delaying the product is Gates' insistence that Windows also have a keyboard interface (keyboard equivalents to the Mouse). Microsoft ships a beta version in July, 1985, and on 20 November 1985 Windows 1.0 finally shipped.

WINDOWS 1.0





(photo courtesy of EMS Company)

B. June 1985 Joint Development agreement signed with IBM. This new agreement superceded the old 1980 agreement and got IBM out of its liability if the DOS source code was disclosed to customers. Gates is unable to get the IBM people to look seriously at Windows.

C. In early 1985 Apple is doing poorly. Mac sales were 20,000 per month which was far below the forecast of 80,000 per month. Gates writes a letter on 25 June 1985 urging Apple to license its Mac technology so the clone makers could get into making Macs. Gates offered to help convince Compaq, Sony, TI, etc., to make Macs and thereby cause the Mac market to become huge. Apple did not license its technology but did sign an ambiguous agreement with Microsoft that November allowing Microsoft to go ahead with Windows.

D. Microsoft stock finally goes public on 13 March 1986 with the initial public offering. Gates worth $311,000,000 the first day it was issued.

E. In December 1986 Gates buys out Seattle Computer's DOS license for $925,000 after Seattle Computer takes Gates to court for trying to deny them the right to sell their DOS license! Gates also buys out Tim Paterson's DOS license for $1,000,000, buys into his business, and gives him a generous job contract (he later makes $20,000,000 when he sells out his share of his business).

F. Meanwhile Microsoft and lumbering IBM move ahead with what becomes OS/2. At first IBM's aim is to cut Microsoft out by developing a common interface for all of its computers from mainframes to PCs (SAA = Systems Applications Architecture). Gates and Ballmer then scramble to convince IBM to also use Windows as an interface.

G. This "compromise" eventually evolved into Presentation Manager but the result was that Microsoft managed to live to fight again another day.

H. The 1986-1988 period saw Microsoft constantly scrambling to protect its interests vis a vis IBM during their "joint" effort to develop OS/2 (it started out as CP-DOS). Ballmer and Gates would do anything to keep the relationship alive (BOGU) for fear of being crushed by IBM.

I. Microsoft's code writers were contemptuous of IBM and it's coding culture. In the increasingly irrelevant world of IBM, the classical languages were COBOL, PL/1, and BAL (Basic Assembly Language), NOT C!

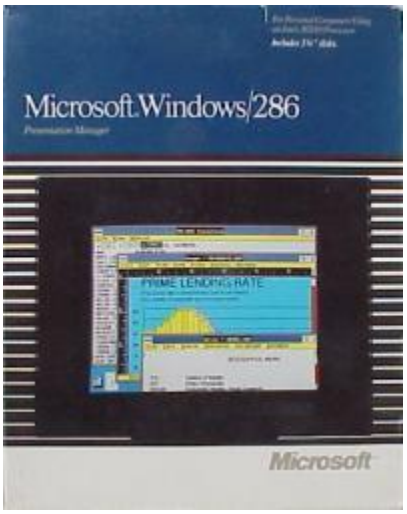
J. In addition, IBM wrote "clunky" code that was top-heavy with lines of documentation to make the software "easy to service."

K. Finally, in December 1987 OS/2 1.0 without Presentation Manager was released. Not until October 1988 is OS/2 1.1 with PM released with a resounding thud. In 1988 only about 4% of 286 and 16% of 386 users purchased OS/2 while Gates was selling Windows at the rate of 50,000 copies per month.

L. In March 1987 Bill Gates becomes a Billionaire at age 31 and by the 3rd Quarter of 1987, Microsoft passes Lotus to become the largest PC software vendor (1987 revenue, $345,900,000).

M. In October 1987 Windows 2.0 is released and Compaq and Microsoft developed Windows 386 to run on Compaq's line of 80386 machines.

WINDOWS 2.0



N. Borland, Ashton-Tate, and Lotus refuse to develop for Windows fearing that, in the words of Philippe Kahn: "People are afraid Microsoft is going to take control of the operating system."

Philippe Kahn and Steve Ballmer

O. By this time Microsoft's competitors are complaining loudly (and correctly) about Microsoft's undocumented calls in DOS & Windows that gave its applications division an advantage over its competitors.

P. Microsoft's legal difficulties multiplied greatly when Apple filed its "Look and Feel" lawsuit in March 1988. One year later Apple wins a preliminary skirmish when a judge rules that Microsoft could only use the visual displays in the very first version of Windows - not those in Windows 2.

Q. When Microsoft's stock nose-dived, Steve Ballmer bet $46,200,000 on the company by purchasing 945,000 shares of Microsoft stock. This purchase would later make Ballmer a Billionaire.

R. On 31 October 1988 Bill Gates in one of his best decisions hired David Cutler and his development team away from DEC. Cutler had developed VMS and he and his group were "smart guys" - just the sort of people Gates loved to hire.

S. Gates had a vision from early on to develop, from scratch, a completely new operating system that would run on all the major Microprocessors and

would, in effect, bring the powerful features of high-end Unix to the PC masses. With Cutler he had the leader and core group of programmers to make that vision a reality.

T. By late 1989 the development of what was to become OS/2 2.0 (32-bit flat) was bogged down in the usual IBM "bureaucratic sclerosis". Many of the major software houses were developing for OS/2 and had placed heavy bets that it would be the operating system for the "high-end" PC.

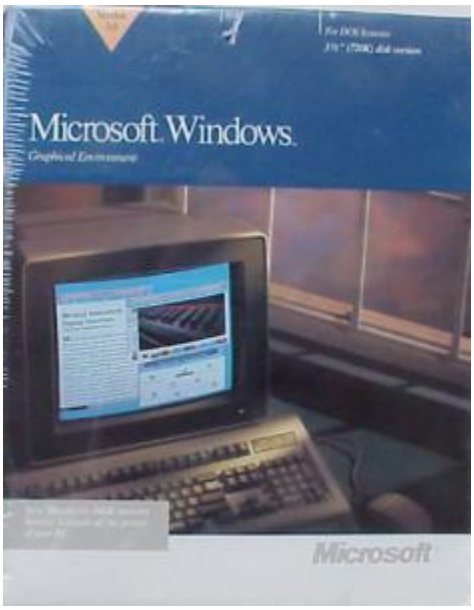
IBM OS/2

U. Microsoft was still promoting Windows and was focusing most of its Applications software development on Windows. Consequently, Microsoft's Applications competitors were getting very nervous about OS/2 because if Windows became the standard then Microsoft would eventually dominate the Applications market as well as the operating systems market.

V. IBM felt that OS/2 should be the "high-end" operating system while Windows would be the "low-end" operating system. At the November 1989 Comdex in Las Vegas the open break between IBM and Microsoft occurred. Neither company was prepared to unambiguously endorse the other's operating system.

W. In May 1990 Windows 3.0 is released and is an instant mega-hit. In the first year 4,000,000 copies of Windows 3.0 were sold - more than all the Mac machines produced since 1984.

WINDOWS 3.0

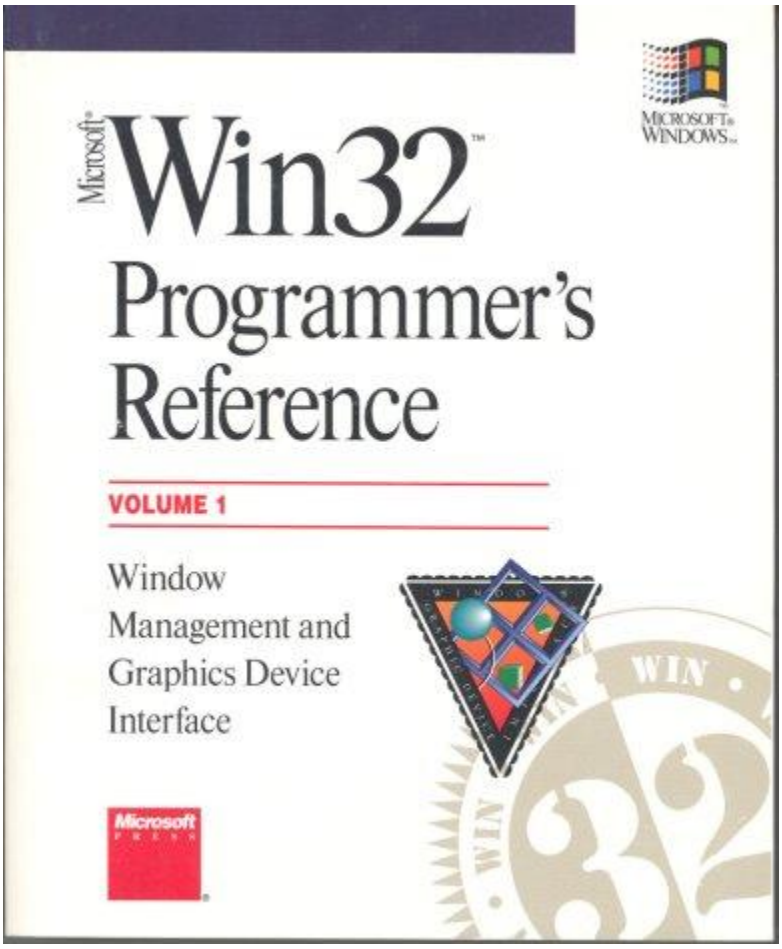


X. Microsoft's dominance of the operating systems market is now assured pending the resolution of the Apple "look-and-feel" suit (essentially decided in Microsoft's favor in April, 1992 although aspects dragged on until 1997).

Y. That fall IBM and Microsoft part company permanently. IBM retains control of the development of OS/2 1.X and 2.0 while Microsoft is responsible for OS/2 3.0. OS/2 3.0 is, in effect, the NT project.

Z. In January 1991 Microsoft unveils WIN32 (essentially a library of C subroutine calls) which will be the foundation of all of its future operating systems. The features that Microsoft built into WIN32 were essentially those that IBM had "reserved" for the "high-end" operating system.

WIN32



AA. By mid-1992 Microsoft's capitalization was greater than Boeing and General Motors. At age 36 Bill Gates is the richest man in the United States. Microsoft is now unstoppable.

BB. July 1993, Windows NT 3.1 is released and gets highly favorable reviews. The future of operating systems according to Bill Gates is now clear. Windows/DOS and Windows NT are to be eventually merged into one product running on all personal computers.

V. **Summary of Business Style:** 1) Hard Working; 2) Very Competitive; 3) Ability to pick gifted associates and motivate ' them to produce in an atmosphere of controlled chaos; 4) Brilliant Strategist.

VI. **Is Bill Gates a Schumpeteran entrepreneur?** Yes. He clearly changed "the stream of the allocation of resources over time by introducing new departures into the flow of economic life" by creating a high-quality operating system monopoly in the personal computing business thereby propelling it to the most important sector of the modern economy.

VII. **Is Gates guilty of unfair business practices?** Yes. Microsoft clearly: 1) Looked at rival developers' projects and then started its own; 2) Used its control over operating systems to enhance its efforts in applications; 3) Used tie-ins; 4) Vaporware - it used pre-announcements of non-existing products to freeze or cripple potential competition.

VIII. **Were (are?) Gates' business practices worse (more unfair) than those of Rockefeller?** No.

Bill Gates
1955–

Cofounder and chairman, Microsoft Corporation

Born: October 28, 1955, in Seattle, Washington.

Education: Attended Harvard University, 1973–1975.

Family: Son of William Henry Gates II (attorney) and Mary Maxwell (teacher); married Melinda French (Microsoft manager), January 1, 1994; children: three.

Career: Lakeside Programming Group, 1968–1969, founder; Traf-O-Data, 1970–1973, founder; Microsoft Corporation, 1975–, founder and chairman; 1975–2000, CEO; 1992–1998, president.

Awards: U.S. National Medal of Technology, 1993; Chief Executive of the Year, *Chief Executive*, 1994; President's Medal of Leadership Award, New York Institute of Technology, 1995; Louis Braille Gold Medal, Canadian National Institute for the Blind, 2002; Knight Commander of the Order of the British Empire, 2004.

Publications: *The Road Ahead* (with Nathan Myhrvold and Peter Rinearson), 1995; *Business @ the Speed of Thought,* 1999.

Address: Microsoft Corporation, 1 Microsoft Way, Building 8, North O, Redmond, Washington 98052-6399; http://www.microsoft.com.

■ William Henry Gates III cofounded the Microsoft Corporation in 1975, built his software company into the one of the most successful businesses in the world, and established himself in the process as the world's richest man. Although Bill Gates started Microsoft as a small business based on a single innovative software program that he had helped to develop, his real genius was his business acumen. As the long-time CEO of Microsoft, Gates was able to borrow and integrate other computer programmers' innovations and sell them to a new and rapidly expanding home computer market. In 1985, 10 years after Microsoft was founded, it had $140 million in revenue, which grew

to $28 billion by 2002. One of the pioneers of home computing, Gates proved himself to be a technological visionary and software applications guru. According to industry analysts, he also demonstrated that he was a shrewd marketing strategist as well as an aggressive corporate leader.

Bill Gates.
AP/Wide World Photos
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A PRECOCIOUS PIONEER

Gates grew up in a prosperous area of Seattle, Washington, with his parents and two sisters. The son of a lawyer and a schoolteacher, Gates attended a public grade school and then the Lakeside School, a private college preparatory institution. It was at Lakeside that he first became interested in the relatively new field of computer programming, met his friend and future business partner Paul Allen, and developed his first computer software program at the age of 13.

In 1968 the Lakeside School was still purchasing computer time on a machine owned by General Electric, as computers were extremely expensive in the late 1960s. Gates and his friends from Lakeside became fascinated with the machines and formed the Lakeside Programmers Group to try to make money in the computer field. The Programmers Group primarily earned its founders free computing time on machines owned by a company in Seattle. Gates and Allen then formed a company that they called Traf-O-Data. They put together a small computer for measuring traffic flow and made about $20,000. The company remained in business until Gates and Allen graduated from high school. Although Gates was interested in computers, he enrolled at Harvard University with the intention of becoming a lawyer like his father. By the time he was a sophomore in 1975,

however, Gates was more interested in computers and electronics than in his pre-law studies.

What became the Microsoft Corporation grew out of two college undergraduates' bluff and bravado. Gates's old friend Allen showed him an advertisement for a kit to build a home computer. The two called the computer's manufacturer, MITS, saying that Gates had taken a primary computer language called BASIC and adapted it for the machine. When MITS expressed interest, Gates and Allen ignored their studies and spent the next four weeks frantically working on turning their boast into reality. In an interview in *Money*, Gates later recalled, "One little mistake would have meant the program wouldn't have run. The first time we tried it was at MITS, and it came home without a glitch" (July 1986).

Having written the first computer language for a personal computer, Gates and Allen established the Microsoft Corporation in 1975. The name "Microsoft" was formed from the words "microcomputer" and "software." Gates then dropped out of Harvard in 1976 and focused on building the new business. He believed that there was a market for computer software and that the market was going to expand rapidly as affordable computers were developed for home use.

RIGHT PLACE—RIGHT TIME

Although Gates rightfully earned credit for building one of the fastest-growing and most profitable companies ever established, Microsoft started out on a shaky foundation. Gates and Allen had sold their first commercially developed software for $3,000 and royalties. Before long, however, Microsoft found itself unable to cover its overhead. Even though Gates and Allen received royalties, their software was also pirated by computer hackers. This piracy led Gates to write an "Open Letter to Hobbyists," which said that computer software should not be copied by the then relatively small computer community without the developer's permission. Gates also recognized at this point in time that the future of computer software lay in owning a standard software package to be used on most computers.

By the late 1970s the computing giant IBM had plans for marketing a personal computer for home use. They approached Microsoft to develop the standard operating system for their home computer models. Gates and Allen then went out and purchased for $50,000 an operating system called Q-Dos, which had been developed by Seattle Computer. Q-Dos was compatible with the Intel processor that IBM intended to use. The two then adapted the Q-Dos system and presented it to IBM. *Money* magazine quoted Gates as recalling, "We bet all our resources on that system" (July 1986).

Gates had learned well his early lessons in the software business. He insisted that IBM make Microsoft the exclusive software licensee for their home computers, meaning that all IBM products would have Microsoft operating systems. Furthermore, Gates negotiated a contract that allowed Microsoft to retain the right to manufacture and license the software, which he and Allen had named MS-DOS, to other manufacturers. Because

there were three other operating systems for microprocessors at that time, Gates didn't own the sole industry standard. But he was well on his way. He and Allen made MS-DOS the most attractive system to computer manufacturers because Microsoft offered a flat-fee license rather than a per-unit contract. Gates and Allen also encouraged software developers to create programs that would broaden their system's capabilities. Their strategy was a huge success because manufacturers initially saved money. In addition, the software developers had an easier job designing such single applications as word processing for use on computers made by other manufacturers.

These negotiations demonstrated that Gates was willing to defer immediate earnings for much greater future profits. His plan was based on building a mass of users for Microsoft products, which would mean the company would own the industry standard. Once Gates's company owned the standard, it could then revert to selling its software at per-unit prices rather than general licenses.

While the contract with IBM placed Microsoft on its way to legendary business growth, it also established a precedent for what some considered Gates's unsavory business practices. When he and Allen had approached Seattle Computer, the software's original developer, they omitted to mention that they were in negotiations with IBM to develop their operating system. Seattle Computer later sued Microsoft on the grounds that it had hidden its relationship with IBM in order to purchase Seattle's system at what turned out to be a bargain-basement price. The two companies came to an out-of-court settlement without Gates or Microsoft admitting to any guilt or duplicity in the original purchase.

MARKETING TRUMPS CHALLENGERS

Paul Allen, who had been serving as Microsoft's head of research and new product development, left the company in 1982 after being diagnosed with Hodgkin's disease. The following year, Gates faced a major challenge to Microsoft's domination of operating systems for home computers when a company called VisiCorp developed a mouse-driven computer system with a user interface based on graphics rather than the keyboard-based and text-driven system of MS-DOS. Gates quickly recognized that VisiCorp's system would be the wave of the future because it was much easier for technologically unsophisticated people to use. Even though Microsoft did not have such a system in the works at that point, Gates started an advertising campaign with an announcement at the Plaza Hotel in New York City that a new Microsoft operating system with graphical user interface (GUI) would soon be marketed. This next-generation system was to be called "Windows."

Gates's announcement was a bluff; the truth was that Microsoft was nowhere near developing such a system. But the marketing ploy worked because people preferred to wait for a system designed to be compatible with their existing Microsoft products rather than undergo the trouble and expense of installing an entirely new operating system. Furthermore, Windows allowed users to avoid buying new software applications to replace the DOS-compatible programs they currently owned. Windows 1.0 was finally

released in 1985. That same year Microsoft reported $140 million in revenue, including $46.6 million from overseas users.

Microsoft's growth continued to be relatively smooth in spite of several challenges, in part because the fiscally conservative Gates had financed most of the company's expansion entirely from its earnings. This cautious approach to financing, however, did not reflect an unwillingness to take risks. In January 1986 Gates launched an ambitious long-term project to develop a new data storage system based on a compact disk, or CD-ROM, that could hold any type of computer file, including music and visual files. In March of that same year, he took the company public. His 40 percent ownership of Microsoft shares made his net worth $390 million by June 1986.

Gates had effectively cornered the market for operating software for the vast majority of personal computers (PCs) as well as developing a wide range of other popular programs. He effectively became a billionaire in March 1987, when his company's stock rose to $90.75 per share, up from $21.50 per share when the company went public. Brian O'Reilly commented a few months later in *Fortune*, "[Gates] apparently has made more money than anyone else his age, ever, in any business" (October 12, 1987).

GATES SWITCHES GEARS

Industry analysts had praised Gates for guiding his company on a path of growth that saw its revenue stream increasing by more than 50 percent per year in a extremely competitive, even cutthroat, market. They credited much of this success to Gates's ability to capitalize early and effectively on industry trends and his willingness to take risks on such fledgling technologies as Microsoft's CD-ROM-based software packages, which became industry standards. Furthermore, Gates had organized the company's structure so that it worked concurrently on all phases of a software product's business cycle from development to distribution. Larry Michels, an early software developer, told Mary Jo Foley of *Electronic Business*, "Other software vendors have modeled themselves after the hardware business. Microsoft created its own model of how to do business" (August 15, 1988).

Although Gates had established himself as a visionary, he did not always hit the mark. For years he had paid little attention to the business potential of the Internet, which led him to say later that he regretted not having focused more closely on Microsoft's capabilities for e-mail and networking. In 1995, however, he did an about-face and began to redirect the company's efforts in this area. His success was measured by the fact that Microsoft's Internet Explorer Web browser had become the industry leader by 2000. Gates's success in developing a competitive Internet browser, as well as coming out on top of the desktop-database and office-suite wars of the 1990s, proved that he had formed a company nimble enough to jump into a market that others were developing and take the lead away from the competition.

In 1998 Gates announced a new phase in Microsoft's expansion that would allow him to concentrate his energies on strategy and product development. At the same time the

company funneled larger amounts of money into improving customer support and feedback. Gates planned to direct the company's work in such areas as intelligent telephones and television, as well as the integration of such new computer input techniques as speech, vision, and handwriting. Although Windows had already gone through several upgrades, Gates wanted to continue improving its ease of use and reliability. To free himself up for this work, he stepped down as president, a position he had held since 1992, but remained Microsoft's chairman and CEO.

SHOWDOWN WITH THE GOVERNMENT

Microsoft earned $19.75 billion in revenue during the fiscal year 1999. Bill Gates had become an icon not only in the computer and business worlds but also in the eyes of the general public. His ghostwritten book *The Road Ahead*, which outlined his vision of the future, topped many best-seller lists for more than three months. In spite of Gates's financial and literary success, however, he found himself facing his biggest challenge yet as the 1990s came to an end.

The challenge came this time from the United States government rather than from Microsoft's competitors. Gates and Microsoft had come under increasing scrutiny for unfair business practices from the time of the court case that followed Microsoft's purchase of the Q-Dos operating system from Seattle Computer in 1980. In 1993 the U.S. Justice Department began an investigation into Microsoft's contracts with other computer manufacturers that led to an agreement from Gates in 1994 to eliminate some of Microsoft's restrictions on the use of its products by other software makers. In 1997, however, the Justice Department sued Microsoft for forcing computer makers to sell its Internet browser as a condition of using the Windows system—a de facto violation of the 1994 consent decree. In December 1997 a U.S. district judge issued a preliminary injunction forcing Microsoft to temporarily stop requiring manufactures who sold Windows 95 "or any successor [program]" to install its Internet Explorer.

Microsoft appealed the injunction, but the following year the Justice Department and 20 state attorneys general sued Microsoft, charging that it illegally thwarted competition to protect and extend its software monopoly. Although Microsoft won its initial appeal in 1998 to reverse the 1997 decision, Gates soon found himself being questioned for 30 hours over a three-day period in a videotaped deposition for the upcoming antitrust trial. The government finally rested its case on January 13, 1999, and the Microsoft defense team ended its case on February 26. The final oral arguments from each side were presented on September 21, 1999.

After the judge presented his findings of fact on the case on November 5, Gates issued a response disagreeing with many of the findings that went against Microsoft. In a statement released to the press as reported by *Court TV Online*, Gates noted, "Microsoft competes vigorously and fairly. Microsoft is committed to resolving this case in a fair and a factual manner, while ensuring that the principles of consumer benefits and innovation are protected" (November 6, 1999).

U.S. District Judge Thomas Penfield Jackson ruled in June 2000 that Microsoft was a monopoly which had illegally exploited the dominance of Windows, at that point installed on over 95 percent of the world's personal computers. Judge Jackson then ordered Microsoft to be broken up into several smaller companies. It was the most severe antitrust ruling since the breakup of AT&T in 1984. Jackson's decision was reversed on appeal, however, and the company received a far less severe punishment directed toward restricting some of its business practices. In spite of this relatively favorable outcome, however, Gates continued to battle competitors in American courtrooms over Microsoft's business practices. In addition, he found himself subjected to litigation in Europe, where Microsoft was once again accused of exploiting its monopoly of Windows to control other computer-related industries, including media-player and server software companies.

Despite the controversy over whether Gates had created a company that used its dominance of the desktop computer system to obtain unfair control of newer computer-related markets, Microsoft continued to prosper. Gates stepped down as CEO in 2000 but kept his position as chairman of Microsoft as well as its chief software architect. In 2004 he doubled the company's research and development budget to $6.8 billion and began pushing a new Windows personal computer operating system code-named Longhorn.

MANAGEMENT STYLE: WORKAHOLIC

Although Gates was long known as a "boy wonder" in the computer and business worlds, his management style was anything but immature. As was noted in a *BBC News* article, "Gates has come to be known for his aggressive business tactics and confrontational style of management" (January 26, 2004). Although he was considered a charismatic leader within his own company, he was also extremely tough—he fired Microsoft's first company president after only 11 months on the job.

An intense businessman who typically put in 16-hour days and took only two three-day vacations in the first five years after establishing the corporation, Gates was demanding and strong-willed about implementing his vision. Coworkers, clients, and industry analysts also remarked, however, that he did not surround himself with yes-sayers but was more than willing to change his mind if someone convinced him of a better alternative. Analysts also observed that one of the keys to Gates's success was his ability to focus on the fundamentals of the business while keeping office politics or his own ego from getting in the way. "Most of what I do is leading," Gates once said in *Electronic Business*. "Managing applies to the people who work directly for me" (August 15, 1988).

Gates was known from the beginning of his career as the epitome of a hard-driving businessman respected by his allies and feared by his competitors. It was his vision that guided Microsoft's immense success. In addition, Gates had an uncanny ability to tackle both the managerial and technical sides of Microsoft's operations. He was especially noted for his success as a marketing strategist who priced his products for the mass market rather than computer specialists. In 1999 the *Journal of Business Strategy* listed Gates among a handful of people who had the greatest influence on business strategy over the last century.

Gates also had his fair share of critics. In addition to accusations of predatory and possibly illegal business practices, some analysts remarked that Gates did not really foster in-house product innovation but tended to focus his attention instead on blocking advances by other companies.

On the other hand, supporters of Gates's managerial style and business acumen pointed out that Microsoft continued to prosper even in the midst of the 2002 information technology slump, growing at 20 percent each quarter and posting a phenomenal 35 percent after-tax profit margin. Despite all his financial success, however, Gates remained a fiscal conservative. He was renowned for his penny-pinching traveling habits, demanding that his schedule be filled for the entire day when he was on the road promoting his company.

NO TIME TO REST

Gates was still the world's wealthiest person in early 2004, with a personal fortune estimated at $60.56 billion. He remained a hands-on leader at Microsoft, however, maintaining an active work schedule as the company's chairman and chief software architect. As noted by Ron Anderson in *Network Computer*, "… no doubt his presence [at the company] will make itself known well into the decades ahead" (October 2, 2000).

In addition to extending Microsoft's success, Gates also turned his attention to philanthropy, including the establishment of the Bill and Melinda Gates Foundation. Gates and his wife endowed the foundation with $24 billion to support philanthropic initiatives in the areas of global health and learning. For example, Gates made plans in February 2004 to donate $82.9 million for research to develop a new vaccine against tuberculosis. In addition to his duties at Microsoft and his efforts in philanthropy, Gates sat on the board of ICOS, a company that specialized in protein-based and small-molecule therapeutics.

See also entry on Microsoft Corporation in *International Directory of Company Histories*.

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—David Petechuk

William Gates III 1
49 , self made
Source: Microsoft

Net Worth: **$46.5 bil**

Country of citizenship: **United States**
Residence: **Medina, WA, United States**
Industry: **Software**
Marital Status: **married , 3 children**
Harvard University, Drop Out

Gates was given honorary knighthood in March, but don't call him Sir William: the title is only good for citizens of the Commonwealth. He is staying plenty busy pressing Microsoft beyond PCs into television set-top boxes, games, cell phones. "Software is where the action is," Gates proclaimed to company researchers last August. Competition from rival open source operating system, Linux, is stalling Microsoft's growth in the server market, but desktop dominance remains intact: Windows installed in 94% of PCs being sold. Next version, Longhorn, should be ready in 2006. Microsoft, meanwhile, is pursuing online music, photos and search software. Gates is methodically diversifying his wealth: He sells 20 million shares each quarter, reinvests through Cascade Investment in nontech companies, including big stakes in Cox Communications, Canadian National Railway, Republic Services. World's biggest philanthropist also devoting $27 billion to good deeds. Bill & Melinda Gates Foundation fights infectious diseases (hepatitis B, AIDS), funds vaccine development, helps high schools.

Distribution of Billionaires by Country
Diameter of disc reflects size of fortune. The red disc indicates William Gates III.

0 yrs	Bill Gates was born in Seattle, Washington to William H. Gates, Sr. and Mary Maxwell Gates on October 28.	**1955**
12 yrs	Gates excelled in elementary school, particularly in mathematics and the sciences. Bill Gates went to Lakeside School, Seattle's most exclusive preparatory school.	**1967**
13 yrs	It was at Lakeside that he first became interested in the relatively new field of computer programming, met his friend and future business partner Paul Allen, and developed his first computer software program.	**1968**

In 1968 the Lakeside School was still purchasing computer time on a machine owned by General Electric, as computers were extremely expensive in the late 1960s. Gates and his friends from Lakeside became fascinated with the machines and formed the Lakeside Programmers Group to try to make money in the computer field.

The Programmers Group primarily earned its founders free computing time on machines owned by a company in Seattle. Gates and Allen then formed a company that they called Traf-O-Data. They put together a

small computer for measuring traffic flow and made about $20,000. The company remained in business until Gates and Allen graduated from high school.

18 yrs Although Gates was interested in computers, he enrolled at Harvard University with the intention of becoming a lawyer like his father. There he met his future business partner, Steve Ballmer. **1973**

20 yrs By the time he was a sophomore, however, Gates was more interested in computers and electronics than in his pre-law studies. During his second year at Harvard, Gates (along with Paul Allen and Monte Davidoff) co-wrote Altair BASIC for the Altair 8800. **1975**

After reading the January 1975 issue of Popular Electronics that demonstrated the Altair 8800, Gates called MITS (Micro Instrumentation and Telemetry Systems), the creators of the new microcomputer, to inform them that he and others had developed a version of the programming language BASIC for the platform. This was untrue, as Gates and Allen had never used an Altair previously nor developed any code for it.

Within a period of eight weeks they developed an Altair emulator that ran on a minicomputer, and then the BASIC interpreter. Allen and Gates flew to MITS to unveil the new BASIC system. The demonstration was a success and resulted in a deal with MITS to buy the rights to Allen and Gates's BASIC for the Altair platform. It was at this point that Gates left Harvard to found Micro-Soft, which later became Microsoft Corporation, with Allen.

21 yrs Gates dropped out of Harvard during his third year to pursue a career in software development. **1976**

In February 1976, Gates published his often-quoted "Open Letter to Hobbyists". In the letter, Gates claimed that most users were using "stolen" pirated copies of Altair BASIC and that no hobbyist could afford to produce, distribute, and maintain high-quality software without payment.

In the ensuing years the letter gained significant support from Gates' business partners and allies which gave rise to a movement that led to closed source becoming the dominant model of software production.

25 yrs When IBM decided to build the hardware for a desktop personal computer, it needed to find an operating system. Microsoft did not have any operating system at this point. **1980**

Bill Gates referred IBM to Gary Kildall, the founder of Digital Research, but when they did not reach immediate agreement with him they went back to Gates, who offered to fill their need himself. He licensed a CP/M-compatible OS called QDOS ("Quick and Dirty Operating System") from Tim Paterson of Seattle Computer Products

for $56,000, and IBM shipped it as PC-DOS.

Microsoft was quick to license DOS to other manufacturers, calling it MS-DOS (for Microsoft Disk Operating System). By marketing MS-DOS aggressively to manufacturers of IBM-PC clones, Microsoft went from a small player to one of the major software vendors in the home computer industry.

In the early 1980's they created Microsoft Windows which was similar to Apple Computer's Macintosh OS graphical user interface (GUI), both based on the human interface work at Xerox PARC.

The release of Windows 3.0 in 1990 was a tremendous success, selling around 10 million copies in the first two years and cementing Microsoft's dominance in operating systems.

By continuing to ensure, by various means, that most computers came with their software pre-installed, Microsoft eventually went on to become the largest software company in the world, earning Gates enough money that Forbes Magazine named him the wealthiest person in the world for several years.

39 yrs	Bill Gates married Melinda French of Dallas, Texas on January 1. Melinda has given birth to three children, Jennifer Katharine Gates (1996), Rory John Gates (1999) and Phoebe Adele Gates (2002).	**1994**
45 yrs	Gates served as the CEO of the company until 2000 when Steve Ballmer took the position.	**2000**

Gates founded the Bill & Melinda Gates Foundation, a charitable organization, with his wife. The foundation's grants have provided funds for college scholarships for under-represented minorities, AIDS prevention, diseases prevalent in third world countries, and other causes.

Gates has not generally engaged in conspicuous consumption beyond his lavish home, with its gardens and art collection. Gates also rents or leases a home on Mustique, an exclusive island in the Grenadines, and owns a 300 foot yacht named Ice.

Early life

Bill Gates was born in Seattle, Washington to William H. Gates, Sr. and Mary Maxwell Gates. His family was wealthy; his father was a prominent lawyer, his mother was the first female Regent of the University of Washington, and his maternal grandfather, J. W. Maxwell, was a national bank president. Gates has one older sister, Kristianne, and one younger sister, Libby.

Gates excelled in elementary school, particularly in mathematics and the sciences. Afterwards he attended the Lakeside School, a private college preparatory institution. It was at Lakeside that he first became interested in the relatively new field of computer programming, met his friend and future business partner Paul Allen, and developed his first computer software program at the age of 13.

In 1968 the Lakeside School was still purchasing computer time on a machine owned by General Electric, as computers were extremely expensive in the late 1960s. Gates and his friends from Lakeside became fascinated with the machines and formed the Lakeside Programmers Group to try to make money in the computer field. The Programmers Group primarily earned its founders free computing time on machines owned by a company in Seattle. Gates and Allen then formed a company that they called Traf-O-Data. They put together a small computer for measuring traffic flow and made about $20,000. The company remained in business until Gates and Allen graduated from high school.

Although Gates was interested in computers, he enrolled at Harvard University with the intention of becoming a lawyer like his father. By the time he was a sophomore in 1975, however, Gates was more interested in computers and electronics than in his pre-law studies. There he met his future business partner, Steve Ballmer. During his second year at Harvard, Gates (along with Paul Allen and Monte Davidoff) co-wrote Altair BASIC for the Altair 8800. Soon Gates dropped out of Harvard during his third year to pursue a career in software development. On December 13, 1977, Gates was briefly jailed in Albuquerque for racing his Porsche 911 in the New Mexico desert.

Microsoft

After reading the January 1975 issue of Popular Electronics that demonstrated the Altair 8800, Gates called MITS (Micro Instrumentation and Telemetry Systems), the creators of the new microcomputer, to inform them that he and others had developed a version of the programming language BASIC for the platform. This was untrue, as Gates and Allen had never used an Altair previously nor developed any code for it. Within a period of eight weeks they developed an Altair emulator that ran on a minicomputer, and then the BASIC interpreter. Allen and Gates flew to MITS to unveil the new BASIC system. The demonstration was a success and resulted in a deal with MITS to buy the rights to Allen and Gates's BASIC for the Altair platform. It was at this point that Gates left Harvard to found Micro-Soft, which later became Microsoft Corporation, with Allen.

In February 1976, Gates published his often-quoted "Open Letter to Hobbyists". In the letter, Gates claimed that most users were using "stolen" pirated copies of Altair BASIC and that no hobbyist could afford to produce, distribute, and maintain high-quality software without payment. This letter was unpopular with many amateur programmers, not just those few using copies of the software. In the ensuing years the letter gained significant support from Gates' business partners and allies which gave rise to a movement that led to closed source becoming the dominant model of software production. Despite Microsoft's reliance on closed source, Gates has said that he collected discarded program listings at Harvard and learned programming techniques from them.

It has been pointed out that Microsoft often produces products that incorporate ideas developed outside Microsoft, such as GUIs, the BASIC programming language, or compressed file systems, without paying royalties to the companies that developed them. Some of these matters have gone to court. Apple v. Microsoft concluded that Microsoft had not infringed Apple's intellectual property (partly because Apple had, apparently, licensed parts of the Macintosh user interface to Microsoft); Stac Electronics prevailed in its claim against the DoubleSpace file system. The BASIC question has not been litigated, but the trend in US law is that copyright does not extend to publicly documented programming languages.

When IBM decided to build the hardware for a desktop personal computer in 1980, it needed to find an operating system. Microsoft did not have any operating system at this point. The most popular microcomputer operating system at the time was CP/M developed by Digital Research in Monterey. CP/M allowed software written for the Intel

8080/Zilog Z80 family of microprocessors to run on many different models of computer from many different manufacturers. This device-independence feature was essential for the formation of the consumer software industry, as without it software had to be re-written for each different model of computer. Bill Gates referred IBM to Gary Kildall, the founder of Digital Research, but when they did not reach immediate agreement with him they went back to Gates, who offered to fill their need himself. He licensed a CP/M-compatible OS called QDOS ("Quick and Dirty Operating System") from Tim Paterson of Seattle Computer Products for $56,000, and IBM shipped it as PC-DOS.

Later, after Compaq licensed Phoenix Technologies' clone of the IBM BIOS, the market saw a flood of IBM PC clones. Microsoft was quick to license DOS to other manufacturers, calling it MS-DOS (for Microsoft Disk Operating System). By marketing MS-DOS aggressively to manufacturers of IBM-PC clones, Microsoft went from a small player to one of the major software vendors in the home computer industry. Microsoft continued to develop operating systems as well as software applications. In the early 1980's they created Microsoft Windows which was similar to Apple Computer's Macintosh OS graphical user interface (GUI), both based on the human interface work at Xerox PARC. The first versions of the Windows OS did not sell well as stand-alone applications but started to be shipped pre-installed on many systems, reducing the incentive of users to buy competing products regardless of quality. Because of this, by the late-1980s Microsoft Windows had begun to make serious headway into the IBM-compatible PC software market. The release of Windows 3.0 in 1990 was a tremendous success, selling around 10 million copies in the first two years and cementing Microsoft's dominance in operating systems.

By continuing to ensure, by various means, that most computers came with their software pre-installed, Microsoft eventually went on to become the largest software company in the world, earning Gates enough money that Forbes Magazine named him the wealthiest person in the world for several years. Gates served as the CEO of the company until 2000 when Steve Ballmer took the position. Gates continues to serve as a chairman of the board at the company and also as a position he created for himself entitled "Chief Software Architect". Microsoft has thousands of patents, and Gates has nine patents to his name.

Since Microsoft's founding and as of 2006, Gates has had primary responsibility for Microsoft's product strategy. He has aggressively broadened the company's range of

products, and wherever Microsoft has achieved a dominant position he has vigorously defended it. Many decisions that have led to antitrust litigation over Microsoft's business practices have had Gates's approval. In the 1998 United States v. Microsoft case, Gates gave deposition testimony that several journalists characterized as evasive. He argued over the definitions of words such as "compete", "concerned", "ask", and "we." BusinessWeek reported, "early rounds of his deposition show him offering obfuscatory answers and saying 'I don't recall' so many times that even the presiding judge had to chuckle. Worse, many of the technology chief's denials and pleas of ignorance were directly refuted by prosecutors with snippets of e-mail Gates both sent and received."

Gates meets regularly with Microsoft's senior managers and program managers. By all accounts he can be extremely confrontational during these meetings, particularly when he believes that managers have not thought out their business strategy or have placed the company's future at risk. He has been described shouting at length at employees before letting them continue, with such remarks as "That's the stupidest thing I've ever heard!" and "Why don't you just join the Peace Corps?" However, he often backs down when the targets of his outbursts respond frankly and directly. When he is not impressed with the technical hurdles managers claim to be facing, he sometimes quips, "Do you want me to do it over the weekend?".

Gates's role at Microsoft for most of its history has been primarily a management and executive role. However, he was an active software developer in the early years, particularly on the company's programming language products. He has not officially been on a development team since working on the TRS-80 Model 100 line, but he wrote code as late as 1989 that shipped in the company's products.

Personal life

Bill Gates married Melinda French of Dallas, Texas on January 1, 1994. Melinda has given birth to three children, Jennifer Katharine Gates (1996), Rory John Gates (1999) and Phoebe Adele Gates (2002). Bill Gates' house is one of the most expensive houses in the world, and is a modern 21st century earth-sheltered home in the side of a hill overlooking Lake Washington in Medina, Washington. According to King County public records, as of 2006, the total assessed value of the property (land and house) is $125 million, and the annual property tax is just under $1 million. Also among Gates's private acquisitions are the Codex Leicester, a collection of writings by Leonardo da Vinci which Gates bought for $30.8 million at an auction in 1994, and a rare Gutenberg Bible.

In 2000, Gates founded the Bill & Melinda Gates Foundation, a charitable organization, with his wife. The foundation's grants have provided funds for college scholarships for under-represented minorities, AIDS prevention, diseases prevalent in third world countries, and other causes. In 2000, the Gates Foundation endowed the University of Cambridge with $210 million for the Gates Cambridge Scholarships. The Foundation has also pledged over $7 billion to its various causes, including $1 billion to the United Negro College Fund; and as of 2005, had an estimated endowment of $29.0 billion. He has spent about a third of his lifetime income on charity. Journalist Greg Palast suggests that the Gates Foundation is used to make tactical donations to hide media sensitive humanitarian side effects of treaties, such as the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS), which Gates has supported. TRIPS requires countries to agree to respect drug and other patents, therefore preventing the local manufacture of existing pharmaceuticals still under patent such as AIDS drugs in Africa.

Gates has received two honorary doctorates, from the Royal Institute of Technology, Stockholm, Sweden in 2002 and Waseda University in 2005. Gates was also given an honorary KBE (Knighthood) from Queen Elizabeth II of the United Kingdom in 2005, in addition to having entomologists name the Bill Gates flower fly, Eristalis gatesi, in his honor.

Microsoft's CEO Steve Ballmer has stated that Gates is probably the most "spammed" person in the world, receiving as many as 4,000,000 e-mails per day in 2004, most of which were junk. Gates has almost an entire department devoted to filtering out junk emails. In an article, Gates himself has said that most of this junk mail "offers to help [him] get out of debt or get rich quick", which "would be funny [given his financial state] if it weren't so irritating".

Influence and wealth

Gates is widely considered one of the world's most influential people. Time magazine named him one of the 100 people who most influenced the 20th century, as well as one of the 100 most influential people of 2004, 2005 and again in 2006. Gates and Oprah Winfrey are the only two people in the world to make all four lists. He was listed in the Sunday Times power list in 1999, named CEO of the year by Chief Executive Officers magazine in 1994, ranked number one in the "Top 50 Cyber Elite" by Time in 1998, ranked number two in the Upside Elite 100 in 1999 and was included in The Guardian as one of the "Top 100 influential people in media" in 2001. Gates has been number one on the "Forbes 400" list from 1993 through to 2006 and number one on Forbes list of "The World's Richest People" from 1995-2006. In 2004, he became a director of Berkshire Hathaway, the investment company headed by Warren Buffett, the second wealthiest person in the world according to Forbes and a long time friend of Gates.

Since 2000, Gates's wealth has declined due to a fall in Microsoft's share price and the multi-billion dollar donations he has made to his charitable foundations. According to a 2004 Forbes magazine article, Gates gave away over $29 billion to charities from 2000 onwards. These donations are usually cited as sparking a substantial change in attitudes

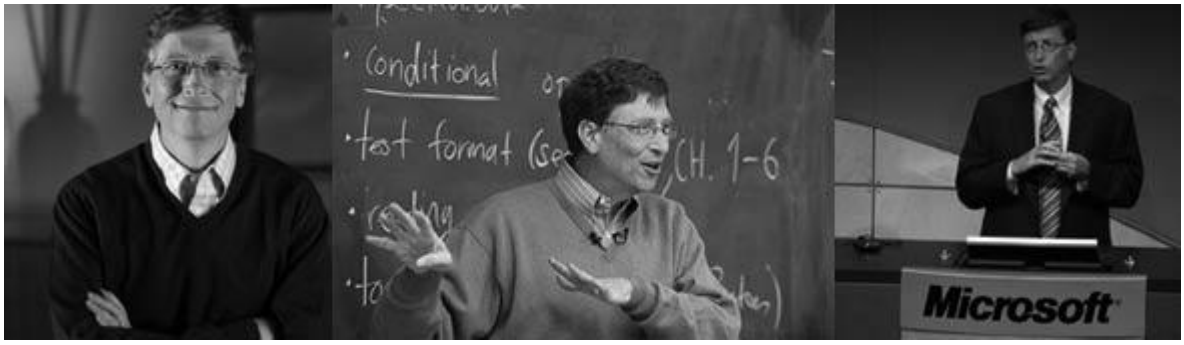
towards philanthropy among the very rich, as philanthropy eventually became the norm for the very rich. The Gates received the "Spanish Nobel" prize - the Prince of Asturias Award for International Cooperation - on May 4, 2006, in recognition of their world impact through charity giving.

Gates has not generally engaged in conspicuous consumption beyond his lavish home, with its gardens and art collection. Gates also rents or leases a home on Mustique, an exclusive island in the Grenadines, and owns a 300 foot yacht named Ice. In contrast, his former associate Paul Allen has used his wealth in perhaps a more typical manner – owning sports teams, vintage airplanes, and multiple residences. Gates also claimed, in 2005, that he has gone to work every day since 1975, which in recent years includes both his role at Microsoft, and his leadership position at the Gates Foundation.

Bill Gates is the co-founder, chairman, and chief software architect of Microsoft Corporation, the world's largest software company as of April 2006. He is also the founder of Corbis, a digital image archiving company. Forbes international rich list has ranked him as the world's richest person for the last twelve straight years. In 1999, Gates' wealth briefly surpassed $100 billion, making him the world's first centibillionaire. When family wealth is considered, his family ranks second behind the Walton family.

Gates is one of the best-known entrepreneurs of the personal computer revolution. He is widely respected for his intelligence, foresight, and ambition. He is also widely criticized as having built Microsoft's business through unfair, illegal, or anticompetitive business practices. Government authorities in several countries have found some of Microsoft's practices illegal, as in United States v. Microsoft.

Since amassing his fortune, Gates has pursued a number of philanthropic endeavors, donating large amounts of money (about 51% of his total fortune) to various charitable organizations and scientific research programs through the Bill & Melinda Gates Foundation, founded in 2000. He, his wife Melinda and U2's lead singer Bono were collectively named by Time as the 2005 Persons of the Year. That same year he was given an honorary Knight Commander of the Order of the British Empire by Queen Elizabeth II. In 2006, Gates Foundation was awarded the Premio Principe de Asturias en Cooperacion Internacional.



Think as the world's greatest leaders, innovators and achievers do. Let them bring inspiration and power into your life...
Life is not divided into semesters. You don't get summers off and very few employers are interested in helping you find yourself.

It's fine to celebrate success but it is more important to heed the lessons of failure.

I really had a lot of dreams when I was a kid, and I think a great deal of that grew out of the fact that I had a chance to read a lot.

As I look forward, I'm very optimistic about the things I see ahead.

To create a new standard it takes something that's not just a little bit different. It takes something that's really new and really captures people's imagination.

People always fear change. People feared electricity when it was invented, didn't they? People feared coal, they feared gas-powered engines... There will always be ignorance, and ignorance leads to fear. But with time, people will come to accept their silicon masters.

The vision is really about empowering workers, giving them all the information about what's going on so they can do a lot more than they've done in the past.

Often you have to rely on intuition.

Our success has really been based on partnerships from the very beginning.

I realized about 10 years ago that my wealth has to go back to society. A fortune, the size of which is hard to imagine, is best not passed on to one's children. It's not constructive for them.

I like my job because it involves learning. I like being around smart people who are trying to figure out new things. I like the fact that if people really try they can figure out how to invent things that actually have an impact.

As we look ahead into the next century, leaders will be those who empower others.

Quotes by Bill Gates (b.1955

Books:
- Business @ the Speed of Thought: Succeeding in the Digital Economy, by Bill Gates, 1999, 496 pages
- The Road Ahead, by Bill Gates, 1999
- Bill Gates (Biography (a & E)), by Jeanne M. Lesinski, 2000, 112 pages
- Gates: How Microsoft's Mogul Reinvented an Industry and Made Himself the Richest Man in America, by Stephen Manes, Paul Andrews, 1994, 560 pages
- Hard Drive: Bill Gates and the Making of the Microsoft Empire, by James Wallace, Jim Erickson, 1993, 448 pages

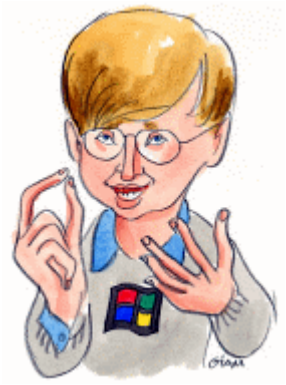
Other Resources:
- Bill Gates at Wikipedia, the free encyclopedia
- Time 100 Buidders and Titans: Bill Gates, Dec. 7, 1998
- Bill Gates at Forbes: World's Richest People
- Biography of Bill Gates

MICROSOFT CORP
Executive Salaries and Stock Options - Executive Compensation

Company Information	
COMPANY NAME	**MICROSOFT CORP**
FISCAL YEAR END	06/30
INDUSTRY	SERVICES-PREPACKAGED SOFTWARE
STATE OF INCORPORATION	WASHINGTON
STOCK SYMBOL	MSFT
Business Address	
STREET1	ONE MICROSOFT WAY #BLDG 8
STREET2	NORTH OFFICE 2211
CITY	REDMOND
STATE	WASHINGTON
ZIP	98052

TELEPHONE NUMBER	425-882-8080

About Bill Gates: Success, Net Worth & Pictures



courtesy of Paul Giambarba

Bill Gates, college drop-out, head of the biggest software company in the world and voted the world's richest man by Forbes for 12th consecutive years. Admired by some, Gates is also loathed by many - check out Bill Gates is Dead and his "Assasination Video".

Bill Gates steered Microsoft to control more than 90% of the client operating system market and be worth more than $300 billion by market capitalization, as of October 2005. Since going public at $21/share on March 13th, 1986, Microsoft stocks has split 9 times and would be worth a staggering $8064 today. If you had invested $10,000 in Microsoft stocks in 1986, your stocks would be worth $3.8 million today ...or up to $7 million before the tech bubble burst in 2000.

His astronomical wealth has also drawn huge fascination globally, judging from the popularity of websites like Bill Gates Net Worth Page and How to Become as Rich as Bill Gates - he makes $155,000 an hour based on his net worth today :)

Bill Gates' Profile/Timeline:

1955 - William Henry Gates III was born on October 28th in Seattle, Washington
1955 - Popularly known as Bill Gates, his family called him "Trey" when he was little
1967 - Bill enrolled in the Lakeside School in Seattle and met Paul Allen
1969 - Bill and Paul (a.k.a "Lakeside Programming Group") reported bugs in exchange for computer time
1972 - Bill and Paul formed Traf-O-Data and developed hardware/software to record highway traffic
1973 - Bill Gates graduated from Lakeside High and enrolled in Harvard University, where he majored in pre-law
1974 - Bill Gates and Paul Allen formed Micro-soft

1975 - Bill and Paul wrote the first computer language called BASIC and licensed it to MITS
1976 - Bill wrote software routines for BASIC on the Altair to use diskettes for storage
1976 - Gates wrote his famous "Open Letter to Hobbyists", accusing them of software piracy
1976 - Bill Gates dropped out of Harvard
1977 - Bill Gates and Paul Allen officially registers a partnership, and Micro-soft became Microsoft
1980 - Tim Paterson begans writing an OS for use on Seattle Computer Products' (SCP) 8086-based computer
1980 - IBM repesentatives met Gates and Steve Ballmer to write the OS for their upcoming computer
1980 - They met again and IBM showed the "Acorn" computer running on an 8-bit 8080 processor
1980 - Gates recommended the use of a 16-bit 8086 processor instead and promised an operating system
1980 - SCP ships QDOS 0.10 (Quick & Dirty Operating System)
1980 - Paul Allen approached SCP and purchased the right to resell to an unnamed client for $50,000 - IBM
1980 - Microsoft proposed to be in-charged of IBM's entire software development and convert DOS for IBM's PC
1981 - Microsoft bought all the rights to SCP's DOS and renamed it MS-DOS
1981 - IBM introduced its first desktop, Datamaster, which ran on the 16-bit 8086 CPU and Microsoft's MS-DOS
1983 - Microsoft announced Windows 1.0
1985 - Bill Gates gave keynote speech at Comdex
1985 - Microsoft released Windows 1.0
1986 - Microsoft is taken public at an IPO price of $21/share
1986 - Bill Gates became a billionaire at 31 years old - the yougest person to do so
1990 - Microsoft released Windows 3.0 and Microsoft sales topped $1 billion for the first time
1994 - Bill Gates and Melinda French got married in Hawaii on January 1st
1994 - Bill Gates becomes the richest person in America
1995 - Microsoft released Windows 95 and Bill Gates became the richest person in the world
1996 - Jennifer Katherine Gates was born on April 26th
1998 - Bill, Melinda and Jennifer moved into their new multi-million dollar house in Medina, Washington
1998 - Microsoft releases Windows 98
1999 - Bill's fortunes swell to $90 billion and maintains his position on Forbes list as the wealthiest person alive
2000 - Microsoft releases Windows 2000 and Windows ME
2001 - Microsoft releases Windows XP
2002 - Stocks and lawsuits bring his Gates' net worth down to $53 billion - still good enough for #1 on Forbes list
2003 - Microsoft releases Windows Server 2003

2006 - Microsoft releases Windows Vista?

Bill Gates Wealth Index

Most people will have read the recent reports of how Microsoft Chairman Bill Gates has had his personal net worth soar over 100 billion dollars and then drop down to 55 billion. He certainly knows how to make (and lose) money.

(Note: This article was written in 1998, Bill's Fortunes have dropped a touch since then.)

Consider that he made this money in the 25 years or so since Microsoft was founded in 1975. If you presume that he has worked 14 hours a day on every business day of the year since then, that means he's been making money at a staggering **million** dollars per hour, **around $300 per second.**

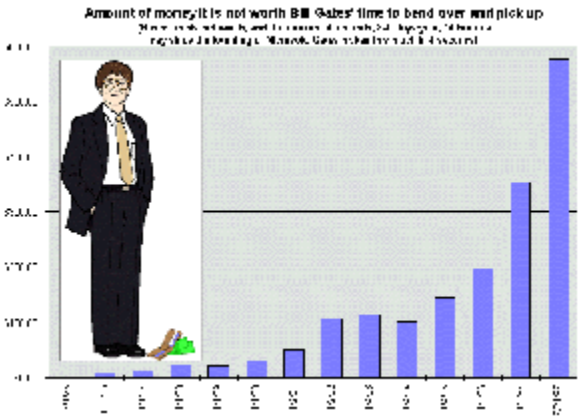
Which means that if, on his way into the office, should he see or drop a $1000 bill on the ground, it's just not worth his time to bend over and pick it up. He would make more just heading off to work.

We're assuming about 4 seconds to bend down and pocket the bill. Of course he can afford to hire people to follow him and pick up any $1000 bills he may drop. Not that he would, fortunately he doesn't quite think of his wealth or time this way. The rumours that when the $50,000,000 invoice for his new manor on Lake Washington came in, he simply said, "Melinda, could you get my wallet. I think it's in my other pants" are not true. It is ironic that a lot of that house is going to be underground; rooms built with Windows won't have any.

When I first calculated this, it was only a $20 bill, and then for some time it was a $100 bill. When I first wrote this as an article (it appeared in *Upside* and *Harper's* and was noted *annoyingly without credit* in the *Wall Street Journal* and *Reader's Digest*, it was a $500 bill. I remember speaking to him at a conference some years ago thinking, "$31 per second, $31 per second" as we talked. I didn't mention this. When I later came to explain the article was really about numbers and not him it was over $100 per second as he ranted to me about how mean *Upside* is to him.

It's perhaps more disturbing to look at the slope of his appreciation during some periods. In 1998 he netted some $45 Billion, meaning that at the rate he's went, if he saw a $10,000 bill, he would have been just as well to pass it by. (They do exist, but he won't see one until he buys the U.S. treasury -- they are not circulated. Salmon Chase, former secretary of the treasury and chief justice, is on it.) If it's a pile of cash he has to count, it's

even worse. At $3,700 per second in 98, they would have to be mythical five-thousand-dollar Bills -- and he would need to have a quick hand -- to avoid him losing the money in wasted time while he's counting them. Counting $1,000 bills would be very unprofitable.



That $45B in 12 months is an astounding rate at which to make money. That's higher than the entire gross domestic products of Chile and Egypt, and he's done twice as well as Guatemala, 4 times better than all of Sri Lanka or the Dominican Republic, 6 times better than Costa Rica, El Salvador or Panama, 8 times better than everybody in Brunei, including the Sultan, and 23 times better than all of Bermuda. That's right, in 1998 Bill's made much more (before taxes) than the entire population of Kuwait, all the Emirs, oil wells, Sheiks, millionaires and peasants -- everybody.

And forget about companies. Nobody -- even G.M, Exxon, Ford, IBM and Intel *combined* -- has earned what Bill's did in 98 by holding onto that MSFT stock. His profit/month is more than all the sales of Lockheed Martin, J.C. Penny, UPS or Intel, and all but 25 of the largest companies on last year's Fortune 500. In fact, in 1998, his stock has gone up around three times Microsoft's entire sales -- not just profits -- for 1996.

The "Too-small-a-bill-for-Bill" index has gone up quite a bit over the years. When Microsoft went public in 1986, the new multimillionaire only had to leave behind $5 bills.

Here's a chart (click on it) of the amount of currency it's not been worth Mr. Gates' time to pick up off the ground over the years, based on his current 800 million or so shares of Microsoft (he has given away quite a few) and the split-adjusted stock price courtesy of Microsoft's own web site.

The chart was of course generated with Microsoft Excel, and for those who want to play with it or print it at a better resolution, here's the .xls spreadsheet file to download.

Bill Gates Dollars

Another way to examine this sort of wealth is to compare it to yours. Consider an average American of modest wealth. Perhaps she has a net worth of $70,000. Mr. Gates' worth is 800,000 times larger. Which means that if something costs $100,000 to her, to Bill it's as though it costs 12 cents. You can work out the right multiplier for your own net worth.

So for example, you might think a new Lambourghini Diablo would cost $250,000, but in Bill Gates dollars that's **31 cents**.

That fully loaded, multimedia active matrix 233 MHZ laptop with the 1024x768 screen you've been drooling after? **Half a penny**.

A nice home in a rich town like Palo Alto, California? **Two dollars**. That nice mansion he's building? A more reasonable $63 to him.

You might spend $50 on tickets, food and parking to take your date to see an NHL hockey game. Bill, on the other hand could buy *the team* for **50 Bill-bills**.

You might buy a plane ticket on a Boeing 747 for $1200 at full-fare coach. In Bill-bills, Mr. Gates could buy **six 747s** (Not tickets, the planes themselves). Two for him, two for Melinda and two for young Jennifer Katherine.

Yet More

Evan Marcus, a Systems Engineer from Fair Lawn, New Jersey who maintains a Bill Gates Net Worth Page on his web site, notes that Bill could buy every single major league team in Baseball, Football, Basketball and Hockey for only about 35% of his net worth -- plenty left over to buy a European sport.

Of course then he wouldn't have around $150 for every person in the USA as he does now. Nor could he still give $6.70 to every person on the planet.

Marcus suggests that Bill could pay Michael Jordan's 1997 salary only 1300 times, but that he could buy 902 million subscriptions to TV guide. He's also fascinated by how much much all this money would be if put into dollar bills. Laid end to end, the Bills would stretch 3.8 million miles -- to the moon and back over 8 times. They could paper over all of Manhatten 7 times, or be stacked 2,690 miles high -- watch out for satellites. They would weigh 40,000 tons -- 100 times the weight of one of those 747s he bought above.

But one thing Marcus says Bill can't do is even dent the national debt. Should he selflessly donate his stock to the U.S. treasury, he would reduce the $5.37 trillion national debt by well under 1%. It's nice to put things in perspective.

Hey, Bill, if you just spent 3 minutes reading this article, do you realize you could have made $50,000 in that time? Back to work. And like I said, no hard feelings.

Picture Gallery of Bill Gates house - (Virtual tour of Bill Gates house in Media overlooking Lake Washington opens in a new window)

Take a virtual tour of the Bill Gates Mansion where he stays with his family. Watch the beautiful neighbourhood of Bill Gates house.

The Bill Gates family lives in the exclusive suburb of Medina, Washington, in a huge earth-sheltered home in the side of a hill overlooking Lake Washington.

Billionaire Bill Gates home is a very modern 21st century house in the "Pacific lodge" style, with advanced electronic systems everywhere. In one respect though it is more like an 18th or 19th century mansion: it has a large private library with a domed reading room. While it does have a classic flavour, the home has many unique qualities.

Lights would automatically come on when you came home. Speakers would be hidden beneath the wallpaper to allow music to follow you from room to room. Portable touch pads would control everything from the TV sets to the temperature and the lights, which would brighten or dim to fit the occasion or to match the outdoor light.

Visitors to Bill Gates House are surveyed and given a microchip upon entrance. This small chip sends signals throughout the house, and a given room's temperature and other conditions will change according to preset user preferences. According to King County public records, as of 2002, the total assessed value of the property (land and house) is $113 million, and the annual property tax is just over $1 million.

According to the National Association of Home Builders, the median American house size is slightly more than 2,000 square feet. Microsoft founder William Gates III house is more than 30 times that size.

Bill Gates Mansion satellite view from Google Maps

Bill Gates House Aerial view from MSN Virtual Earth

There has been lot of speculation that the home of Bill Gates on Lake Washington was designed on a Macintosh. Pictures of the Gates' complex are both private and copyrighted, so in order to see what this place really looks like you need to go to BCJ's website.

Following the "residential menu" click on the forward arrow key at the bottom of the pictures to advance to the house entitled, "Guest House and Garage, Medina, Washington".

USNews.com provides an interactive tour of Bill Gates home that covers the Pool building, Exercise facilites, Library, Theater, Formal dining room. Microsoft's own Seattle Sidewalk site has a birds-eye view of the project under construction. (Medina Washington project)

It took seven years to build the 40,000-square-foot Bill Gates mansion on a wooded five-acre compound in the moneyed Seattle suburb of Medina. [Bill Gates House Address: 1835 73rd Ave NE, Medina, WA 98039 map - arial photo] Much of the Bill Gates house is built underground into the hill, so the house looks smaller than it actually is. Unfortunately the hidden section underground did not escape the taxman's view; Bill paid over a million dollars last year on property taxes.

Earlier, Bill Gates organized a private party at his waterfront mansion. The U.S. Department of Homeland Security announced a "temporary security zone" around Gates' Lake Washington home which locked down all of Lake Washington south of the Highway 520 bridge and stayed in effect for two days. Gates' homestead is approximately 48,000 square feet with a garage that reportedly accommodates 30 cars.

The architects who designed Bill Gates' famous residential compound in Washington were James Cutler Architects and the architectural firm Bohlin Cywinski Jackson (BCJ).

Inside Bill Gates' Garage, you'll find a 1999 Porsche 911 Convertible and 1988 Porsche 959 Coupe. Steven Ballmer drives a 1998 Lincoln Continental. In fact, due to the 959's questionable emissions and unknown crash ratings, it took a federal law signed by President Clinton for Bill Gates to legally drive his 959 on American roads.

Read this interview with James Cutler, FAIA, the best-known architect of Northwest Style and the designer of the Bill and Melinda Gates residence on Lake Washington near Seattle. Firm: Anderson Cutler Architects (formerly James Cutler Architects), on Bainbridge Island, off the Seattle coast.

REDMOND, Wash., Feb. 16, 2005 — Microsoft Corp. has for decades been on the cutting-edge of technological innovation. Company co-founder and chairman Bill Gates spoke to Peter Jennings today at the corporation's headquarters.

Gates talked at length about Microsoft's effort to upgrade security in the computer industry, his foundation's charitable work and his goals for the company.

Following is a transcript of the interview:

PETER JENNINGS: There are several stories in the newspapers this morning all about the speech you made in San Francisco about the state of security in the industry. How much of a challenge is security these days?

BILL GATES: Security is, I would say, our top priority because for all the exciting things you will be able to do with computers — organizing your lives, staying in touch with people, being creative — if we don't solve these security problems, then people will hold back. Businesses will be afraid to put their critical information on it because it will be exposed. People won't use their credit cards quite as much and buy things, and so it's really the thing we got to get right so that people don't think about it. So that it's just happening without their having to learn a lot of terminology and see a lot of user interface. We're making good progress on it.

JENNINGS: Microsoft is nonetheless accused of not getting it right and being slow to get it right.

GATES: Well, the whole industry has a challenge here. Because of Microsoft's central role, that means it's a big challenge that Microsoft has to step up to. Over the last year, people have been more and more complimentary of how we have made progress. We're focused on it, but a few years ago, people were being tough on us and I think there was a lot of validity to that.

JENNINGS: Microsoft is the biggest target.

GATES: We're responsible for the creation of the PC industry. The whole idea of compatible machines and lots of software — that's something we brought to computing. And so it's a responsibility for us to make sure that things like security don't get in the way of that dream. You know, its individual empowerment, information at your fingertips — we need to drive that forward.

JENNINGS: And if people continue to undermine Microsoft or the general technology in general, how seriously does it inhibit its future?

GATES: Oh, I think there are a lot of people who would be buying and selling online today that go up there and they get the information, but then when it comes time to type in their credit card they think twice because they're not sure about how that might get out and what that might mean for them. So I don't think it has caused us to go down in any way, but there is a lot more people who would be using it once we get all these concerns taken care of.

JENNINGS: You notice that ChoicePoint in California found that 30 some odd thousand, perhaps a hundred thousand, of their employees found that their identities got raided in their huge system. How worried does that make you?

GATES: Well, certainly there has been a lot of information in computers for decades — your charge card information, your telephone call data. It's partly because people have

personal computers, they realize all that information is out there and the people that have those databases need to secure them. They need to administer them properly because people expect their privacy to be preserved.

JENNINGS: I read an article coming up here on Firefox (Web browser) and its perceived ability to do this better than you. Is that fair?

GATES: Well, there's competition in every place that we're in. The browser space that we are in we have about 90 percent. Sure Firefox has come along and the press love the idea of that. Our commitment is to keep our browser that competes with Firefox to be the best browser — best in security, best in features. In fact, we just announced that we'll have a new version of the browser so we're innovating very rapidly there and it's our commitment to have the best.

JENNINGS: Are you going to have to push your browser faster because of competition?

GATES: Well, competition is always a fantastic thing, and the computer industry?

JENNINGS: I knew you were going to say that (laughs).

GATES: (smiles) … is intensely competitive. Whether it's Google or Apple or free software, we've got some fantastic competitors and it keeps us on our toes.

JENNINGS: And you say it keeps you on your toes, you have such a huge portion of the market — in all elements of technology. Is the tendency in the shop sometimes to think that we just can't be beaten?

GATES: No, in fact that's one thing I like about the Microsoft culture — is that we wake up every day thinking about companies like Wang or Digital Equipment, or Compaq, that were huge companies that did very well and they literally have disappeared. Got bought up, you know went into a direction that was a dead end for them. So we have that lesson and we are always saying to ourself — we have to innovate. We got to come up with that breakthrough. In fact, the way software works — so long as you are using your existing software — you don't pay us anything at all. So we're only paid for breakthroughs. We have to make a new version of Windows or Office that you think is worth going out and buying.

JENNINGS: Why do so many people seem to think that open sourcing is so essential?

GATES: Well certainly there is always going to be free software, and there will be commercial software. We represent one company that has commercial software and can stand behind it in terms of support and compatibility. But we have always believed that free software space will be there and will be complimentary.

JENNINGS: Everybody I talked to seems to, particularly if they are young, seems to think that open sourcing is important and that among the reasons it is important is that it enables them to run more secure systems. Is that true from your point of view?

GATES: Actually no, but that is the kind of competition that we have. Is that they will innovate in that space, we will innovate in our space. And in fact, we do a lot of work to make sure that these things can inter-operate so that a company can have a mix of Microsoft products, Unix products, Mainframe products, and then each time they do a project they can look and say - is the Microsoft solution best? Is the other solution best? And so there will just be a lot of choices there, no one approach is going to replace the other.

JENNINGS: You sound quite sanguine about this. Is this a public position that is essential to take?

GATES: No, I have always loved the competitive forces in this business. You know I certainly have meetings where I spur people on by saying, "Hey, we can do better than this. How come we are not out ahead on that?" That what keeps my job one of the most interesting in the world.

JENNINGS: What does it mean to be the Chief Software Architect?

GATES: Well it means that there are a lot of business issues and concerns and you know final decision making that the CEO Steve Ballmer gets to worry about, and I get to worry about the technical strategy. What are we doing with the products? And so five years ago, when I was still CEO, the percentage of time I got with the engineers was going down. It had gotten down to almost less than a third of my time. And now I get to focus the vast majority of my time on exactly those software design issues.

JENNINGS: Can you tell me two things that you have changed your mind about in the last year about, in the last year, about technology?

GATES: Well let's see. There are some things that we are always thinking about. For example, when will speech recognition be good enough for everybody to use that? And we have made a lot more progress this year on that. I think we will surprise people a bit on how well we will do on our speech recognition. Also the idea of how the phone and the PC are coming together. Where you will be able to see the calls that you missed, or even when your phone rings see immediately who that is that's calling, or control how that is forwarded, or even set it up so that the screen is part of your interaction. We are seeing that as increasingly important and are putting a lot of research into that.

JENNINGS: And are there a couple of things about technology in the last couple of years that you have simply said — don't need to go there, don't want to go there or can't go there?

GATES: Anywhere that we can have software work for somebody and make them more productive, help them stay in touch. We're going to write software for them. So we do software for watches, for phones, for TV sets, for cars. And some of these take a long time to catch on. In fact it's just this last year our software for cable systems, for TV watching, has really gotten a lot of customers and we have working on that for over 10 years.

JENNINGS: Do you struggle sometimes between being a hugely successful businessman and being a software architect?

GATES: No, I don't think there is any contradiction there. The way to be successful in the software world is to come up with breakthrough software, and so whether it's Microsoft Office or Windows, its pushing that forward. New ideas, surprising the marketplace, so good engineering and good business are one in the same.

JENNINGS: You have so many opportunities available to you on a daily basis, more than most people in their lives, when you got up this morning and headed for work, what did your day look like? What's on the agenda today which is utterly fascinating?

GATES: Well, I have a meeting today with our people doing search. And that's an area where Google has got out in front, does a very good job. We're sort of the David vs. Goliath in that (chuckles) particular battle so we'll have fun talking to them about their progress. I am meeting with our tablet people about the idea of carrying text books around. They'll have just a tablet device that they can call up the material on. That's been a dream for a long time, we're making progress there. So review of the software projects and encouraging them in terms of what they are doing well and telling them who else they need to work with. That's the primary thing on my schedule.

JENNINGS: What about off the job?

GATES: Well I get a lot of time to read for my work the foundation is doing. I'm very interested in the education work there, very interested in the global health programs. They send me over lots of books I read and send back questions about doesn't this mean we can do this that or the other thing. So I would say that after software the thing I spend most time on is the work of the foundation.

JENNINGS: You are famous for your determination that people acquire knowledge and learn more and yet you like everyone else make these extraordinary games now (Gates chuckles). Is gaming both enhancing now and undermining society?

GATES: I think the thing we see is that as people are using video games more, they tend to watch passive TV a bit less. And so using the PC for the Internet, playing video games, is starting to cut into the rather unbelievable amount of time people spend watching TV. The interactive games range quite a bit in terms of how much they enrich you. Certainly your reflexes get quite a good workout there. We've had this "Halo 2" that has been an unbelievable hit, and the new thing we brought to that is that you don't just sit in a room

by yourself, you connect over what we call live - so you are talking to your friends, you are meeting people, who are making it more social and I think that will bring it to a lot more people and a lot more age groups.

JENNINGS: Are you nonetheless happiest when you are alone with a book and so you recommend it to other people?

GATES: I spend a lot of time reading. I think getting kids to love reading, any topic is fantastic thing for their future. When I go on vacation I always take way too many books because I am always worried I will run out. That's one of my greatest pleasures.

JENNINGS: And Fresca I am told you always take on vacation. Is that true?

GATES: Oh different diet drinks. Diet Coke, Diet Orange, Diet Fresca — I like all of those.

JENNINGS: You have been a big advocate of travel. And you have on occasion said that Americans who spent more time traveling in Africa, for one, would learn something. What would we learn?

GATES: Well I think there is a lot of compassion when you see people in a very tough situation. When you see parents dying of AIDS, you see orphans, you see malaria. If you don't see it — if you are just reading the statistics its hard to relate to and its hard to think of it as something that you need to help change. So actually getting out to India, to Africa, that's critical to me to make sure my foundations is doing effective work and you know renews my commitment to take all the wealth I have and make sure it goes back to causes like world health.

JENNINGS: But you are a very specific example in this case and I will come to that, how do you think the average American would change if he or she traveled more?

GATES: I think they'd vote for Politicians who cared more about the developing world and the tough conditions there. That our aid would be more enlightened and a higher percentage of what we do. I think they would want to get involved themselves in either being a part of a volunteer organization here in the U.S. or even spending some time helping out overseas. I think they would feel a more common bond and realize how privileged they are.

JENNINGS: Is there any part of the world that intimidates you?

GATES: Well I could say that every time I go to China I am amazed by the level of energy and activity there. And you know its like super charged capitalism where they're creating new jobs and they are being very efficient. And you know that's daunting. It's a challenge to the rest of the world that we got this great opportunity that they're going to build good products, but we all have to become more efficient to work at that level as well.

JENNINGS: Should we be worried that China will best the United States before long?

GATES: Well in the area of economic activity, no one bests anyone. As their people are more college educated and creating inexpensive products. That's just a great thing for our consumers. It does mean that the companies here need to think about selling to China. About how they work with partners there. And measuring their efficiency against the best in the world which in my business will be the leaders in China.

JENNINGS: Is the U.S. as competitive as it needs to be?

GATES: I think we need to renew our competitiveness.

JENNINGS: How do we do that?

GATES: Well we need to look at particularly our education system. I'm very passionate about the fact that our high schools are not doing the job they should do. They were really invented for an era where really not every one needed to get a good college education to get the jobs of the future, and so I think we need to start there. I think we need to look at some of the efficiencies in our medical care, legal system, but education would be at the top of my list in keeping the U.S. at the forefront, where it clearly is today.

JENNINGS: You are constantly giving money to different causes. I wonder if your money creates a sense of urgency that you would like it to create in terms of other people's interest and commitment.

GATES: Well we often will give in partnership with other people. For example these grants for new high schools that work in a different way. We've had many people come along and help out with that. Of course there we need to work with the government. The vast amount of funds for education will always come from the government. Likewise in world health we have been able to draw people in and really show that you can make a big difference and save lives and improve outcomes and there is no inefficiency in this like sometimes the image in foreign aid feels like, well where does it go?

JENNINGS: Are you saying that private enterprise, private money, is more efficient than government money?

GATES: No, I am saying that there are examples when you focus on health, that all the money — government and private — can make a difference. We often do pilot projects though to you know make it evident what the right approach is. We're very careful about measuring the outcomes, making sure that we really did get what was intended and then if it goes well than both private and government money hopefully come in and scale up the good idea.

JENNINGS: Is the converse true? Do you sometimes give so much money that people are inclined to say, "Let Gates do it."

GATES: Well I hope that's not the case. I know that in the case of world health and education we are seeing more money, other than our money, come into those areas and we're able to shape how some of the government money comes in in way that makes it more effective.

JENNINGS: You are paid a great compliment once, when someone said, "You feel a death in Africa as if it were a death in the world." A, is that true? And B are the rest of us missing something?

GATES: Well I think most people are kind of overwhelmed with the statistics. You know that you hear a million people die of Malaria, several million people die of AIDS, and its hard to relate to. Whereas if you knew just one family, and saw what was happening there, you could understand that those children have joy and opportunity, just like your children do. Then it would be easier to relate to. And so for me, you know I study the statistics, but I also have to go over there and have that direct connection to really renew my belief that every life should be treated on an equal basis.

JENNINGS: What have you learned about the value of private money?

GATES: Well private money can take risks in a way that government money often isn't willing to. For example, take the creation of a vaccine that will eliminate AIDS as a problem or Malaria — that's been vastly under-funded and we need to change that. Governments didn't want to try something that could be a failure.

JENNINGS: You are so well known that I think people expect you to be good at almost everything. Are you good at almost everything?

GATES: No — absolutely not. My success, part of it certainly, is that I have focused in on a few things. From a very young age I thought software was magical, I thought if I just really focused on that and hired great people that we could change the world through the tool that software has now become. And so you know, I picked just a very few things. I think that's the only way I can make a difference.

JENNINGS: Is there anything you're notoriously bad at?

GATES: Oh my wife thinks she's better at me than puzzles. I haven't given in on that one yet. I don't get to do a lot of sports. I do a few — some tennis, and golf, but you know, I'm mostly known for my work in software and now a tiny bit for the foundation work.

JENNINGS: Can you play an instrument?

GATES: I'm very embarrassed. I played a bit when I was young and I'm not good at musical instrument. I meet people overseas that know five languages — that the only language I'm comfortable in is English. Those are things that I'd like to get around to but I haven't been able to.

JENNINGS: Can you write?

GATES: I like to think I can write. I have a few books that sold fairly well and I think putting your thoughts on paper is very, very important. In my work at Microsoft there've been a number of very key memos. For example, one that kicked off our focus on the Internet that's still pretty famous called "Internet Tidalwave." Three years ago is when I wrote the memo getting us focused on these security problems, making sure that we had breakthroughs that would avoid that holding the field back.

JENNINGS: Did you ever envision, and is it difficult to live life in the stratosphere as you do at such an early age?

GATES: Well, my company was pretty small when I was in my 20s. The success of Microsoft has really been in the last 15 years or so. I think it is tough to have success at a young age. I've tried to limit the distortive effect that that has. I think that having kids helps a lot with that. Just staying very focused on the problems people have.

JENNINGS: And are you very, very aware that your children are terribly privileged? I shouldn't say terribly privileged, very privileged and that you have to fight that with them for the future?

GATES: I think that's one of the biggest challenges that Melinda and I face is that our kids will grow up in a nice house and we don't want them to take things for granted. We're looking forward to taking them on a lot of these foundation trips so that they will see what life really is like for most people on the planet and they'll have an understanding for why we're giving our wealth to those causes.

JENNINGS: When I talk to people about you, everybody was fascinated that I was coming to see you. I'm sure that's not a surprise to you. They very quickly, often, particularly if they're young, put you over on the side of being a businessman. And they put other people over here as creators. Do you think that your image has suffered because you've been so successful at business?

GATES: Well, my success is creating great software. It's not like if you put me in some other business I'd be an expert and know what to do. And I think my most important work was the early work — conceiving of the idea of the PC and how important that would be, and the role software would play, having standards there. So, you know, people are welcome to think of me as a businessman, but I think of myself as a software engineer.

JENNINGS: You're original vision was to put a PC in every home.

GATES: That's right. The slogan of Microsoft when we were just a few people was a computer on every desk and in every home.

JENNINGS: And is it realistic today?

GATES: Well, in fact, we're very close to that vision being a reality, at least in the rich countries. PC penetration in the United States is over 60 percent. The prices keep coming down, the power keeps going up. You know, today, people know, if you want to organize your photos or your music or keep a complex family schedule together or just find books — that PC is the way to do that. So, we really have achieved a lot of that dream.

JENNINGS: On the subject of music, I read somewhere that about 80 percent of Microsoft employees who have a music playing instrument or a music playing device use an iPod.

GATES: Well, I doubt that's the case. Certainly, the iPod's a great success.

JENNINGS: Do you have one?

GATES: No, I'm not an iPod user. I use the Creative Zen which is a fantastic product. That's another space where, even what we have today, whether it's iPod or the other things are only the start of what we're gonna have in a few years. People are gonna want choices. These things are going to be smaller or better, cheaper. So, music has changed. The age of the CD is really coming to an end.

JENNINGS: The public likes this tension between you and the others as I'm sure you know. So people want to know do you have an iPod. You say you don't have. Did iPod beat you in this issue?

GATES: Oh the iPod did a great job, but what Apple's done there is typically what they do. It's their, only their one music store, only their device. What we're doing is providing choices. So it's like the Apple computer versus the PC. With the PC you can buy from many companies so you get cheaper prices, you get more variety and here with music devices we're coming in with the same. But they're a strong leader in the space and I think as we gain share, people will be surprised.

JENNINGS: But, it isn't hard for you is it to stand back and compliment somebody else?

GATES: No, particularly Steve Jobs who's done a lot of amazing things in our business.

JENNINGS: I've heard some people say that if they were graduating from science or technology today, they'd rather work for Jobs than Microsoft. Why do you think that might be true?

GATES: Well it's certainly not the case. You found a very unusual data point there. In terms of software that's going to change lives and the most interesting software work in the world we're able to attract the smartest people and believe me, that's something that we track very, very carefully. When it comes to having the best software people, that's been the key to our success.

JENNINGS: I think it was in Davos you said it was stupid as hell to let Google get ahead of you on the search engine.

GATES: Yea, that's throughout my career, you know, I've gotten to make hundreds and hundreds of mistakes sometimes we get into something too early sometimes we have to match what they do but then come with something better there. I think we're actually one of the few companies that can say with credibility that we'll give Google some competition. And that's great for everyone.

JENNINGS: What is the next big thing?

GATES: Well, we can make computers far simpler than they are today even as we're doing more and more with, you still have to learn to much about the innards. You know, security is a great example of that. Even communications, you have multiple e-mail accounts, and instant messaging and phone numbers, it should just be that you pick the person you want to contact and the right thing happens automatically. If you want to have a meeting, you ought to be able to have somebody at a distance be involved in that in a very simple way. So communication itself is still very, very inefficient. That's one of the areas where we see breakthroughs, even in the next 3 years.

JENNINGS: SPAM?

GATES: Well SPAM is taking e-mail, which is a wonderful tool, and exploiting the idea that it's very inexpensive to send mail. What we're doing is we're filtering out these SPAM e-mails because they have a certain character, certain topics that they cover, that filtering works very well. SPAM is way down from its peak. There's a new technology that is an industry standard we created called Sender ID that will bring it down even more. And so we're well on the track to making this problem and making sure that it doesn't make e-mail waste your time with lots of unimportant messages.

JENNINGS: We are all so dependent on the technology now, is it possible that some evil genius could bring the system down?

GATES: Well, certainly, take the electricity network. We've experienced even in the last two years, that without anyone evil, that there was a big blackout there. Likewise for the internet. We have to worry that it gets administered well and that nothing bad happens to it. More and more safeguards are being put into place but no infrastructure's invulnerable and there's a lot more to be done for the computer infrastructure.

JENNINGS: When I said to somebody the other day that you at Microsoft had always said we will continue to be the innovators of technology this person who was young and a techie said "Oh they've never innovators they buy other people's material, they expropriate other people's knowledge and adapt it into their business." I don't understand that completely, but is there some truth in that?

GATES: Well the biggest thing we did was we invented the field. That is there were no other companies doing what we were doing. The idea of the PC, the idea of the software industry — that was something very, very unique. There are companies like Xerox had a research lab that did a lot of forward looking work. In fact, the whole interface you see with windows and with the Apple McIntosh a lot of the early ideas came from Xerox. A lot of the good people who did the work there are now here at Microsoft taking those ideas a lot further. And so, it is important to acknowledge that we build on the work of others. But if any one company has done a lot of unique work, breakthrough work, risk-taking work, that's gotta be Microsoft.

JENNINGS: I was asking you about whether or not you thought an evil genius might be able to bring the country down? Second point to that, how much do you worry about technology letting us down in general?

GATES: Well technology has provided a lot of increased productivity but we always have to look at where it comes in and causes problems. Spam is a great example of that, making sure parents can control where their kids are going on the internet is a very good example of that, so it's hard to think of a breakthrough that hasn't come with some challenges that we have to mitigate.

JENNINGS: Which movie do you think's gonna win the Academy Awards?

GATES: Perhaps Hotel Rwanda. I think there's a lot of good movies this year so I can't say for sure.

JENNINGS: What's the last book that you read that really made a difference in your life?

GATES: I just finished reading Jared Diamond's book called "Collapse" and I highly recommend it, it's about societies that used up their resources and therefore, went into decline. So he's talking a lot about some of the environmental challenges will face and it's a fantastic read.

JENNINGS: You are a very, very serious man.

GATES: Oh, I'm serious when I do my work. I'm not serious when I'm home with my kids.

JENNINGS: The person you would like to meet that you haven't been able to meet yet?

GATES: I like to meet scientists who are doing breakthrough work. A lot of them toil in obscurity some of them are very well known. I wanted to meet Richard Fineman but I never got a chance to do that.

JENNINGS: The best thing about gaming?

GATES: Gaming draws you in. We're gonna make gaming far more social than it's been to date. Certainly, versus somebody just sitting there on the couch watching passing TV I'll stick up for gaming.

JENNINGS: What's the worst thing about gaming?

GATES: Well, gaming can be so interesting that it draws you away from reading or doing your homework. Certainly in our household there'll be a budget for how much time gets spent in front of the videogame.

JENNINGS: Do you think that the country continuing to have the degree of deficit spending which this administration appears to support is good for the country?

GATES: I'm quite worried about the fiscal imbalances that we've got and what that might mean in terms of financial crisis ahead. I think we're a bit in unchartered territory. I'm not an expert myself but I definitely hope we go back to less of a trade deficit and less of a budget deficit.

JENNINGS: President, beg your pardon, Senator Frist said yesterday he didn't think there was enough public support in the country for the president's plan to have private security accounts in social security. Do you think the public support is there?

GATES: I think the issue of what type of returns you'll see there, how that will effect interest rates and things, I think there's some very complex issues there that the public in general has a hard time understanding. Partly, the specifics aren't in so that you're looking at in a very abstract way. People want to know, when they retire, will their benefits be as good as they've been in the past. And I think there's a lot of unanswered questions.

JENNINGS: What would you do if you were away for an entire day and you had no access to technology.

GATES: I would take a bag of books with me and have a fantastic day.

JENNINGS: So, you are not dependent on technology?

GATES: No, in fact when I go on vacation, I don't do e-mail when I'm off on vacation because that's my time to read. But, over the weekend, I do a lot of e-mail because I come up with new ideas and that's my chance to really write down my extensive thoughts about things that happened during the week.

JENNINGS: Do you talk to your public?

GATES: I'm not sure what you mean?

JENNINGS: Do you talk to the public on e-mail?

GATES: I don't get out in chat rooms all that much. I do put out broad letter to our customers about 3 or 4 times a year.

JENNINGS: How do you think you've changed in the last 10 or 15 years?

GATES: Well certainly having kids has been a fantastic thing for me. It's meant that I'm a little more balanced. In my 20s I worked massively, hardly took vacation at all. Now, I, with the help of my wife, I'm always making sure I've got a good balance of how I spend my time.

JENNINGS: And finally, though, it's completely out of order. The Bill and Melinda Gates Foundation is astonishing. How do you choose what you're going to give money to?

GATES: Well the basic priority is what we're doing in world health and that's about saving lives. And so we look at what breakthroughs, what medicines can save lives. It's very clear that you can list those top 10 diseases that only exist in the developing world and say, OK, we've got to solve those. and so that's pretty easy. In education, which is our other area, we've chosen high schools. Saying that in fourth grade U.S. students are very competitive by 12th grade they're among the worst. So what is it that goes on there in terms of motivation or tracking or incentive systems and we hope to make a contribution in improving that.

JENNINGS: But you could have chosen other issues. Why were so intent in making a difference in communicable diseases?

GATES: Well, I looked at what is the greatest inequity in the world. The U.S. is very oriented towards solving inequity — gender inequity, racial inequity. In fact, you'd have to say, the great inequity is that we let people die of these diseases. We treat their lives as being worth less than a few hundred dollars because that's what it would take to save them. And so there's a huge disparity and bringing the advances in science to those diseases can change that in a big way. So, my goal was to pick the thing I thought was the greatest inequity in the world, focus on that as our top priority and that's world health and then take the greatest challenge for the United States and make that also a priority and that's the work we're doing in education.

JENNINGS: Many thanks. I enjoy listening to you.

Microsoft aims to trounce Google
People are underestimating what Microsoft is doing with search technology, says Bill Gates.

The head of the software giant told the BBC that its ambition is to be bigger than Google in search.

He said that competition had ultimately been good for web users because it had pushed search technology. This meant search would be "far better" in a year.

The next decade looks even better, he said, with a lot more advances in software technology ahead.

"The beauty of software is that we are always making breakthroughs. We will have more in the next 10 years than we have had on the last 30," he said in an exclusive BBC interview.

Mr Gates said he saw Microsoft's strengths lying in search, but also in its software that provides the glue to make different devices talk to each other so that people can have more power over their content.

"We are in the best position we have ever been in," he said.

But he stressed that Google was not the only threat it faced in the long term.

It had competition in every arena, from the likes of Nokia, Sony and Apple, but that was something with which Microsoft had become accustomed.

> **“Our success is overwhelmingly greater than theirs [Apple's] is - they are learning from us every step of the way and we are learning from them”**
>
> Bill Gates, Microsoft

More to do

He admitted Apple had had the biggest bite out of the digital music business with its iPod and iTunes success, and wished that Microsoft and its device partners had a bigger share.

But he stressed that, in most part, Microsoft was not about making devices.

"Our success is overwhelmingly greater than theirs [Apple's] is - they are learning from us every step of the way and we are learning from them," he said.

Microsoft is still about making PC technology work for people, with software being at the centre of it to "help people out."

Although software has been his life's work, Mr Gates said that the PC of today is still not the PC he dreamed about 30 years ago however, and that was a challenge he would continue to pursue.

"It is not as simple, not as cheap, not as powerful as I thought we could achieve so now I get to come in and work with smart people to make that happen. It's the most fun I can imagine," he said.

Although there were a billion PCs, that was still very different to having six billion in the world and that they

> **“TV will be redefined so that the shows can be when you want them. They can be personalised; when you see the news it will on the topics you care about”**
>
> Bill Gates, Microsoft

was still more to be done to make them much smarter.

"They can do lots of things, but still you can't talk to them, and that is one of the things we will get this decade," he predicted.

"So being part of really getting that ultimate tool that empowers you, lets you achieve your potential, lets you pursue your curiosity - there is nothing more fun than making that 100% true."

Playing in the home

What was becoming ever more important to the company was providing the glue that makes it easy to get one device to talk to another, particularly in the home.

With more broadband penetration, Mr Gates said he still saw the PC as the device through which people could organise and share their digital content, such as photos and music.

He sees Microsoft's role as critical in helping to change people's lifestyle in the home, for example, making "digital memories" easily accessible.

Entertainment is also becoming an extremely important area for Microsoft and every other big name technology firm.

"TV will be redefined so that the shows can be when you want them. They can be personalised; when you see the news it will on the topics you care about," he said.

Microsoft offers more than just software

But it is also an evolving arena which is embracing gaming and other types of content much more, as well as video, music and TV.

The Xbox 360, released in November in the US and December in Europe and Japan, joins the media centre as part of Microsoft's effort to provide people a hub through which they can organise and share their content.

"The whole family home can be connected together so it is easy to see your photos on different screens in the house, and easier to get the music wherever you go."

Longer term

Looking ahead, the strategy Microsoft is taking to remain a dominant player relies on work being done in its global research laboratories.

"It's based on the long-term approach we've taken in investing in things like speech recognition so you can talk to your phone, or visual recognition so that if a phone takes a picture of a sign in a foreign language we can translate for you," Mr Gates said.

"We are stronger than ever because we have a research lab in Cambridge, we have one now in China, one in India and that is where the top problems in computer science are going to be solved."

The Bill Gates Interview

1994

A candid conversation with the sultan of software about outsmarting his rivals

"The Wallet PC is a futuristic device. Instead of having tickets to the theater, your Wallet PC will digitally prove that you paid. It's our vision of the small, portable PC of, say, five years from now."

"If we weren't still hiring great people and pushing ahead, it would be easy to fall behind and become a mediocre company. Fear should guide you, but it should be latent. I consider failure on a regular basis."

"We bet the company on Windows and we deserve to benefit. It was a risk that's paid off immensely. In retrospect, committing to the graphics interface seems so obvious that now it's hard to keep a straight face."

A youngish man who looks like a graduate student sits on the door of his unpretentious dorm-like room, spooning Thai noodles from a plastic container. His glasses are smudged, his clothes are wrinkled, his hair is tousled like a boy's. But, when he talks, people listen. Certainly no person on the campus can talk about the future, as he does, with the riveting authority of someone who not only knows what's in store for tomorrow but is a major force in shaping that future as well.

Yet this is an office, not a dorm room. And, while everyone calls the complex of 25 buildings a campus, it's not a college or university. It's the sprawling Microsoft headquarters in Redmond, Washington. And the speaker is no grad student. He's William H. Gates III, chief executive and co-founder of the largest software company in the world, which made $953 million last year on sales of $3.75 billion. As Microsoft's largest stockholder, he's worth nearly $6.1 billion, making him this country's second wealthiest man and, at 38, its youngest self-made billionaire. (Gates pal, investor Warren Buffett, is first, though they occasionally trade places depending on stock prices.)

Microsoft's wealth and power just grow and grow, asserts Fortune magazine. CEO Bill Gates could buy out an entire years production of his 99 nearest competitors, burn it, and

still be worth more than Rupert Murdoch or Ted Turner. Microsoft's $25 billion market value tops that of Ford, General Motors, 3M, Boeing, RJR Nabisco, General Mills, Anheuser-Busch or Eastman Kodak.

With size comes power. Microsoft dominates the PC market with its MS-DOS operating system, the basic software that lets the computer understand your commands and carry them out. MS-DOS runs on 90 percent of the worlds IBM and IBM-clone computers. Microsoft has extended that presence with Windows, a graphics interface environment that runs on top of MS-DOS and will, according to Gates, replace DOS in future versions. Microsoft also supplies about 50 percent of the worlds software applications: programs such as Excel (spreadsheets), Microsoft Word (word processing) and Access (data bases). It is also in the business of networking. And multimedia. And CD-ROMs. And books. And as an early supporter of the Macintosh computer, Microsoft virtually owns the Mac application market.

The future looks equally promising. Gates recently announced that Microsoft and McCaw Cellular Communications will form a joint 840-satellite global communications network. At the same time, Gates also acknowledged that he was in high-level negotiations with AT&T about a series of ventures that could include interactive television, on-line computer services and software. This is in addition to a previously announced joint venture with Nippon Telegraph and Telephone, the worlds second-largest phone company, and with cable giant John Malone and his Tele-Communications, Inc. aimed at launching a digital cable TV network for computer users. Viewers would be able to interact with programs, download software and shop for products and services. Other partnerships loom as well, including ones with publishing companies and Hollywood studios.

Gates insists that Microsoft has to keep running full speed just to stay in place. But that hasn't stopped his enemies from engaging in constant Bill-bashing. His competitors accuse Microsoft of unfair business practices, and his allies consider themselves fortunate to be on his good side. Given the fluidity of partnerships and strategic alliances in the computer industries, today's friends could easily become tomorrows foes and vice versa, if Gates thinks it advantageous.

Nor is Gates immune from official attack, as evidenced by a three-year Federal Trade Commission investigation into possible monopolistic tendencies stemming in part from the success of Windows over IBMs OS/2 created in tandem with Microsoft. The FTC dropped the case but, uncharacteristically, it was picked up again, this time by the Justice Department. Gates insists "the hard-core truth is that we've done nothing wrong." But the investigation continues, and Gates has other problems as well. Microsoft recently lost a $120 million lawsuit led by Stac Electronics and is planning an appeal. Stac claimed Microsoft's Doublespace hard disk compression utility infringed on its patents for Stacker, the compression utility Microsoft had originally wanted to include with its new versions of MS-DOS. (Its worth noting, though, that Stac also had to pay Microsoft $13 million in damages for misappropriated trade secrets.)

Gates is part scientist, part businessman and he's surprisingly good at both roles. If he's not flying off somewhere (he often travels coach despite his wealth), his day is an endless series of meetings. Gates cruises the Microsoft campus at a breakneck pace to check on the progress of his young, idealistic and fiercely competitive programming jocks: *Wired* magazine calls them Microserfs. He listens to presentations, praises some ideas and criticizes others as "the stupidest thing I've ever heard".

Since founding Microsoft in 1975 with Harvard pal Paul Allen, Gates has been described as everything from a capitalist brainiac to a plain old nerd. *The New Yorker* wrote: To many people, the rise of Bill Gates marks the revenge of the nerd. Actually, Gates probably represents the end of the word nerd as we know it. Maybe that's why a software competitor and friend once called him one part Albert Einstein, one part John McEnroe and one part General Patton. (Must be somebody who likes me, mused Gates.)

Bill Gates was born into a well-to-do Seattle family. His father, William H. Gates II, is a prominent attorney. His mother, Mary, is a University of Washington regent and a director of First Interstate Bank. Hoping to alter young Bills rebellious streak, his parents put him into Lakeside, an academically rigorous private school in Seattle. It was there that he met eventual business partner Paul Allen and discovered computers. Soon Gates was programming in his spare time and making money at it. He was in the eighth grade.

Gates entered Harvard in 1973, and dropped out two years later when he and Allen wrote a version of BASIC computer language that worked on the new Altair computer. He and Allen moved to Albuquerque, where the Altair was built, and started Micro-soft. In 1979, Gates and Allen moved the company, but not the hyphen, to Seattle. In 1980, when IBM turned to Microsoft in its search for an operating system, the modern PC era began in earnest.

Allen left the company a few years later when he was diagnosed with Hodgkins disease, but he has since recovered and re-emerged. With his own Microsoft billions, Allen now owns the Portland Trailblazers basketball team, his own software company (Asymetrics), Ticketmaster and a large chunk of the America Online service.

We sent Contributing Editor David Rensin to Redmond to speak with Gates. Rensin, who wrote our Bill Gates profile in 1991, reports:

"A couple of years ago you checked in at Microsoft simply by giving your name to the receptionist. Now you type your name and destination into a Compaq notebook computer at the front desk and it prints out your building pass."

"However, not much had changed inside Gates' office since my last visit. A poster for the Russian version of DOS 4.01 had been replaced by a poster of Intel's Pentium chip. His coffee table had been cleaned up and the computer and monitor were different. Gates uses a Compaq 486/25 Lite notebook (he has docking stations at the office and at home) and is looking forward to getting a Compaq Concerto notebook. Otherwise, Gates doesn't have lots of time to tinker with the newest computer hot rods."

"When Bill is talking about computers, technology, business strategy, biotechnology, or his vision of the future, you're amazed at the amount of information in his head, and at his facility at sifting through it and drawing surprising conclusions. On his personal life, he can be somewhat defensive, reluctantly talking about his parents, his recent marriage to co-worker Melinda French and his life away from the campus."

"True to his reputation, Bill would rock furiously at times. Other times he would stand and pace or stare out the window. Once, as we were talking about his problems with IBM, he picked up a heavy ruler some kind of paperweight or award and slapped it repeatedly into his hand."

"I decided, at least for that moment, to stick with less controversial questions."

PLAYBOY: Let's start small. Explain the future.

GATES: OK. [Laughs] Today, the PC is used as a primary tool for creating documents of many types; word processing, spreadsheets, presentations. But by and large, when you want to find a document, archive it or transmit it, you don't really use the electronic form. You get it out on paper and send it. In the coming information age, access to documents, broadly defined, will be done electronically, just by traveling across a network that people now call an information highway. It's also called digital convergence, a term popularized by John Sculley, and information at your fingertips, a term I use a lot. I'm quite content this will happen. I could be wrong about how quickly.

PLAYBOY: How soon?

GATES: Optimists think three years. Others think ten. I'm a convert. I'm spending almost $100 million a year to build the kind of software that will help make this thing work, make it easy to use, protect privacy in the right way. I think it's possible that in three or four years we'll have millions of people hooked up.

PLAYBOY: Coming soon: a nation of couch potatoes?

GATES: You can already stay glued to the box. But this box is a facilitator. It can save time, which you can then put into the things you want to do. For a lot of people that will mean getting away from the box.

[...continued from previous page]

PLAYBOY: Besides finding documents, what will we be able to do?

GATES: Say you want to watch a movie. To choose, you'll want to know what movies others liked and, based on what you thought of other movies you've seen, if this is a movie you'd like. You'll be able to browse that information. Then you select and get video on demand. Afterward, you can even share what you thought of the movie. But thinking of it only in terms of movies on demand trivializes the ultimate impact. The way we find information and make decisions will be changed. Think about how you find people with common interests, how you pick a doctor, how you decide what book to read. Right now, its hard to reach out to a broad range of people. You are tied into the physical community near you. But in the new environment, because of how information is stored and accessed, that community will expand. This tool will be empowering, the infrastructure will be built quickly and the impact will be broad.

PLAYBOY: What about those who say things won't change that much, that it's mostly blue-sky?

GATES: It's as blue-sky as the PC was six or seven years before it became a phenomenon.

PLAYBOY: How will Microsoft participate in the information highway?

GATES: The current interactive user interface doesn't consist of much. It doesn't have the shared information and the reviews, the niceties that will make people want the systems. Microsoft is spending a lot of money to build software that we think is better. It will run in the box in your home that controls your set as you make choices. We're involved in creating the much bigger piece of software at the other end of the fiber-optic cable, the program that runs on the computer, which stores the movie data base, the directory and everything else.

PLAYBOY: The mainframe?

GATES: The successor to the mainframe. But its speed and data capacity go beyond what's now used to do airline reservations or credit card data bases. Watching a movie doesn't require much computer power. You're just picking the information off the magnetic disc, putting it on the wire and sending it. But if you're synthesizing a 3-D scene, kind of a virtual reality thing, with 20 people in a multiplayer game, then you have some computation. Or say the President is making a speech. Everybody in the nation gets to push little buttons to say yea or nay, and gathering all that information so it can be displayed within a second or two is tricky. But it's all within the state of the art. You don't have to be a dreamer to know that the technology will not limit the construction of the information highway.

PLAYBOY: How will being able to respond directly to the president alter our system of government?

GATES: The idea of representative democracy will change. Today, we claim we don't use direct democracy because it would be impractical to poll everybody on every issue. The truth is that we use representative democracy because we want to get an above-average group to think through problems and make choices that, in the short term, might not be obvious, even if they are to everybody's benefit over the long term.

PLAYBOY: Do you agree?

GATES: Yes. When making choices, or setting policies about the economy, education or medicine, society is best served by electing people who are particularly hardworking, intelligent and interested in long-term thinking.

PLAYBOY: You're giving our current elected officials a lot of credit.

GATES: What we have may be less than ideal, but it's still better than direct democracy. Anyway, we'll no longer be able to hide behind the excuse that we don't have the technology to gather the opinions.

PLAYBOY: What else is Microsoft involved in? We've heard about software that can control washing machines, for instance.

GATES: [Laughs] The washing machine example is extreme, but people do sometimes kid us that we see an opportunity to sell our software in broad areas. We are involved in a new generation of fax machines that we think will be better and easier to use. And a generation of screen phones [a standard phone with a minicomputer] in which the typically cryptic buttons are replaced with a graphics interface. We're also working on software that runs in printers. We've worked with people on car navigation systems. And in the home environment, something you can carry in your pocket called the Wallet PC.

PLAYBOY: In your pocket?

GATES: It's a futuristic device unlike today's personal digital assistants. Instead of using keys to enter your house, the Wallet PC identifies that you're allowed to go into a certain door and it happens electronically. Instead of having tickets to the theater, your Wallet PC will digitally prove that you paid. When you want to board a plane, instead of showing your tickets to 29 people, you just use this. You have digital certificates. Digital money. It has a global positioning thing in it, so you can see a map of where you are and where you might want to go. It's our vision of the small, portable PC of, say, five years from now.

PLAYBOY: Do you use a PDA?

GATES: I carry a standard 486 portable machine with me whenever I travel, because I have my e-mail on it. I used one of the original Newton's for a week, and its available if you'd like it.

PLAYBOY: What's your problem with it?

GATES: It was supposed to do handwriting recognition. But, based on the initial product, people are skeptical about whether handwriting recognition really works. They did some nice technical work on the product. Unfortunately, its not a useful device as far as I'm concerned, so it'll probably set the category back.

PLAYBOY: You've been meeting with people such as QVC head Barry Diller, Fox owner Rupert Murdoch, agent Mike Ovitz, John Malone of TCI and Gerald Levin of Time Warner to mastermind the future. Who sought out whom?

GATES: Its a good mix. Ovitz called me. He understands the opportunities of the new media. He thought it would be valuable to see how our visions meshed. He wants to make sure that when he's doing deals he's reserving rights for his clients in the best way. He wants us to think about licensing rights as were doing titles.

PLAYBOY: That's what you can do for Ovitz. What can he do for you?

GATES: So many things. He can help us get the word out in Hollywood that we want to team up with people to do multimedia titles. Mike can help us create ways to explain how these new tools are the studio of the future.

PLAYBOY: We hear so much about Ovitz, but never from him. What kind of guy is he?

GATES: It's strange when you read a lot in the press about somebody before you meet him. I don't know that much about Hollywood and its dynamics, so when I read this long piece on Ovitz in *The New Yorker*, it made me go, Whoa! I better be careful. Actually, he's a pretty personable guy. And, when you think about it, how could he be successful in that business without that kind of skill?

PLAYBOY: One might think he would be intimidated by you.

GATES: Sure. Not that I hoped for that. We've had lots of long dinners, and I went down and saw Creative Artists Agency. Its actually been almost two years since we first started talking with each other. We come from our own domains, where we're clearly hardworking, focused, quite successful. The issue is, what's the opportunity to work together? I've gotten to know a lot of these people over the past 18 months, and they are much more down-to-earth, practical, even humble, than you'd expect.

PLAYBOY: For instance?

GATES: Murdoch's a fairly quiet guy. Clearly brilliant, but quiet. Malone is straightforward in terms of talking about technology and strategy. He and I are damn similar. He worked at Bell Labs and understands both business and technology. We have a lot more in common than some of the other people these joint-venture things have exposed me to. I've met Diller several times. He came up here twice before landing at QVC, when he was just driving around and looking at the possibilities. He spent a lot of time here. He's a very sharp guy. He asked good questions. Not everybody loves him, but they all respect the hell out of him. Apparently he's a tough manager.

PLAYBOY: Meet any movie stars yet?

GATES: No. [Pauses] Actually, I did. I went to this Golden Plate thing where there were quite a few movie stars: Barbra Streisand, Dolly Parton, Kevin-what's his name?

PLAYBOY: Costner?

GATES: That's a mental lapse, just to completely embarrass myself. I talked to Michael Crichton quite a bit, but he's not a movie star.

PLAYBOY: Did any of the celebrities recognize you?

GATES: I don't think so. But some of the scientists did. And a lot of the kids did, because kids tend to use computers more.

PLAYBOY: They had no idea they were shaking hands with the second richest guy in America?

GATES: No.

PLAYBOY: By the way, how much are you worth at this moment?

GATES: Well, remember, I don't own dollars. I own Microsoft stock. So it's only through multiplication that you convert what I own into some scary number.

PLAYBOY: Are people more intimidated by your brains or your money?

GATES: Not many people are intimidated by either. Here at work we're all just trying to get a job done. My people have the confidence of their convictions and they know their skills. And that occupies most of my time. The people I buy burgers from aren't intimidated, either. [Laughs] We all suffer from being hyped up in the press. These markets are very competitive. When people say things like, Bill Gates controls this or Malone controls this or Ovitz controls that, I hope people don't really believe it. Because every day were saying, How can we keep this customer happy? How can we get ahead in innovation by doing this, because if we don't, somebody else will? If anything, people underestimate how effective capitalism is at keeping even the most successful companies on the edge.

PLAYBOY: Since you and Paul Allen started Microsoft in 1975, the company's capacity for renewal has been unerring and wildly profitable. If you could sum up the corporate ethos in one sentence, what would it be?

GATES: Lets use our heads and think and do better software than anyone else.

PLAYBOY: How soon did it become more business than fun?

GATES: Pretty early, when I hired four guys and one of them didn't come in for a couple days. I said, Damn it, we're not going to get this stuff done. People are going to be upset. I've got salaries to pay. Fun became a serious responsibility. Back then I used to compute how much software we had to sell each day. I was directly involved in everything. I knew at ten in the morning if I'd already sold that days worth of software. If I had, then I wanted to take care of a weeks worth of sales.

PLAYBOY: A true businessman.

GATES: I have to admit that business-type thoughts do sneak into my head: I hope our customers pay us, I hope this stuff is decent, I hope we get it done on time. The little additions and subtractions that one has to do. Take sales, take costs and try to get that big positive number at the bottom.

PLAYBOY: Do you dislike being called a businessman?

GATES: Yeah. Of my mental cycles, I devote maybe ten percent to business thinking. Business isn't that complicated. I wouldn't want to put it on my business card.

PLAYBOY: What, then?

GATES: Scientist. Unless I've been fooling myself. When I read about great scientists like, say, Crick and Watson and how they discovered DNA, I get a lot of pleasure. Stories of business success don't interest me in the same way.

PLAYBOY: How come you're not in a lab coat somewhere?

GATES: Part of my skill is understanding technology and business. So lets just say I'm a technologist.

PLAYBOY: If business is ten percent, how does the other 90 percent break down?

GATES: [Blows a big raspberry]

PLAYBOY: Come on!!

GATES: This gets far too ephemeral and private. It is an interesting question, I will admit. But applying it to myself in a public way is probably

PLAYBOY: But you brought it up.

GATES: I did. OK. Ninety percent to all other.

PLAYBOY: [Blows raspberry]

GATES: This percentage thing is too hard because you always forget something important. Whoops, I forgot about my family. I mean, come on, this is too difficult.

PLAYBOY: Its hard to believe we found something too difficult for you.

GATES: There must be another metric to explain what I mean when I say that business is not the hard part. Let me put it this way: Say you added two years to my life and let me go to business school. I don't think I would have done a better job at Microsoft. [Stands] Let's look around these shelves and see if there are any business books. Oops. We didn't need any.

PLAYBOY: How do you define smart?

GATES: [Rolls his eyes] Oh, come on. It's an elusive concept. There's a certain sharpness, an ability to absorb new facts. To walk into a situation, have something explained to you and immediately say, Well, what about this? To ask an insightful

question. To absorb it in real time. A capacity to remember. To relate to domains that may not seem connected at first. A certain creativity that allows people to be effective.

PLAYBOY: Whew. Are you smart?

GATES: By my own little definition I'm probably above average.

PLAYBOY: Why do some of your critics say you and by extension, Microsoft are not innovative, that you are evolutionary rather than revolutionary? Here's a quote: Bill is just a systems guy who has been able to fund a wider range of me-too applications on the basis of one extremely lucrative product MS-DOS practically handed to him ten years ago by IBM. All he's done since is hang in.

GATES: [Smiles] DOS has been as much as 25 percent of our profit. But believe me, those profits go to the bottom line. If the company weren't profitable you could say, Ah, DOS, they're using it to fund the other stuff. The fact is, everything is very profitable here. And we're doing so many innovative things now, even my harshest critics will never say that again.

PLAYBOY: Perhaps. But why did they say it in the first place that, along with vision, luck, timing and an unrelenting need to win, you've succeeded by picking up the fumbles of your competitors? You were given the right to license MS-DOS by IBM because it thought the future was in hardware, not in software or operating systems.

GATES: [Stands, paces] So here's our management meeting: Well, I don't know what we're supposed to do. Has anybody fumbled anything recently? I mean, come on! Hey, Digital Research: I hear they're fumbling something. Let's go do something there. What was the first microcomputer software company? Microsoft. The very first! Who were we imitating when we dropped out of school and started Microsoft? When we did the Altair BASIC? When, early on, we did CD-ROM conferences and talked about all this multimedia software? And who were we imitating when we did Microsoft Word? When we did Excel? It's just nonsense.

PLAYBOY: It's said that you have nothing less than industry domination in mind.

GATES: But what does it mean to win? If I were a guy who just wanted to win, I would have already moved on to another arena. If I'd had some set idea of a finish line, don't you think I would have crossed it years ago?

PLAYBOY: Do you want to dominate the software industry?

GATES: No. We're only healthy if the industry as a whole is healthy and thriving. Most types of software aren't appropriate for us to do. For those that are, well always have competition. Its so simplistic. Whenever a company is successful, people say it's out to dominate. Take Disney. Its a wonderful company, but there are people within the

entertainment industry who wonder about Disneys goals. Or IBMs, when it was successful. People impute all sorts of ridiculous motives and plans.

PLAYBOY: Such as Disney being called Mauschwitz because of the tough deals they drive?

GATES: They do great products and they're good businessmen. In our industry, some people are afraid of us because were so good. Outside the industry people say, Wow! This software stuff is confusing. You bet I want to go with a company that's going to be around and has proved it has things that work together and are pretty good. Actually, that scares successful companies in the industry. You get a good enough reputation and you're like an incumbent.

PLAYBOY: And vulnerable to incumbent-bashing?

GATES: Yes. The industry press has been tough on us for as long as we've been the largest company. We're involved in setting some fairly key standards and people are afraid of us because they think, Geez, they are quite capable. It's daunting, I suppose.

PLAYBOY: You suppose?

GATES: One thing people underestimate is how markets don't allow anyone to do anything except make better and better products. There's not much leeway. The world is a lot more competitive than most people think, particularly in a high-technology area. If a company takes its eye off improving its products, if it tries to do anything that would be viewed as an exercise of power, it'll be displaced very rapidly.

PLAYBOY: You're not suggesting you've never exercised your power.

GATES: OK, so we tried to get everybody to write software for Windows. If we discouraged people from writing software for Windows we would be hurting ourselves a lot.

PLAYBOY: And now Windows is so popular in the stand-alone-PC market that you've blown away competitors like IBM's OS/2 and HP's New Wave. Has Windows won?

GATES: If you define the term narrowly enough, you could say yes. Windows has a substantial share of the volume on DOS-based PC's. But we keep doing versions. And despite its current success, unless we keep the price low and keep improving the product dramatically, then it will be supplanted. Of course, we think there are enough improvements in the next version, 4.0, code-named Chicago, to extend Windows success another couple of years. And then we'll have a version after that.

PLAYBOY: Do you have an unfair advantage over your competition because your systems people who do things like MS-DOS and Windows exchange data freely with

your applications programmers, thereby breaching the Chinese wall, the ethical boundary that's supposed to separate them? Its been an oft-repeated charge.

GATES: [Strongly] Chinese wall is not a term we've ever used. And companies often have more than one product. Kodak makes film and cameras, and those two parts of the company can work together. IBM makes computers, some peripherals, and software and applications. Ford not only makes cars, it makes repair parts. The day it thinks of a new car, it doesn't call in all the other repair-parts companies to build those repair parts. We're actually more open than any other company that has multiple products. We take lots of affirmative steps to help other companies. Naturally, our applications group is the most committed to Windows. In the early days they didn't hesitate when I said, Hey, we're going to do Windows. Other companies did, even though we begged them to write for Windows. That gave us a leadership position, which we've continued to increase over the years. We bet the company on Windows and we deserve to benefit. It was a risk that's paid off immensely. In retrospect, committing to the graphics interface seems so obvious that now it's hard to keep a straight face. But the big beneficiary of the whole PC phenomenon has been the users. Individuals can now get these tools at very low prices. This is the market working exactly as it should. And yeah, that's been tougher on some producers, and it means we have to keep working hard. We can't rest for a second.

PLAYBOY: Let's talk about the recent government investigations. Last year the Federal Trade Commission concluded a three-year look into Microsoft's affairs. During that time many of your competitors complained about alleged Microsoft strong-arm business tactics and monopolistic practices. After two votes the FTC decided not to proceed with any action. Now the Justice Department has picked up the ball. Is Justice asking questions different from the FTC's?

GATES: It's the same stuff.

PLAYBOY: Why don't you just refer them to the FTC files?

GATES: That's millions of pieces of paper.

PLAYBOY: Did these investigations take you by surprise?

GATES: At some point, with the kind of success we've had, it's both expected and appropriate for one government agency to review what's going on in the industry. The fact that we have a second one doing it, sort of double jeopardy, is unprecedented. But fine, we'll go through another one. It may take many years.

PLAYBOY: Are you hoping that it takes many years?

GATES: No. It would be better if it were over soon.

PLAYBOY: What was the toughest part of testifying before the FTC?

GATES: No real problem. I was quoted once. I think the quote was misinterpreted as answering the question, What's the worst case in your dealings with the FTC? with, Well, if I trip on steps when I'm walking in and break my head open, that's the worst case.

PLAYBOY: It does seem rather cavalier.

GATES: It does. What I meant was that you multiply low-probability events by their probability. That's how you judge them. You don't just take this one-in-a-billion thing and spend everybody's time elaborating on it. In any case, we had no problem with a company as successful as Microsoft, in an industry as important as ours, being looked at by a government agency to make sure we're competitive and that things work the right way. In fact, we spent three years providing the FTC with millions of documents and explaining our industry so that it could be sure the status quo was being maintained. That's perfectly legitimate.

PLAYBOY: Does the FTC have to go through all that trouble to understand your industry?

GATES: Yeah. It takes some time. But if it hadn't looked at the software industry, then the status quo still would have been maintained.

PLAYBOY: This also happened to IBM and AT&T, with the latter being broken up. Do you fear that?

GATES: No. The government decides when something's important enough to look into. Then it allows all your competitors to call it up and say, Please hold them back this way. Please make it harder for them to create good products in this way. Please tell them not to compete with us anymore. Microsoft makes a little mouse, so we had these guys who make mice saying, Why don't you tell them not to do mice. They do Windows and they do mice. Some guy who does Arabic software layers complained that he didn't like the way we were doing Arabic software layers. The government looks at all the mud that gets thrown up on the wall. We did have one competitor who launched a paranoid political attack against us with the FTC in an attempt to persuade the government to help it compete.

PLAYBOY: Everybody knows that was Ray Noorda, chief executive of Novell.

GATES: That was disappointing.

PLAYBOY: Careful word, disappointing. Didn't it piss you off when you thought Noorda was working against you?

GATES: To the degree that he failed, we can be magnanimous about it.

PLAYBOY: Was the outpouring of negative sentiment hurtful?

GATES: No. This is a very competitive business.

PLAYBOY: You're blase about it.

GATES: It's cheap for a competitor to pick up the telephone and say, in effect, Please hurt my competition in the following way. It's straightforward. It's absolutely to be expected.

PLAYBOY: Is there nobody you'd like to restrict or retaliate against? For instance, one of your most vocal critics is Borland chief executive Philippe Kahn. It seems he goes out of his way to attack you.

GATES: When we got into the Apple lawsuit, he said, Oh, Windows, it's like waking up and finding out that your partner might have AIDS. That was his quote in Time. In another magazine, I think it was Business Week, he chose to compare us to Germany in World War Two.

PLAYBOY: And your response?

GATES: That was so extreme. I don't think it will mislead people in any way. People who do that discredit themselves. It's so outrageous and so offensive and inappropriate. Just think back to the Holocaust and all the tragedy. But what bothers me more is when facts are twisted so that people can't tell what's right or wrong. You won't find us ever doing anything like that with any of our competitors. Philippe is a smart guy. I've been critical of his company's inability to make more money, but that's something I do to his face. Everything I'm saying to you about Philippe, I've said to him directly.

PLAYBOY: Mitch Kapor, founder of Lotus, says Microsoft has won and now the industry is the kingdom of the dead.

GATES: I have immense respect for Mitch. We've agreed and disagreed on many things but stayed friends through the years. After he said that, I saw him and asked, Hey, Mitch, what was that?

PLAYBOY: Had he really said it?

GATES: He has strong opinions, and I think that the remark was taken out of context. He's given us good feedback on our software for a long time.

PLAYBOY: Is Microsoft so big that you never go on the offensive?

GATES: Never. And as we move onto this information highway, believe me, most of the companies involved are far bigger than we are. We're dealing with the German telephone company and with British Telcom. We're dealing with NTT, the worlds highest-valuation corporation. Are they going to compete with us? Work with us? Were a small, small

company in that arena. There may be some point when we feel that somebody is using market muscle against us and wish we had a way to avoid it.

PLAYBOY: How long do you anticipate staying active with Microsoft?

GATES: At least for the next ten years, I see myself being in very much the role I am in today. Then there will be a point where somebody younger, probably younger, should be given the prime role here. I'd still have a role, but it wouldn't be as CEO.

PLAYBOY: Does depending on someone else's vision make you nervous?

GATES: No, I just have to pick the right person.

PLAYBOY: Would that have to be somebody like you?

GATES: No. You have to be open-minded. Somebody could do it differently and still do it well. You can't have this bias that they need to do things the same way. Of course, it'll be somebody who understands technology very well and has high energy and likes to think ahead. There are certain requirements.

PLAYBOY: Like your management style? We hear you're brusque at times, that you won't hesitate to tell someone their idea is the stupidest thing you've ever heard. It's been called management by embarrassment challenging employees and even leaving some in tears.

GATES: I don't know anything about employees in tears. I do know that if people say things that are wrong, others shouldn't just sit there silently. They should speak. Great organizations demand a high level of commitment by the people involved. That's true in any endeavor. I've never criticized a person. I have criticized ideas. If I think something's a waste of time or inappropriate I don't wait to point it out. I say it right away. It's real time. So you might hear me say, That's the dumbest idea I have ever heard many times during a meeting.

PLAYBOY: What do you mean when you say something is random?

GATES: That it's not a particularly enlightened idea. [Sarcastically] So, how do you have a successful software company? Well, you get me and Microsoft executive vice president Steve Ballmer and we just start yelling.

PLAYBOY: Do your employees stand up to you?

GATES: Oh, sure.

PLAYBOY: In the beginning, why did you and Paul Allen decide to do only software when everyone else was doing hardware?

GATES: Paul and I believed that software would drive the industry and create substantial value. And we understood it best.

PLAYBOY: Didn't Paul originally want to do hardware?

GATES: Hardware and software, and I thought we should do only software. When you have the microprocessor doubling in power every two years, in a sense you can think of computer power as almost free. So you ask, Why be in the business of making something that's almost free? What is the scarce resource? What is it that limits being able to get value out of that infinite computing power? Software. Another way to look at it is that I just understood a lot more about software than I did about hardware, so I was sticking to what I knew well and that turned out to be something important.

PLAYBOY: Your big move into operating systems was when you did the 16-bit MS-DOS operating system.

GATES: We always knew that we were going to do operating systems, though we initially thought just high-end. When we were helping to design the original IBM PC hardware, the question was whether we would do the operating system.

PLAYBOY: And now MS-DOS runs on more than 90 percent of all personal computers, or about 100 million, and it made Microsoft. Was the partnership the key to winning?

GATES: Our restricting IBM's ability to compete with us in licensing MS-DOS to other computer makers was the key point of the negotiation. We wanted to make sure only we could license it. We did the deal with them at a fairly low price, hoping that would help popularize it. Then we could make our move because we insisted that all other business stay with us. We knew that good IBM products are usually cloned, so it didn't take a rocket scientist to figure out that eventually we could license DOS to others. We knew that if we were ever going to make a lot of money on DOS it was going to come from the compatible guys, not from IBM. They paid us a fixed fee for DOS. We didn't get a royalty, even though we did make some money on the deal. Other people paid a royalty. So it was always advantageous to us, the market grew and other hardware guys were able to sell units.

PLAYBOY: By 1986, DOS had won.

GATES: Right. Subsequently there were clone competitors to DOS, and there were people coming out with completely new operating systems. But we had already captured the volume, so we could price it low and keep selling.

PLAYBOY: Has DOS peaked?

GATES: I don't know. DOS continues to be sold on a high percentage of PC's. But within a few years it will be replaced by a next-generation operating system. This is a case where we're obsoleting our own product I hope. Or somebody else will. Actually, it

would have been obsolete some time ago if we hadn't come along with Windows and sort of built it on top of DOS, to renew its capabilities. The fact that we did that as an add-on to DOS allowed people to keep running DOS applications. We thought that would be of some benefit to people.

PLAYBOY: And to yourself. Perhaps to buy time.

GATES: No. People wanted to run their DOS applications. Believe me, it would have been a lot easier to write Windows so it didn't run DOS applications. But we knew that we couldn't make the transition without that compatibility. In fact, the next version of Windows further enhances our ability to run DOS applications.

PLAYBOY: What happened to IBM? According to one book, you supposedly told a group of Lotus employees over too many drinks that IBM would fold in seven years. IBM is still here, of course, but it's restructuring and streamlining. So you were partially right.

GATES: In this business, by the time you realize you're in trouble, it's too late to save yourself. Unless you're running scared all the time, you're gone. IBM could recover, but in terms of what it was, it'll never have a position like that again. It was during the glory years, its years of greatest profit and greatest admiration, that it was making the mistakes that sowed the billions of dollars of losses that came later.

PLAYBOY: What were those mistakes?

GATES: The idea of how you run software development properly is not something you can capture in a few sentences. It's how you hire people, organize people, how you plan the spec, how you let it change, how you do the testing, how you get feedback from customers. IBM's only real software success had been with mainframes, where they were the only choice. Consequently IBM didn't develop those processes very well.

PLAYBOY: Could that be happening to Microsoft now? In terms of corporate power, your company has been called the new IBM.

GATES: I've thought about that, but I don't think so.

PLAYBOY: That's what IBM said.

GATES: That's right. But did IBM try to renew its vision, did it really look at the early signs that things weren't going right? Did management really focus on those things, or did they let themselves get a little complacent about their success? Were they working hard, were they hiring new people? And remember, when IBM was run by its founder it thrived and for several generations of management after that. When you have a founder around, or if that founder picks the right successor, companies can do well. But we have to prove ourselves. I can't prove that decay hasn't set in. Five years from now you can call me and

say, Well, Bill, it looks like the decay didn't set in. At least I hope the evidence will show that.

PLAYBOY: What was your first meeting like with Lou Gerstner, IBM's new chief?

GATES: It was my chance to tell him what Microsoft is.

PLAYBOY: He didn't know?

GATES: I'm not saying that. I wanted to talk more about the company. It was a bit awkward because when I went there they said, Thank you for coming, Mr. Manzi. [Laughs] Jim Manzi [current head of Lotus, a Microsoft rival] and I don't look alike, so that set me back a little. Then we went into this room, the famous Tom Watson Library, a place I'd been probably a dozen times and know the history of pretty well. Gerstner took some time explaining it to me, though I already knew. I wasn't sure whether I was supposed to stop him or not. We eventually talked about the business. I did not endeavor to give him any advice. He knew I'd been talking to the board and chided me a little about that.

PLAYBOY: Do you expect to get along?

GATES: Microsoft and IBM are perfectly complementary companies with the exception of one small group IBM has that does PC system software.

PLAYBOY: Where does the relationship stand today?

GATES: IBM is our best customer. It's porting a lot of its key software into the Windows environment. Every month we find more and more things we can do together.

PLAYBOY: Over the years, have your youthful looks been more help or harm?

GATES: Its hard to say. If you're asking whether I intentionally mess up my hair, no, I don't. And certain things, like my freckles, they're just there. I don't do anything consciously. I suppose I could get contact lenses. I suppose I could comb my hair more often.

PLAYBOY: We are talking about knowing that your youthful, or can we say nerdish? looks would throw potential competitors and partners off balance and give you an advantage going in.

GATES: [Smiles] I think that my looks were a disadvantage, at least back then. But once our competitors had to admit we knew what we we're doing, they had a hard time knowing what category to put us in. We were young, but we had good advice and good ideas and lots of enthusiasm.

PLAYBOY: You recently got married, an event many of your competitors have fervently wished for. Now, they say, you'll concentrate less on work.

GATES: They're just joking. If they really think I'm going to work a lot less just because I'm married, that's an error.

PLAYBOY: Isn't there a kernel of truth in any joke?

GATES: Married life is a simpler life. Who I spend my time with is established in advance.

PLAYBOY: You were one of the world's most eligible bachelors. No doubt there are many women who would love to be in Melinda's place.

GATES: What? They want to do puzzle contests with me? They want to go golfing with me? How do they know its interesting to be around me? They want to read the books I read?

PLAYBOY: What was it that attracted you to Melinda?

GATES: Oh, I don't know. That's probably too personal. Even before I met Melinda, if someone asked me a question like that I'd always say I was interested in people who are smart and independent. And I'm sure I'll continue to meet lots of interesting, smart, independent people.

PLAYBOY: Something about Melinda must have made you turn the corner. Don't tell us you're just getting older and it was time.

GATES: There's some magic there that's hard to describe, and I'm pursuing that.

PLAYBOY: Can you describe how she makes you feel?

GATES: Amazingly, she made me feel like getting married. Now that is unusual! It's against all my past rational thinking on the topic.

PLAYBOY: We know you're kidding and not kidding. Let's go back farther. Which parent most influenced you?

GATES: My mom was around more, but my dad had the final say on things. They were both major influences. I was raised pretty normal. We didn't get to watch TV on weeknights. We were encouraged to get good grades. Our parents talked a lot about the challenges they were dealing with and treated us as though we could understand and appreciate those things. My parents took us around and traveled some. When we were young our grandparents read to us a lot, so we got into the habit of reading. My sister is two years older than I am and we learned a lot of stuff together.

PLAYBOY: How were you encouraged to get good grades?

GATES: We got 25 cents for an A. It was kind of funny because there was a whole period when I got terrible grades and my sister got straight A's. That was until I was in eighth grade. Then my sister discovered boys. She never got straight A's again. My grade point average went from a 2.2 to a 4.0 over the summer. I wanted to get straight A's. I decided to get straight A's.

PLAYBOY: Why?

GATES: There was no reason. It takes a little bit of effort. I guess I didn't want people to think I was dumb. And when you get straight A's once, its easier.

PLAYBOY: Were you a discipline problem?

GATES: People thought I was a goof-off, a class clown at times. That was OK, not really a problem. Then I went to private school, and there was no position called the clown. I applied for it, but either they didn't like my brand of humor or humor wasn't in that season. In fact, I didn't have clear positioning for a couple of years. I was trying the no-effort-makes-a-cool-guy routine. When I did start trying, people said, Whoa, we thought he was stupid! Better reassess.

PLAYBOY: Did your parents wonder if you might be stupid?

GATES: Oh, no. They just thought I was underachieving dramatically. When I did get into trouble in school, they sent me to this psychiatrist. He gave me a little test and books to read, and he would talk to me about psychological theories just getting me to think about things. He said some profound things that got me thinking a little differently. He was a cool guy. That's why I always liked the movie Ordinary People, because this guy was just like the psychiatrist in that movie. I only saw him for a year and a half, and never saw him again, and I haven't been to anybody like that since. But my mind was focused appropriately.

PLAYBOY: What did he say to you?

GATES: I said, Hey, I'm in a little bit of a battle with my parents. He said, Oh, you'll win, don't worry. I said, What? What's the story here? He said, You'll win. They love you and you're their child. You win.

PLAYBOY: And the implication was?

GATES: That if you think you need to put more effort into winning with them, don't. It's a fake battle. It's ridiculous. It was enough to get me to think, Hmm, that's interesting. He also had me read all this Freud stuff.

PLAYBOY: How old were you?

GATES: I was 11. But he was an enlightened guy. He was always challenging me. He would ask me questions, but he would never tell me whether my answer was right or not. He would say, That's an OK answer. Then our time would always be up and he'd give me more stuff to read.

PLAYBOY: Ever wonder what might have become of you if you had gone to public school instead of Lakeside, where you met Paul Allen and fell in love with computers?

GATES: I'd be a better street fighter.

PLAYBOY: When did you know you had something special to offer? When did you become aware you were different?

GATES: [Big raspberry] I have something special to offer, Mom! Mom, I just figured it out: I have something special to offer! So don't make me eat my beans.

PLAYBOY: You know what we mean.

GATES: When I was young we used to read books over the summer and get little colored bookmarks for each one. There were girls who had read maybe 15 books. I'd read 30. Numbers two through 99 were all girls, and there I was at number one. I thought, Well, this is weird, this is very strange. I also liked taking tests. I happened to be good at it. Certain subjects came easily, like math. All the science stuff. I would just read the textbooks in the first few days of class.

PLAYBOY: Even though your parents are well off on their own, how have they reacted to your extreme wealth?

GATES: I don't show it to them. I hide it from them. I have it buried in the lawn. It's bulging a little bit, and I hope it doesn't rain.

PLAYBOY: Bad bet, living in Seattle.

GATES: My money is meaningless to them. Meaningless. It has no effect on anything I do with my parents. [Pauses] If somebody's sick we can get the best doctors, so it has that impact. But we talk about things that money doesn't affect.

PLAYBOY: We're not suggesting that you talk only about money.

GATES: We never talk about money.

PLAYBOY: Does your net worth of multi-billions, despite the fact that it's mostly in stock and the value varies daily, boggle your mind?

GATES: It's a ridiculous number. But remember, 95 percent of it I'm just going to give away. [Smiles] Don't tell people to write me letters. I'm saving that for when I'm in my 50s. It's a lot to give away and it's going to take time.

PLAYBOY: Where will you donate it?

GATES: To charitable things, scientific things. I don't believe in burdening any children I might have with that. They'll have enough. They'll be comfortable.

PLAYBOY: Youll give them only a billion, maybe?

GATES: No, no, are you kidding? Nothing like that. One percent of that.

PLAYBOY: But they'll grow up thinking, Gee, if Dad leaves me some of the money. . . .

GATES: I'll make it clear that it'll be a modest amount.

PLAYBOY: So you want them to be as self-made as you?

GATES: No, that's not the point. The point is that ridiculous sums of money can be confusing.

PLAYBOY: In general, or only to the young or inexperienced?

GATES: I think to anyone.

PLAYBOY: Is it confusing to you?

GATES: I'm very well grounded because of my parents and my job and what I believe in. Some people ask me why I don't own a plane, for instance. Why? Because you can get used to that kind of stuff, and I think that's bad. It takes you away from normal experiences in a way that is probably debilitating. So I control that kind of thing intentionally. It's one of those discipline things. If my discipline ever broke down it would confuse me, too. So I try to prevent that.

PLAYBOY: So why not give the kid a billion dollars and let him try to control it as well?

GATES: Not earning it yourself, knowing you have it from a young age, being so different in that respect from the other kids you grow up with, would be very confusing.

PLAYBOY: Won't your being their dad be confusing enough?

GATES: I will seek to minimize that in every way possible. I'll be as creative as I can. That experience is bad for a kid.

PLAYBOY: How do you entertain yourself with your money?

GATES: I swallow quarters, burn dollar bills, that kind of thing. I mean, when I buy golf balls I buy used golf balls, and that entertains me. Ha, ha, ha.

PLAYBOY: Seriously.

GATES: I'm building a house. It has serious functions, but entertainment is most of it. It has a screening room. And I'm putting in these huge video screens and buying the digital rights to the world's masterpieces and all sorts of art. I guess that's indulgent.

PLAYBOY: Rumor has it the house is mostly underground.

GATES: Completely false.

PLAYBOY: When will it be done?

GATES: I thought it would take four years. It will take five, then I'll move into the project.

PLAYBOY: What else entertains you?

GATES: I like to learn. I like puzzles. Ive even played some golf the past year and a half, because everybody else in my family does. Actually, right now I'm a little addicted. I get a kick out of being out there on the green grass. I'm just getting into the 90s now.

PLAYBOY: We hear you don't watch TV.

GATES: I do watch television. I don't have any TVs with their over-the-air receivers connected in my house. But when I'm in a hotel room or other places that have a TV, then I turn it on and flip the channels just like everybody else. I was watching cartoons on Nickelodeon on Sunday. Its amazing.

PLAYBOY: What was on?

GATES: Ren & Stimpy and Rugrats. Great! Cartoons have improved a lot since I was a kid. I'm not immune to the lures of television. I just try to stay away from it because I like to read. **PLAYBOY:** What do you read?

GATES: *The Economist*, every page. Also *The Wall Street Journal* and *Business Week*. And I read *Time*. If I'm traveling, every once in a while I'll pick up an issue of *People*. I read *USA Today*.

PLAYBOY: What's the most random thing you read?

GATES: Fiction. That's true randomness. My older sister has read all the trashy books. So, occasionally, I have her recommend one. Otherwise, I'm in the same traffic as everybody else. I'm in the same airplane delay as everybody else. I sit in the same coach

seat as everybody else. Yeah, I'm here in meetings all day. Here at Microsoft I work hard. There are a lot of experiences I haven't had. There are a lot of sitcoms I haven't seen. I haven't had a child yet. There are religions I don't belong to. I think we all have our own slice of life. I eat at McDonald's more than most people, but that's because I don't cook.

PLAYBOY: You're back to eating meat?

GATES: Yes. That was only a three-year period when I was proving to myself I could do it. But in terms of fast food and deep understanding of the culture of fast food, I'm your man.

PLAYBOY: Jack-in-the-Box? McDonald's?

GATES: Well, McDonald's is more pervasive around here. We also have Jack-in-the-Box. I'm not the kind of guy who decides that just because a few people got sick, it's necessarily going to happen to me. It wasn't very crowded for a while, but I thought that was fine.

PLAYBOY: The recent biographies of Bill Gates and Microsoft, Gates and Hard Drive, both explore the mythology that's developed about your quirks, habits and exploits. We'd like to sort the actual from the apocryphal.

GATES: Fine.

PLAYBOY: We'll start with an easy one. It's always written that you rock compulsively in your chair, and we can attest that you're doing it now and have been for most of this interview.

GATES: Right.

PLAYBOY: What about your penchant for driving fast and accumulating speeding tickets?

GATES: [Smiles] I get fewer speeding tickets than I used to.

PLAYBOY: Did you once get a cop fired for giving you a speeding ticket?

GATES: Thats false.

PLAYBOY: What about the story that while driving from Albuquerque to Seattle, you got three speeding tickets in one day from the same cop?

GATES: No, no, no. I've always told the truth about that one. I got twospeeding tickets from the same cop. Two. Not three. I got three tickets on the drive, but only two from the same cop. But I don't think anybody ever suggested that I said I got three from the same cop.

PLAYBOY: There's the story that your mother chooses your clothes and helps you color-coordinate by pinning them together this from a former girlfriend, who seems to repeat it without incurring your disapproval.

GATES: There was one point in my life when my mother was trying to explain to me about what color shirt to wear with what ties. But this goes way back. And I think people listen to their mother's advice when it relates to fashion. It's not an area in which I claim to know more than she does. And it's not that much effort to pick one shirt versus the other. I don't look down at the color I'm wearing during the day. So if it pleases other people that I know a little bit more about which shirt to pick with which tie, thats fine. At that time I didn't know much about it. I think I know a little bit about it now, but below average.

PLAYBOY: Is it true that you cornered the market in McGovern-Eagleton buttons after Eagleton was dumped as a running mate?

GATES: It's certainly true that I made a lot of money selling McGovern-Eagleton campaign buttons. I'll be glad to show them to you, but I don't think it matters how much I made. It doesn't aggrandize me when things get less and less accurate the farther they get from the source.

PLAYBOY: Next: the $242 that you supposedly paid for a pizza to be delivered one night.

GATES: That is just reporters' randomness to the max.

PLAYBOY: Did you have a million-dollar trust fund while you were at Harvard?

GATES: Not true. [Throws up his hands, stands and starts pacing] Where does this randomness come from? You think it's a better myth to have started with a bunch of money and made money than to have started without? In what sense? My parents are very successful, and I went to the nicest private school in the Seattle area. I was lucky. But I never had any trust funds of any kind, though my dad did pay my tuition at Harvard, which was quite expensive.

PLAYBOY: How did he feel when you dropped out?

GATES: I told him it was a leave of absence, that I was going back.

PLAYBOY: Nice move.

GATES: Hey, if I had completely failed I would have gone back, of course. Harvard was willing to take me back. I was a student on leave.

PLAYBOY: When you were at Harvard, did you frequent the Combat Zone, home of hookers, drugs and adult films?

GATES: That's true. [Laughs] But just because I went there doesn't mean I engaged in everything that was going on. But I did go there. It's easy, you just take the subway. And it's pretty inexpensive. I ate pizza, read books and watched what was going on. I went to the diners.

PLAYBOY: Ever take LSD?

GATES: My errant youth ended a long time ago.

PLAYBOY: What does that mean?

GATES: That means there were things I did under the age of 25 that I ended up not doing subsequently.

PLAYBOY: One LSD story involved you staring at a table and thinking the corner was going to plunge into your eye.

GATES: [Smiles]

PLAYBOY: Ah, a glimmer of recognition.

GATES: That was on the other side of that boundary. The young mind can deal with certain kinds of gooping around that I don't think at this age I could. I don't think you're as capable of handling lack of sleep or whatever challenges you throw at your body as you get older. However, I never missed a day of work.

PLAYBOY: Here's the wildest rumor: You once trolled Seattle in a limo looking for hookers.

GATES: No, no, that is not true. A Korean friend of mine in high school rented a limousine one night, and we went to Burger Master. He liked one of the girls there, so he thought it would be fun to pull up in a limousine and leave a big tip at this drive-in place. But that is quite a metamorphosis from this nice hamburger girl to something more lurid. This isn't the rock-and-roll industry. The computer industry doesn't have groupies like rock does.

PLAYBOY: Really? You've been described by one of your own people as Bill Gates, rock star. Wasn't there a young woman in Mensa, from Atlanta, who said she needed some software for her Mac which you delivered personally?

GATES: Who told you that? I sent it to her. There are elements of truth in all mythology, along with a good dose of exaggeration that I have not contributed to. Here's the point: People think, Hey, here's this guy, he's single, has all this success, isn't he taking advantage of it a little bit? I mean, geez, just a little bit?

PLAYBOY: And the answer?

GATES: Those people wouldn't be completely disappointed. They'd be somewhat disappointed because at night they'd find me sitting at home reading the molecular biology of the gene or just working late, or just lying around doing new deals and things like that. My job is about the most fun thing I do, but I have a broad set of interests, going places, reading things, doing things.

PLAYBOY: And when you do fly, you fly in coach.

GATES: It's quite a mix there. I fly coach when I'm in the U.S. on business. But when I fly to Europe, I fly business class. When I go to Trailblazers games with Paul Allen, I fly on the plane he owns. I also drive my own car.

PLAYBOY: Does privilege corrupt?

GATES: It can, I've noticed. It's easy to get spoiled by things that alienate you from what's important.

PLAYBOY: Are you afraid it would look bad to the people at Microsoft?

GATES: No, it's for me personally. I wouldn't want to get used to being waited on or driven around. Living in a way that is unique would be strange.

PLAYBOY: Do the rumors bother you?

GATES: Rarely. But its difficult. Microsoft being well known and having people know we do great software and getting people enthused about new things, that's an important part of Microsoft, challenging these new frontiers. It's natural for a company to be associated with its co-founder and leader. But as far as my personal life goes, its kind of a drawback. Even so, my experience with being exposed to the public is nothing like that of really well-known people.

PLAYBOY: Are you ready for celebrity?

GATES: No. I haven't even taken the introductory course.

PLAYBOY: Why not write your own book?

GATES: If I were to, I'd do it about the future instead of the past. When I reach a ripe old age, like 60 or something, then maybe I can be reflective.

PLAYBOY: You can set the record straight right now.

GATES: [Sighs] That some degree of oversimplication occurs is unavoidable. It's not like I'm complaining. Actually, my only complaint is that I wish somebody had written a decent book. And perhaps in the future somebody will. I just don't happen to like the ones that exist. They're incredibly inaccurate. Worse, they don't capture the excitement, the fun.

What were the hard decisions? Why did things work out? Where was the luck? Where was the skill? You just don't get a sense of it. In fact, at one point we wanted to encourage a writer of reputation to do that, but we decided against it because we didn't want to put the time into it.

PLAYBOY: Don't you think people would want to read your Iacocca?

GATES: [Peeved] Now what does that mean? I think the answer is no to all such things. And when I do, I'll do it a hundred times better than any book done so far. But right now I don't want to be huger. I'm huger than I want to be. I'd like to shrink a little.

PLAYBOY: Then why are you talking with us?

GATES: For the message that personal computers can do neat things, that software is great stuff, that there's an exciting opportunity here and Microsoft is involved in it, that's a worthwhile message for Microsoft to get out. And if you want to just put Microsoft spokesman next to all those comments, that would be fine, except I know that people are more interested in human stories than they are in what technology can do for them.

PLAYBOY: Perhaps thats a strong clue to what should be done with emerging technologies.

GATES: That's true. We should let people communicate with other people.

PLAYBOY: Communicate with us: Who is Bill Gates?

GATES: I don't think theres a simple summary of anyone.

PLAYBOY: That said, give it a try.

GATES: [Laughs, then grudgingly, almost by rote] I like my job because it involves learning. I like being around smart people who are trying to gure out new things. I like the fact that if people really try they can figure out how to invent things that actually have an impact. I don't like to waste time where I'm not hearing new things or being creative.

PLAYBOY: Like these questions?

GATES: Some of them I've heard before. Certainly the history of the company has been widely discussed.

PLAYBOY: We mean questions about who you are.

GATES: Nobody's ever asked me the question in that form before. Who are you? Just get right to the meat of the issue. Lets make it multiple choice.

PLAYBOY: Make it a free-association test. It must conjure some thoughts.

GATES: [Long pause] No, I don't know if I'm thinking of anything.

PLAYBOY: Try again.

GATES: OK, I have a nickname. My family calls me Trey because I'm William the third. My dad has the same name, which is always confusing because my dad is well known and I'm also known. If they'd realized that would occur, they wouldn't have called me the same name. They thought I'd be unknown so they said, Hey, just use the same name, what the heck. When people say Bill, that's work, mostly, and I think of all the stuff I should be doing. When people call me Trey, I think of myself as the son. I think of myself as young. I think of my family, of just being a kid, growing up.

PLAYBOY: Do you like the public Bill that we've described to you?

GATES: I think the observations about me are all over the map, so it's hard to respond to that. When I got engaged, the *Star* said that I had a little contest for Melinda and that as soon as she finished the contest, I asked her to marry me. And then she said, Yes, oh yes! I find that humorous because it's so unreal and so ridiculous. *The National Enquirer* hired an astrologist Id never met to say various things about me. That struck me as ridiculous. *Forbes* does this whole thing about who's wealthy and what they think. I thought what they wrote about me was silly, but this year they had a nice article on my friend Warren Buffett that I thought was pretty good. So I guess it's easier reading about other people. My guideline has always been to avoid a focus on me personally. Not because of any deep, dark secrets. Rather just a sense of privacy. I guess it's kind of silly in a way.

PLAYBOY: People see what you have wrought and want to know what kind of person becomes a guy like you.

GATES: You mean if they have the same kind of personal life then maybe they'll become like me?

PLAYBOY: Come on. Isn't this whole information highway based on wanting and having access to more information?

GATES: Yeah, but there are lots of things you can be interested in.

PLAYBOY: And this is one of them.

GATES: But it's sort of prurient, isn't it?

PLAYBOY: Maybe only to the guy who's the center of attention.

GATES: When we have the information highway, I'll put it out there. Everybody who wants to pay, I don't know, one cent, can see what movies I'm watching and what books I'm reading and certain other information. If I'm still interesting, I'll rack up dollars as people access that part of the highway.

PLAYBOY: How many buildings are on this campus? Have you visited them all?

GATES: Twenty-five. Yeah, I've been to all of them, but there are a few I've been to only once.

PLAYBOY: Do you wander around here late at night?

GATES: Actually, I'll do that tonight. It's Friday and I have no plans.

PLAYBOY: Do you look in people's offices?

GATES: I see if people are around, see what they put up on the walls. I want a little sense of what the feeling is, how lively, how much people personalize things. They put industry articles up on the walls, ones that are particularly rude to us or particularly nice to us. They put up their progress, their number of bugs or new things that work. And you run into people. Even on a Friday night there'll be a bunch of people here, and I'll get a chance to ask what they're thinking.

PLAYBOY: Let's start to wrap up with a more global perspective. What should our attitude be toward the Japanese?

GATES: This Japanese-bashing stuff is so out of control. It's almost racist the way people have these stereotyped views of why Japanese companies are successful, without gathering many facts.

PLAYBOY: Even though they're in a slump now, why have the Japanese been so successful?

GATES: For good reasons. Great products. A long-term approach. Focus on engineering and what it takes to turn products around quickly. Being able to adapt to what's necessary to sell effectively in markets around the world. Believe me, they have some challenges ahead. But what they did with no natural resources and, essentially, no world power is a miracle.

PLAYBOY: And we did none of the above? What were our mistakes?

GATES: Actually, America has also done pretty well during this period. Some American companies made mistakes, and there are things we could do to improve our products. For instance, we could improve our education system. Also, get rid of short-term thinking. Focus on product engineering instead of financial engineering. We could fine-tune. But we've contributed a lot, too. America and Japan are the two leading world economies in terms of technology and innovative products. And in software, information-age technology and biotechnology, our second most important business, the U.S. has an amazing lead.

PLAYBOY: Our auto business is recovering. We're finally focused on making better cars instead of on holding down Japanese imports. But what in the American psyche let our lead slip away?

GATES: I don't think it's the American psyche. We don't have to dig that deep to find rot. The way those car companies managed their engineering process and their manufacturing process was wrong. It was out of date, and it took an unbelievable amount of time to get those processes reformed. It really took Ford to set the pace.

PLAYBOY: Does Microsoft follow the Japanese model?

GATES: There are aspects. Look, our workers are all Americans, so we don't sing company songs and things like that. The idea of taking a long-term approach, taking a global approach, many fine American companies have done that, and have that in common with the Japanese. But in no sense would I say were following some broad set of Japanese approaches.

PLAYBOY: How should our society think about the future?

GATES: More optimistically. As there is progress, which is partly advances in technology, in a certain sense the world gets richer. That is, the things we do that use a lot of resources and time can be done more efficiently. So people wonder, Will there be jobs? Will there be things to do? Until were educating every kid in a fantastic way, until every inner city is cleaned up, there is no shortage of things to do. And as society gets richer, we can choose to allocate the resources in a way that gives people the incentive to go out and do those unfinished jobs.

PLAYBOY: One story about you suggested that if Microsoft manages to write and deliver the software running inside the box it will, on the most basic levels, influence how we interact with the information highway. How does it feel to know you can have the same impact in the next 20 years as you had in the first 20?

GATES: Because we've had leadership products, we've had an opportunity to have a role. But this would have happened without us. Somebody would have done a standard operating system and promoted a graphics interface. We may have made it happen a little sooner. Likewise, the information highway is going to happen. If we play a major role it'll be because we were a little bit better a little bit sooner than others were.

PLAYBOY: If you don't take the next step, are you concerned about falling from the heights you've achieved?

GATES: There may be a better way to put it. If we weren't still hiring great people and pushing ahead at full speed, it would be easy to fall behind and become a mediocre company. Fear should guide you, but it should be latent. I have some latent fear. I consider failure on a regular basis.

PLAYBOY: Personally, are you slowing down any?

GATES: I used to take no vacations. I used to stay up two nights in a row. I don't do that anymore.

PLAYBOY: What about keeping up with the technology? Overwhelming?

GATES: No. But it's harder than when I was young.

PLAYBOY: What's the last thing you didn't understand?

GATES: The quantum theory of gravity. [Laughs] Look at this office. Who can read all this stuff? Maybe tomorrow I'll return the hundreds of e-mail messages that are in my in-box right now.

PLAYBOY: People might find it hard to believe that you just barely keep up.

GATES: How would they know? I can tell them that's the truth. The same with the degree of success I have had. I never would have predicted it. I didn't set out to achieve some level of wealth or size of company. I remember in 1980 or 1981 looking at a list of people who had made a lot of money in the computer industry and thinking, Wow, that's amazing. But I never thought I'd be on that list. It's clear I was wrong. I'm on the list, at least temporarily.

PLAYBOY: Temporarily?

GATES: I'm waiting for the anticlimax. I hate anticlimax. In terms of being able to do new and interesting things, I would hate to lose that. That's partly why I work as hard as I do trying to stay on top of things.

PLAYBOY: Is the one success of Microsoft enough for you?

GATES: Microsoft has had many, many successful products. It's like saying to somebody whos been married 50 years, Well, hell, you've had only one wife. What's wrong with you? You think you can do only one? I mean, I'm committed to one company. This is the industry I've decided to work in.

PLAYBOY: An interesting metaphor you choose, the wife thing.

GATES: You're welcome to print it.

PLAYBOY: Put it this way: You're 38, a billionaire, you co-founded the world's largest software company and transformed the industry. What do you want to do for an encore if there is one?

GATES: Encore implies that life is not a continuous process, that there's some sort of finite number of achievements that defines your life. For me, there are a lot of exciting things in front of me at Microsoft, things that we want to see if we can make happen with technology. There are great people here who are fun to work with. And in the next decade the most interesting industry by far will be information technology, broadly dened. We have a chance to make a major contribution to that. Its very competitive. We won't know until late in that period whether we did it right or not. I'm excited about that. And were still on a pretty steep curve in terms of making even better word processors or figuring out how an electronic encyclopedia or movie guide should work, guring out what sort of tools for collaboration we should offer to people. That will be my focus for the foreseeable future.

PLAYBOY: What about tomorrow? Any plans for Saturday?

GATES: [Smiles] Work.

Transcript: Bill Moyers Interviews Bill Gate

MOYERS: When I first heard that you were going to give away billions of dollars to, global health I was skeptical. I mean, no one can doubt that you know everything there is to know about information technology, but global health? And I thought, here's a man surrounded by power and privilege whose every need and every comfort are met. How could he possibly see the world through the eyes of an impoverished woman with HIV in India or a hungry, starving child in Mozambique? How could he possibly get inside of their way of seeing the world so that what he did wasn't just a rich man's hobby?

GATES: Certainly I'll never be able to put myself in the situation that people growing up in the less developed countries are in. I've gotten a bit of a sense of it by being out there and meeting people and talking with them. And one of the gentlemen I met with AIDS talked about how he'd been kicked out of where he'd lived and how he felt awful he'd given it to his wife and their struggle to make sure their child didn't have it, and the whole stigma thing, which, you know, that's hard to appreciate. In this country when you get sick people generally reach out, you know, that's the time to help other people and yet some of these diseases it's quite the opposite.

So what I was thinking about was where my resources that I'm the steward of be able to make an impact, I thought "okay, what's the greatest inequity left?" And to me, and the more I learned about health and the unbelievable inequity, it kind of stunned me, it shocked me, every step of the way.

MOYERS: You could have chosen any field, any subject, any issue and poured billions into it and been celebrated. How did you come to this one? To global health?

GATES: The two areas that are changing in this amazing way are information technology and medical technology. Those are the things that the world will be very different 20 years from now than it is today.

I'm so excited about those advances. And they actually feed off of each other. The medical world uses the information tools to do their work. And so when you have those advances you think will they be available to everyone. Will they not just be for the rich world or even just the rich people and the rich world? Will they be for the world at large?

The one issue that really grabbed me as urgent were issues related to population… reproductive health.

And maybe the most interesting thing I learned is this thing that's still surprising when I tell other people which is that, as you improve health in a society, population growth goes down.

You know I thought it was…before I learned about it, I thought it was paradoxical. Well if you improve health, aren't you just dooming people to deal with such a lack of resources where they won't be educated or they won't have enough food? You know, sort of a Malthusian view of what would take place.

And the fact that health leads parents to decide, "okay, we don't need to have as many children because the chance of having the less children being able to survive to be adults and take care of us, means we don't have to have 7 or 8 children." Now that was amazing.

MOYERS: But did you come to reproductive issues as an intellectual, philosophical pursuit? Or was there something that happened? Did come up on… was there a revelation?

GATES: When I was growing up, my parents were almost involved in various volunteer things. My dad was head of Planned Parenthood. And it was very controversial to be involved with that. And so it's fascinating. At the dinner table my parents are very good at sharing the things that they were doing. And almost treating us like adults, talking about that.

My mom was on the United Way group that decides how to allocate the money and looks at all the different charities and makes the very hard decisions about where that pool of funds is going to go. So I always knew there was something about really educating people and giving them choices in terms of family size.

GATES: I have to say I got off the track when I started Microsoft, I thought okay now I have my, you know, my passion. At least for the next 40 years or so. And when my mom said to me, "oh you have to do a United Way campaign," I said to my mom, "mom this is serious stuff now. That was all nice to talk about but you know I've got to pay these people and if we don't get enough contracts. And this is a very competitive environment. And so this whole notion that we're gonna sit around and drink tea and do United Way campaigns, I don't think we have time for that."

But she kept working on me and saying, "no, this is a good thing." And had me meet with other people.

So finally I thought, "okay I'll fit it into my framework" which is getting the employees to kind of feel more bonded, more of a team. You know, and appreciate the unique position they're in. And so we made a United Way Fund. We had contests around it. We had the agencies come in.

But a little bit I have drifted away from thinking about these philanthropic things. And it was only as the wealth got large enough and Melinda and I had talked about the view that that wealth wasn't something that would be good to just pass to the children.

Because in a wealth of any kind of magnitude like that, it's actually more — haven't asked tem their opinion yet — but more of a handicap than it is of a benefit. So you know once you decide that over 95 percent of it's going back to society, then you do start talking about where it will go.

And so Melinda and I were having those conversations. But we only had one or two projects that we thought we'd get into early. We thought, okay, this is mostly for many decades from now.

MOYERS: You were clearly competent at making money. Did you doubt your competence in giving it away?

GATES: I actually thought that it would be a little confusing during the same period of your life to be in one meeting when you're trying to make money, and then go to another meeting where you're giving it away. I mean is it gonna erode your ability, you know, to make money? Are you gonna somehow get confused about what you're trying to do?

MOYERS: It's a nice confusion. It's a very nice confusion.

GATES: So, you know, I didn't want to mix those two things together. The big milestone event for me though was… a report was done, it's called "The World Development Report 1993" that talked about these diseases. And I remember seeing the article and it showed that Rotavirus over a half million children per year. And I said to myself, that can't be true.

You know after all, the newspaper, whenever there's a plane crashing and 100 people die, they always report that. How can it be that this disease is killing a half million a year? I've never seen an article about it until now. And it wasn't even an article about that. It was just a graph that had you know these 12 diseases that kill, most of which I had never heard of.

And so I thought, this is bizarre. Why isn't it being covered? You know, and there's a mother and a father behind every one of these deaths that are dealing with that tragedy.

And so then I got drawn in a little bit.

And there was one dinner after we'd given our first vaccination grant. I think it was 125 million. All these doctors came. And they're… they thought, "okay, this is a dinner where I'm supposed to just say thank you, thank you. And you know try not to use the wrong fork or something."

So they're there, and you know it's a nice dinner. But after about 15 minutes I say to them, "yeah. Well, it's okay. You've thanked me enough. But what would you do if you had more money?" And they're all kind of like, "well, does he really mean that? Is he serious?"

I said "yeah, what if you had, you know, ten times as much money. What would you do?" And then the guy who's worked his whole life on Hepatitis B speaks up and the guy who's working on AIDS speaks up, and the guy who's working on Immucocal speaks up.

And so it started opening the door to saying, you know, it's sort of a 'bad news' story in that governments are not giving the money, they're treating human life as being worth a few hundred dollars in the world at large. And that's, you know, in almost a factor of a thousand difference between how it's treated in the rich world versus in the rest of the world.

MOYERS: Oscar Wilde once said, "it's the mark of a truly educated man," and I'm sure he would today say woman, "it's the mark of a truly educated man to be deeply moved by statistics." What is that capacity that enables someone to transform a fact or figure on a page to a human being a long way off?

GATES: I think there is a general difficulty of looking at a number and having it have the same impact as meeting a person. I mean if we said right now, there's somebody in the next room who's dying, let's all go save their life. You know, everybody would just get up immediately and go get involved in that.

When my daughter whose 7 saw this video, you know, showing the kid who's got difficulty walking because of polio, her reaction was: "Who is that? Where are they? Let's go help them. Let's go meet that kid. What if he gets polio in his other leg?"

You know, so she's immediately drawn into that human on the screen.

It's a lot easier to connect to the story of the one person or the five people. It now, you know, because I'm mathematically literate, you know I know that when there's 3 million kids every year dying of things that are completely preventable with the technology we have today. You know I can try and magnify how I feel about that one situation by a factor of 3 million. It's tough. But at least you know it's super important.

MOYERS: What does it say to you that half of all 15 year olds in South Africa and Zimbabwe could lose their lives to AIDS? What does it say to you that 11 million children, roughly, die every year from preventable diseases?

What does it say to you that of the 4 million babies who die within their first month, 98 percent are from poor countries? What do those statistics tell you about the world?

GATES: It really is a failure of capitalism. You know capitalism is this wonderful thing that motivates people, it causes wonderful inventions to be done. But in this area of diseases of the world at large, it's really let us down.

MOYERS: But markets are supposed to deliver goods and services to people.

GATES: And when people have money it does. You know when our foundation is not involved in the diseases of the rich world. Not, you know, those are very important, but the market is working there. Between the basic research that the government funds, through NIH. The bio-tech companies. The pharmaceutical companies. You know incredible things will happen with cancer and heart disease over these next 20 or 30 years. Because that's a case where capitalism is at work.

MOYERS: There's a profit in it. There's a profit in it.

GATES: Right. Here what we have is, with the plural disease, not only don't the people with money have the disease, but they don't see the people who have the disease. If we took the world and we just re-assorted each neighborhood to be randomly mixed up, then this whole thing could get solve.

Because you'd look out your window and you'd say, you know there's mother over there whose child is dying. You know let's go help that person. This problem, the lack of visibility, it's partly you don't read about it, you don't see it. It's the silence that's allowing this to happen.

MOYERS: Was there an "Aha!" moment? Was there a moment of eureka when you realized what you're just saying and said, "this is where we're gonna put our billions"?

GATES: I know when I saw that article on the World Development Report, I said, this can't be true, but if it is true, this deserves to be the priority of our giving. And so I took the article and Melinda read it. I gave it to my dad and said, you know can you have the people you're working with, tell me is this some aberration here? Or if this is true, give me more things to read.

It was a shock, but then, you know it was an answer to say that governments weren't doing it.

And so maybe we could help step in. And maybe not just our resources, but maybe we could galvanize some interest and attention and IQ to go and look at these problems and think you know if I have the technology that can you know stop mosquitoes from carrying these diseases. Or allow vaccines to be delivered without a refrigerator, you know I have saved millions of lives by coming up with those ideas.

MOYERS: I talked on Saturday to one of the leading public health officials in the world. One of the pioneers in this field. And he said you once asked him for a list of books. And he provided you with a list of books. And the next time he had seen you just a few months later, you'd read 17 of them. I mean do you ever read anything for fun? Do you ever read your e-mails?

GATES: There was about six months where I was carrying around about 10 issues of The Morbidity & Mortality Weekly Report. And people would see that on my desk at work and what the heck? You're reading The Morbidity & Mortality Weekly Report. You know I'd say to them, yes, use this one from the 1980s when AIDS came out. This is a real collector's item here.

Actually it's taken a lot of different books to get you know the different perspectives and try and understand what could be done.

MOYERS: It's one thing to read a book, it's one thing to read the statistic, one thing to read a graph, it's another thing to read a human being's face. Did you go into the field?

GATES: Yes. And it's awkward. I'm not you know particularly good at this. Maybe I'll never be good at it. But to walk around to each patient and ask you know what is your problem? And be respectful of, you know, their desire for privacy.

But I think it is very important. If people got out like that you know these problems would get addressed.

MOYERS: There was a trip you took to Soweto in South Africa that was decisive in your thinking. Tell me about that.

GATES: Well we took a computer and we took it to this community center in Soweto. And generally there wasn't power in that community center. But they'd rigged up this thing where the-- the cord went 200 yards to this place where there was a generator. You know powered by diesel. So this computer got turned on. And when the press was there it was all working just fine.

And it-- it-- it was ludicrous, you know. It was clear to me that the priority issues for the people who lived there in that particular community were more related to health than they were to having that computer. And so there's certainly a role for getting computers out there. But when you look at the, say, the 2 billion of the 6 billion the planet who are living on the least income. You know they deserve a chance. And that chance can only be given by improving the health conditions.

GATES: the thing that's so stark is that you're in Johannesburg which is sort of a first world location. And you're talking with banks about their software and you know it's, if you like, it's not that much different than being in the United States.

And then you drive about 5 miles and you're in one of the most poor areas you've ever been in. You know those houses that are built out of the corrugated iron which you know and the heat is just unbearable.

It's very jarring to go from this experience in the city and to this other experience and have them be so close together. You think well how come it's so different in such a small distance?

MOYERS: What is your answer to how it is that the resources of the world are so misallocated?

GATES: It's a mistake.

MOYERS: But somebody has to make a mistake. Who makes it?

GATES: I think we make it every day by thinking that national borders are you know allow huge inequities to exist across those borders.

And I do think this next century, hopefully, will be about a more global view. Where you don't just think, yes my country is doing well. But you think about the world at large. There is one excuse that people have for not paying attention to this. It's not a valid excuse but.

And that is that things have been improving despite the research money not being in place applied the right way. Infant mortality or life expectancy, even in the countries in the worst situation, infant mortality is lower today than it was in the best country 120 years ago.

Now there are things that come along like the AIDS epidemic that send it in the other direction. And we shouldn't be willing to wait you know and have it take 50 or 100 years for these medicines, the new vaccines, that kind of treatment, to be wide-spread.

MOYERS: Have you made any progress on safe birth reproductive family planning issues?

GATES: Yes. There's a measurable impact when you can go in and educate families, but primarily women, about their different choices.

There's real impact that you can have in this area. Anything to do with reproductive health. Whether it's maternal mortality, infant mortality, there's new ideas. There's more people getting involved.

MOYERS: One of my colleagues accompanied your father and Jimmy Carter when they went to Africa not long ago. The footage was striking. There was your father and Jimmy Carter, the former President of the United States sitting on the doorstep talking about

condoms as if you were talking about computers. Are you comfortable dealing that openly with people's habits? People's behavior?

GATES: Well, it's interesting. The AIDS is a disease that is hard to talk about.

MOYERS: That visit that my dad did, the Health Minister had never been in that neighborhood. And so they invited him to come. And people didn't think he would. But he actually did come and then got involved and said, okay, we're gonna do free condom distribution to this neighborhood because of the impact that that can have.

MOYERS: Someone told me, actually a couple of weeks ago that, we'd actually be better off if you'd spend more money on distributing condoms than on this research on AIDS at the moment. That it's the immediate need that people have to you know about their behavior that is the biggest problem the world faces with AIDS. What do you think about that?

GATES: The ideal thing would be to have a 100 percent effective AIDS vaccine. And to have broad usage of that vaccine. That would literally break the epidemic. Because that it's not known how long that'll take, and the best case is probably in a 10 to 15 year timeframe, we also have to put huge energy into treatment of the people who have it today.

We've got to put a lot of money into changing behavior. Which we've funded a number of things in that. And there's even an intermediate intervention that we think is very important, which is a microbicide.

MOYERS: A what?

GATES: A macrobicide.

MOYERS: What is that?

GATES: Okay that's a gel that a woman could use to block sexual transmission without the male even knowing that it's being used, ideally.

MOYERS: That requires a great discipline of passion and the question that arises you know how to motivate your Microsoft employees. You know how to affect their behavior by the rewards that you hold out. How does the world affect the behavior of people at a sexual level?

GATES: It's a bit… that's a very tough problem. It's particularly tough if political leaders aren't willing to speak out. You know there's been really just a few countries where the politicians said, this is so important for the welfare of our citizens. And even though it involves you know drug use, and sex workers. They were gonna get up and say that it was a crisis for the country. That happened in Thailand.

MOYERS: Right.

GATES: That's the only country that really caught the potential epidemic at the early stage. It happened in Uganda but it happened after the disease had already progressed to about a 20 percent prevalence.

It's not happening to the degree it should in other countries. And anyone who thinks it's confined to Africa is gonna get quite a wake-up call that already in India there's been five and 10 million people who have AIDS. And it's only a question of how many tens of millions or you know perhaps more than 100 million people in India who will get this disease.

And yet, intervening early, is when you can the biggest effect.

MOYERS: I interviewed Dr. David Ho a couple of weeks ago. He's made the great research breakthrough — TIME's Man of the Year for it. He's now worried about China, where his forbearers came from.

GATES: I was in China just two weeks ago talking to the Health Minister and talking to Jiang Zemin about raising the profile there.

And they have — for their level of income — quite a strong health system. And quite, you know, a willingness to say, okay, if this is about sex workers we'll go in and we'll register the sex workers. And we're gonna make sure that certain behavioral changes are taking place, like Thailand did.

And so I think the right thing will happen there. They will need international support. They'll need more encouragement to make sure it gets done.

MOYERS: What do you think about the Bush's administration retreat from women's health issues, reproductive rights around the world. Not only their retreat from it, but their outright opposition and their effort to impede it?

GATES: We've got to make sure that that money really gets allocated. And we've got to make sure it gets used effectively.

MOYERS: But they're not supporting contraception. They're not supporting condom distribution. They're not supporting safe sex.

GATES: Part of the problem is that the citizenry doesn't speak up enough and make it a big issue.

MOYERS: You know mean make global health a grassroots issue?

GATES: That's right. And yet if you grab somebody and say, do you care about this thing…

MOYERS: Yeah.

GATES: You can engage them very quickly. But it's not on the agenda.

MOYERS: How do we do that?

GATES: And so well, I'm thinking a lot about that. I'm interested in any ideas. Because this is about human welfare. You know, how we deal with the AIDS epidemic should be one of the greatest ways that the world gets measured. The report card for this era these next few decades.

A big part of that grade should be, did we apply all of the world's resources and activities and visibility against the AIDS crisis. And yet, to the average voter, you know, it's not on the radar screen. There's only about $6 a year given to world health issues by the U.S. and we're quite a legged in our giving.

We have to go out and regalvanize people that the role of the United States is not just what we do in the area of security, it's also sharing our advances and our resources. And if somebody wants to think about the chance of terrorism in the decades ahead, I think this issue of how young people outside the U.S. think of our country; what is the role of the U.S. in terms of creating opportunity for them?

And if we don't step up to these health issues, you know we're really not answering that critical issue.

MOYERS: What would you like the average American to know about global health?

GATES: I think understanding the basic facts about the AIDS epidemic is important. I think knowing how little resources are going into these things. Knowing that this is not a case of government waste. I mean there's this notion of government spending in general and foreign aid that often ends up in some dictators bank account.

In the area of world health, we're actually coming into the country with vaccines. And you're working at the village level to measure coverage there. There we can be very effective. This is not money that 20 years from now we're gonna wake up and say, how was that money spent? We'll know how it was spent because we look at the stopping the disease progression.

And so it is a special thing that the cynicism about government spending should be suspended here because it can be handled in the right way.

MOYERS: In this country we have eliminated diphtheria and whooping cough. All of those childhood diseases that were still prevalent when I was a kid years ago. The vaccines exist but we do not get them to the people whose lives… the children whose lives would be saved right now if they had it. Why don't they get to the people, the kids who need them?

GATES: Well the biggest single initiative we've done is the vaccine fund. And that was 750 million to galvanize the world to say, okay let's enter a new phase where we raise vaccination coverage from the little bit less than 70 percent it is today. And we get the new vaccines in there.

You know the Hepatitis B, the pneumococcal, there's about four that we have here in the U.S., that are not being given worldwide.

The total cost of getting vaccines, a package to a child, is about $30. And even if we add in the new vaccines, we'd still be at less than $50 of cost for this delivery. And so that money which was supplemented to some degree by governments and others but not as much as we had hoped is very directly related to this vaccination coverage.

MOYERS: What do you think are the major diseases that we're gonna have to deal with in the next 25 years?

GATES: Well top of the list is certainly AIDS. It's very epidemic. And I don't think AIDS even recognized how bad the epidemic could become.

If you were gonna design a bad disease you probably couldn't do something worse than AIDS. The latency, the fact that you're infected and you don't actually see the health effects till six to eight years later, that causes people not to understand what's going on.

You know take something like smoking: say that instead of dying 30 years later of cancer, that instead you smoked and you just dropped dead right then. You know people would get the connection. Oh. He smoked. He died. That's not good. Let's not smoke anymore.

Well AIDS is like that, where you just don't see the impact on a society. You know if people, someone visiting a sex worker walked out and they just fell on the street, you know there would be a pile of bodies there and you'd say, okay something's going on here.

The fact that there's these little epidemics of hemorrhagic fevers, they get incredible publicity. Ebola, Marburg, Lassa. You know and it's literally in the hundreds of people. But because it's all of a sudden that they die, that gets more visibility almost than AIDS gets.

GATES: You know plane crashes in India and the same day the plane crashed 8,000 kids died of things that could have been prevented. Which gets the coverage? Well, you don't expect coverage every day, but maybe at least once a month they ought to just say, by the way, every day this month, we don't want you to forget, just two paragraphs you know. 8,000 people are dying every day. And we'll let you know when it changes, but so far it's been that case for a long, long time.

MOYERS: Isn't it true that in Africa more children die of respiratory illness than people die of AIDS?

GATES: Because of this latency, 5 million people were infected this year. And so AIDS will be #1 in terms of the cause of death. Infant mortality is still higher, and the biggest piece of infant mortality is acute respiratory infection.

MOYERS: Yeah.

GATES: Generally pneumonia-related diseases. And so they both should be dealt with. In fact there are vaccines although they're still very expensive, that can deal with the respiratory problems of infants.

MOYERS: Are you looking for a vaccine for malaria? Because malaria kills a lot of people.

GATES: Yeah. In terms of what's #2, you'd probably put malaria. Malaria not only kills a million people a year, but at any time there's 300 million people who are being debilitated by the disease.

And if you took the top 10 diseases that are really troublesome in Africa, a lot of them you wouldn't know the names of. I mean you know Lice Maniasis, Sisto-Somaisis. Even something like trachoma that wouldn't make the top 20.

MOYERS: Trachoma is?

GATES: It's… you get an infection in your eye and you start itching and it's the leading cause of preventable blindness. Because eventually you itch and your eye turns in and you lose your sight. And yet you know Zithromax is this anti-biotic that if you give it--actually can prevent the disease. And if you get enough people taking it then you stop the spread of that disease. And yet it doesn't… it wouldn't make the top 20…

MOYERS: Can you think we will find a vaccine for malaria? Some people say it's impossible. It's such a complex disease.

GATES: No doubt. First of all, I'm an optimist, so… I should explain that. But there is…with malaria, there is innate immunity. That is if you get the disease, you are… it's very… except for different strains, you don't get it again. And so the immune system clearly does recognize something in the course of that disease.

And so all we have to do is take the sequencing information and try and find out what that is. You know I'd say quite certainly within the next 20 years and ideally in the next 10 we'll have a good vaccine for malaria.

MOYERS: In business, the market kicks you in the pants if you make a mistake. In philanthropy, some of your mistakes are celebrated because you gave the money and nobody ever came back to ask what happened?

GATES: We have to be really brutal with ourselves on this. We will make mistakes.

But then again, you've got to take risks. I mean that's one of the things a philanthropist can do that governments aren't as well suited to do. A politician doesn't want to allocated money if it's a one out of three chance of doing something really good, because, you know, then two out of three they'll have to stand up and say it was a waste.

Whereas a philanthropist can say, "Okay. But we will take that risk." Because the payoff would be there. And, you know, we're… I'm not gonna get voted out of office if in fact it's a dead end.

So we should be doing the things that the normal approaches can't do, whether it's approaches to the AIDS vaccine or malaria or delivery systems. We've got to be out there and accept some kind of failure rate.

MOYERS: Is the basic problem that we don't have enough knowledge to solve global health issues?

Or is it poverty? I mean if I'm forced to live on $1 a year, I'm not gonna be able to afford any medical care… I mean $1 a day. I'm not gonna be able to afford an aspirin. I'm not gonna be able to afford to make that trip to that clinic.

Your children, my children, my grandchildren. We can afford, they can afford decent medical care. Isn't poverty the real issue here?

GATES: It shouldn't be. The benefit to the world, both on a humanitarian basis but even on a pure economic basis of dealing with these diseases is… it's quite clear and quite positive. I actually get angry when people try and justify these health things in economic terms. You know like you'll read a paper that says, you know, "If malaria was cured, the GNP of this country would be 30 percent higher."

That gets it so backwards. I mean it's true. Statistically it's true and I suppose there're some audiences that you've got to use that argument. But the whole wealth is a tool to measure human welfare. It's just a tool that we created to help us sort of incentivize people and help get things done.

If death doesn't get reflected in GNP, then that doesn't mean it's unimportant. If the suffering in malaria doesn't get reflected in those numbers, it's still very important. So we shouldn't have to resort to these economic arguments.

Some people resort to security arguments. They say, "If we don't cure these diseases, the instability in these countries will be bad. And, you know, that could be scary." Or they resort to the, you know, "It's coming to your neighborhood argument." That, you know, somebody could get on a plane from one of these places and, you know, you might get sick. I mean don't worry about these people, but you might get sick.

And those, you know, those arguments, if they get more money for world health, then fine. I won't object. But they're wrong. The right argument is, you know, this mother's

child is sick. And that child's life is no less valuable than the life of anyone else. And the world has plenty of resources to go solve these problems.

MOYERS: Let's say that everybody agreed with you. That they wanted to do the moral thing. What practically could we do? You've already admitted the market doesn't get there. It doesn't get to Uganda. It doesn't get to Nepal. It doesn't get to Mozambique. It doesn't get to places where people as you and I talk are dying from malaria, tuberculosis, AIDS, all kinds of disease.

The market doesn't do it. How do we do it? Every, you know, $27 billion is a lot of money, I think. But it's a drop in the bucket compared to what you've been describing. So what do we do practically?

GATES: For the U.S. to do its fair share, we'd have to take the $6 per citizen that is spent on foreign health issues and we'd have to raise that to $30 to $40.

And if other rich countries did their part, then there would be the money to give the vaccines, to create the new vaccines. To give oral rehydration therapy. To have the education in the villages. You know then the whole picture of health would change quite dramatically.

You know public health doctors I know talk about the positive feedback loop in poor countries. If parents believe their children will get better, they save more and they reproduce less, therefore there's less money… there's more money for other things. Do you accept that as a workable theory?

GATES: Absolutely. And that is the most amazing fact that should be widely known. You know essentially Malthus was wrong. If you raised wealth and you improve health, particularly if you educate women, then this virtuous cycle kicks in and a society not only becomes self-sustaining, but it can move up to a fully developed status.

The Club of Rome was writing about how we were basically headed towards a disaster. That the amount of food that the world would produce would be inadequate and you know that things would just get worse and worse and worse.

Well, now at least in the countries where health has taken hold, we're seeing literacy rates improve. We're seeing, you know, everything about life improve. Once you get this one thing right. And that was something that was quite a revelation to me. I, you know, I frankly thought that the Malthusian principles applied at least in the developing countries.

But because of computer technology now in medicine, advances will move at a incredible pace. The next 20 or 30 years will be the time to be in medicine. Many of the top problems, I'd say most of the top problems, we'll make huge advances against.

Just think about a kid who's curious, say, about malaria. They can go onto the Internet today and, you know, see what's going on. Try, you know, they can even see the genome if they want. They can see the papers that have been published by different labs.

So I get very excited about how the generation that's coming into health right now, the visibility, particularly of these poor world diseases, you know the information now is in their hands. And they ought to be able to do quite a bit with it.