

How Would You Move Mount Fuji?

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The Big Idea

Have you ever been asked "Why are manhole covers round instead of square?" during a job interview? Or asked to answer other riddles and hypothetical or trick questions?

These puzzle-interviews have been emulated by numerous fortune 500 companies from Microsoft. Questions such as the above seek to separate the most creative thinkers from the merely talented.

"How Would You Move Mount Fuji?" gives you a peek into more than 35 of the most challenging questions, riddles and puzzles used by Microsoft and other companies. This book will teach you how to answer them creatively and effectively, giving you an upper hand on crucial job interviews.

The Impossible question

Logic puzzles, riddles, hypothetical questions and trick questions have long been used in computer-industry interviews. These are known as "impossible questions" and are believed to measure the intelligence, resourcefulness or "outside-the-box thinking" needed to survive in today's very competitive business environment.

Today, these impossible questions are also being used, not just in computer-industry interviews, but in almost every line of business such as law firms, banks, consulting firms, insurance companies, the media and the armed forces.

The strangest thing about these impossible questions is that no one knows the answer - not even the person who is asking. Still, people are being hired or not hired based on how well they answer the questions.

The popularity of these puzzle-interviews can be attributed to the American company Microsoft. Its interview process is a reflection of how the company needs to be more selective and extra careful in its hiring. For the company, these questions are a reflection on how you handle a difficult situation. It is important for them to find out what you can do and not just what you have done.

Riddles and Sphinxes

These puzzle-interviews are updates on the ancient Greek legend of Oedipus and the Sphinx where the Sphinx devoured anyone who could not answer the riddle: "What is it that walks in four legs in the mornings, two legs at noon and three legs in the evening?"

With its use of puzzles in its hiring process, Microsoft tries to weed out those who think on their feet and those who do not. All that matters is your logic, imagination and your problem-solving ability.

Microsoft's puzzle-interviews has changed the way companies hire. With bad hires more costly than ever, organizations have given the job interview an importance it was never meant to have. References have become less common and less useful so hirers seek information somewhere else. The job interview is the most direct means of assessing a potential employee.

The Two-Second Interview

In a study conducted by two Harvard psychologists, Nalini Ambady and Robert Rosenthal found out that people make snap judgments within the first two seconds of an initial meeting with another person.

The study suggests that an interviewer has already made up his or her mind about the interviewee by the time the interviewee has sat down. The decision may be based on looks or the body language.

Traditional and Behavioral Questions

Human resource experts classify interview questions into "traditional" and "behavioral". Traditional questions include "Where do you see yourself in five years?"; "What do you do on your day off?"; "What is the latest book you've read?"

Behavioral questions, on the other hand, ask a candidate to describe a past experience bearing character and job skills. The reason for this is that it is harder to fabricate a story than a one-liner.

Future Tense

Microsoft's hiring process focuses on the future. The company's goal is to hire people based on what he can do rather than what he has done. The company hires people fresh out of college and those who have past experiences, but the emphasis is always on the future tense.

The Termans and Silicon Valley

Bill Gate's hiring philosophy is that he values intelligence above anything else. As a result, Microsoft is a refection of this philosophy. The company values intelligence and places less emphasis on skills and experience. The puzzle interview was then utilized to gauge a candidate's intelligence.

Lewis Terman and I.Q.

Measuring man's intelligence was first popularized by a Stanford psychologist Lewis M. Terman in the early 1900s. He translated into English the pioneering intelligence test devised by French educator Alfred Binet. By placing a different spin on Binet's original test, Terman added "harder" questions so that he could use the test for both children and adults. Terman named the test "Stanford Revision and Extension of the Binet's Intelligence Scale". This version is still being used today.

For Terman, intelligence is the ability to reason abstractly. Intelligence is not knowledge of facts but the ability to manipulate concepts. To test that ability, he used analogies, synonyms and antonyms, reading and comprehension, math and logic puzzles.

I.Q. Test in the Workplace

In 1917, I.Q. tests were used in Army recruitment. This ushered in the use of such tests in the workplace. Companies routinely use I.Q. tests to decide which people to hire and which to promote.

In another story, Lewis' son, Frederick, is known to be responsible for the stature that Stanford has today. He dreamed of starting an industrial park in Palo Alto next to the University. He convinced the University to set aside a big plot of land where students and professors could start their own business. This land is now known as Silicon Valley.

The Shockley Interview

One of the "founders" of Silicon Valley is William Shockley. He insisted that every job candidate must take an intelligence test and these interviews included logic puzzles. The Shockley interview may be the inspiration behind the puzzle-interviews being used by Microsoft today.

Are Puzzle Interviews I.Q. Test.?

Microsoft's puzzle interview does more than test an individual's I.Q. It is said to measure bandwidth, inventiveness, creative problem-solving ability and outside-the-box thinking.

For the company, the successful problem solver must be persistent as well as smart. They believe that a logic puzzle is a better indicator of workplace success than other intelligence tests.

Bill Gates and the Culture of Puzzles

The founder of Microsoft, Bill Gates was born into a family that believed in organized fun. His parents often organized family skits and Sunday evening tournaments of bridge, Password and trivia games where winning mattered. His father would present and dissect topical issues for the family - posing probing questions and expecting well-reasoned answers.

Bill Gates never lost this taste for games and puzzles. This love is reflected in how he runs his company and his hiring policy. When Microsoft employees travel on business, they can expect little time for unstructured sightseeing. Instead, the company arranges competitive games.

For Bill Gates and Microsoft, the secret of remaining ahead of the pack is not to "get fat" (i.e. complacent) but to "stay hungry". For them, creativity does not happen without a few constraints and when one starts leaning on wealth instead of living by wits, he is in real danger of losing his edge.

Microsoft and Its Employees

To be able to succeed in the highly competitive and volatile computer and software industry, one has to combine logic with creativity and mental flexibility. Microsoft and any other company will only be as good, as creative, and as innovative as the people it hires. This is why it is essential for them to hire the right people for the right job.

A main goal of hiring is to find "Bill clones" - the company's term for a young person of Gates-like intelligence and competitive edge. Microsoft hirers pride themselves in being able to identify people who can achieve great things rather than those who have already done them.

Microsoft is very cautious in hiring. Like Gates, the company needs to be very sure that the person hired is very good at what he or she is supposed to do. They are expected to prove themselves more informally by solving puzzles.

Its guiding principle in hiring is "Do no harm". Microsoft seeks to avoid hiring the wrong people, even if this means missing out on some good candidates. The rationale behind this is that it costs too much to recruit, maintain and discharge an employee. Hiring someone who is not capable to do the job does more harm than good for the company.

The Microsoft Interview Puzzles

Microsoft's interviewers ask many types of questions, even the traditional and behavioral ones. Interviewers also ask hypothetical questions that are specific to the computer industry. Developers are asked a number of programming questions and are required to write codes.

Where Does Microsoft Get Its Puzzles?

Microsoft interviewers are free to ask any question they want. Usually, they ask recreational problems that are stated in words and involve little or no math.

It is also encouraged that those working in Microsoft come up with "new" and presumably effective questions. According to the author, puzzles evolve out of retelling.

Wall Street and the Stress Interview

Microsoft isn't the only company that uses puzzle interviews in selecting the right man for the right job. By the 1990s, these types of interviews have been showing up outside Silicon Valley, particularly in the New York financial community.

These types of interviews are custom-made for the stress laden culture of Wall Street where competition is intense and the market share quite fragile. These interview tests aim to make the candidate uncomfortable in order to provoke certain reactions that are believed to reflect how one candidate does under stress.

Most of the questions asked during these interviews are a variation of the Microsoft logic puzzle or those found in puzzle books and internet sites.

How to Outsmart the Puzzle Interview

1. First decide what kind of answer is expected (monologue or dialogue). Logic puzzles usually calls for a monologue. Design answers have single answers. Good answers show awareness that trade-offs exist.
2. Whatever you think of first is wrong. With puzzles and riddles, the first obvious answer that pops into mind is not usually the right answer.
3. Forget you ever learned calculus.
4. Big complicated questions usually have simple answers.
5. Simple questions often demand complicated answers.
6. "Perfectly logical beings" are not like you and me.
7. When you hit a brick wall, try to list the assumptions you are making. See what happens when you reject each of these assumptions in succession.
8. When crucial information is missing in a logic puzzle, lay out the possible scenarios. You'll almost always find that you don't need the missing information to solve the problem.
9. Where possible, give a good answer that the interviewer has never heard before.

How Innovative Companies Ought to Interview

Interview puzzles are created to act as a negative screen and weed out people who are not right for the job. They are a way of making sure that the wrong persons are not hired, rather than a way of identifying the geniuses.

The puzzle interview recognizes two discomforting facts about life:

1. With the rapid pace of changing of technology, there is no point in hiring for a specific soon-to-be-obsolete set of skills. A company needs to hire for a general problem solving capacity.
2. A bad hiring decision is likely to hurt the company more than a good hiring decision will help it. Avoid bad hires.

Below are a few guidelines to make sure you get the information you need out of puzzle interviews:

1. The value of the puzzle is in inverse proportion to the candidate's experience.
2. Have an interview plan.
3. An interview is not an IQ test.
4. An interview puzzle is a filter to prevent bad hires.
5. Interview questions are only as fair as you make them.
6. Choose questions so that it doesn't matter (much) whether the candidate has heard them before.
7. Challenge your first impression.
8. Avoid "questions with no right answers".
9. Don't do a "stress interview".
10. Don't pass notes.
11. Avoid deception, even the common "white lies".

Sample Puzzle / Logic Questions and Answers

1. *Why are manhole covers round instead of square?* The answer that is considered best is that a square cover could fall into its hole. In contrast, a circle has the same diameter in all directions. The slight recess in the lower part of the cover prevents it from falling in, no matter how it's held.
2. *Why is it that, when you turn on the hot water in a hotel, the hot water comes out instantly?* Hotels have a hot water re-circulating system. It consists of a pump attached to an extra line that runs "backward". This line goes from near the hot water tap farthest from the hot water heater, all the way back to the heater. The pump slowly circulates hot water through the hot water lines so that the water in the line never gets cold. When you turn on the tap, the line water is already hot.
3. *How many times a day does a clock's hands overlap?* According to the book, the answer is 22. If you want to count the overlap at the midnight that begins the day, and also the midnight that ends the day, then the answer is 23.
4. *Mike and Todd have \$21 between them. Mike has \$20 dollars more than Todd. How much does each have? You can't use fractions in the answer.* The answer is that Mike has \$20.50 and Todd has \$0.50.
5. *You have a bucket of jellybeans in three colors - red, green and blue. With your eyes closed, you have to reach into the bucket and take out two jelly beans of the same color. How many jelly beans do you have to take to be certain of getting two of the same color?* The answer is four. Pick just three jelly beans and its probable that you have one of each color and therefore no match. With four jellybeans, at least two have the same color. This is Microsoft's twist on the older puzzle of how many socks you have to pull out of a drawer in the dark to be sure of getting a pair. The answer, of course, is three.

Key to a Puzzle

The key to solving any puzzle is to be sensitive to the clues as to what kind of puzzle it is. Clues come in many forms ranging from the wording of the puzzle to the tone of the voice posing it, to your own reasoning about the assumptions themselves.

Be confident in answering the puzzle and of your answer. Interviewers would likely hire someone who comes to a decision, articulates it and sticks by it.