Do you understand why stars twinkle? Would you rather read than watch TV? Do you trust data more than your instincts?

And other strange questions you need to answer to get a job in the era of optimized *hiring*

By Eliza Gray

PHOTOGRAPH BY ANDREW B. MYERS FOR TIME

Here is what it's like trying to get a job right now. You've racked up your college loans, worked hard to get your degree and polished your LinkedIn profile. You're ready to impress a potential employer with your qualifications and your drive. Maybe you buy a nice interview outfit.

But then come the questions.

True or False:

"I never get angry."

Um. False, you guess? Doesn't everyone get angry sometimes?

"My parents praised me for my achievements."

Careful here. True might make you seem entitled. False might make you seem neurotic.

When I was young, there were times when I felt like leaving home.

This is the point at which you might reasonably ask yourself, What's going on here? What could any of that possibly have to do with my ability to analyze stocks (or sell pharmaceuticals, or write computer code, or manage a restaurant)?

The answer: everything. As the class of 2015 heads out into the workforce this summer, they are going to have their heads examined by the companies they hope to work for. Convinced by the gurus of Big Data that a perfect workforce can be achieved by analyzing the psyche and running the results through computers, hundreds of employers now insist that job candidates submit to personality tests. The phenomenon spans the pay scale from burger flipping to high finance. And the questions range from the intrusive ("I dislike the high taxes we pay in this country") to the positively bizarre ("Sometimes I'm not sure what I really believe").

Employers—and the $2 billion industry that provides many of the evaluations—say the tests are a critical tool in fighting employee turnover, increasing productivity and raising customer satisfaction. By gaining insight into job seekers' personalities, they say, it's now possible to identify the workers who will be the happiest and the most successful in the roles they have on offer. And the hiring process is just the start. Once on board, many of these companies continue to track and crunch data about workers' personality traits to help find candidates for promotions, transfers and—at times—termination.

Want to work at a hedge fund or in private equity? Your employer might want to know how you measure up in terms of Cattell's 16 personality factors, the Hogan Personality Inventory's seven scales or the Caliper Profile's more than 22 traits—tests that can take anywhere from 20 minutes to several hours, according to some frustrated job seekers. Interested in becoming a nurse? You might face questions from the Prophecy Behavioral Personality Assessment or Pegged Software, a startup founded by a former White House economist that administers tests to 3 million job applicants in health care annually. One of the most popular tests, Gallup's StrengthsFinder, is now used by 457 of the *Fortune* 500 companies as a way to communicate with workers, according to the Wall Street *Journal*.

Some employers are now monitoring workers' temperaments in real time—including the world's largest hedge fund, where employees can track their individual stats on a personalized digital "baseball card." Experts in the fast-growing "people analytics" industry believe it won't be long before algorithms regularly sift through Facebook and Twitter postings to glean and analyze additional data.

The upshot is that there's a new vital qualification for workers all across the economy. It isn't an IQ rating or even EQ, the emotional intelligence quotient that came into vogue in the 1990s. There's no name yet for this indispensable attribute. The qualities are so murky that often not even the employers chasing it are able to define it; they simply know that an algorithm has discovered a correlation between a candidate's answers (such as an expressed preference for classical music) and responses given by some of their most successful workers.

So let's call it the X quotient—and get ready, because thriving in the new economy means acing your XQ test, an exam that no one has prepared you for.

"I BELIEVE THIS is really the future for hiring," says Andy Biga, a 35-year-old JetBlue executive with a toothy smile who looks a little like an intern himself as he tells me about using data and assessment in HR. Biga has a corporate-sounding title, director of talent acquisition and assessment, but in April, at the Wharton People Analytics Conference at the Ritz-Carlton hotel in Philadelphia, he looked more like a prophet, with dozens of human-resources professionals sitting enthralled as he spoke.

Biga was letting them in—just a bit—on some company secrets: By using a personality profile made up of 12 traits, Biga says, his team can predict down to the flight attendant which employee will make a good impression on a customer. Biga is careful not to give away too much to potential competitors; his PowerPoint explained to the audience that JetBlue's early research shows that it may be more important for a flight attendant to be "helpful" than "nice," but without defining exactly what that means.

In a typical year, JetBlue posts 3,000 job openings—for 150,000 applicants. To win a coveted spot, a big chunk of those applicants must get past the battery of tests Biga's team designed.

I called Biga and his protégé, another 30-something data wiz named Ryan Dullaghan, after the conference to see if they'd talk me past the buzzwords and through what they're really looking for in a new hire. No dice. After all, if the traits they wanted in an employee were printed in TIME, they said, job applicants might be able to game the test. Ditto the questions, though they did offer some exam-

Do you often fantasize about being famous?

ples of similar ones that didn't make the cut, like: "I am uncomfortable accepting help from others," and "I feel stressed when others rush me." (Test takers are typically asked to answer whether they agree or disagree with a statement.)

Applicants are rated by color based on their scores. Greens are a great fit. Yellows will do O.K. in a pinch when JetBlue needs to hire a lot of people. Reds are the do-not-hires. The payoff for the airline: customers were 15% to 25% more likely to call with an unsolicited compliment for a JetBlue employee who was a "green" than one who was a "yellow." Biga's team loves the way it works for crew-member positions so well that they are looking into rolling out the same approach for corporate jobs in the near future.

Not every company can afford its own in-house Biga. But there are hundreds of vendors eager to take on the role of shrinking job applicants' heads and measuring their XQ. One of the bigger outfits is Infor, a New York–based software company that claims to assess a million candidates a month—a number that translates to 11% of the U.S. workforce. Infor, which has worked with clients as diverse as Hertz, Boston Market and Tenet Healthcare, concocts a job applicant's "Behavioral DNA," a measure of "39 behavioral, cognitive and cultural traits," and compares them to the personality traits of the company's top performers.

Infor promises clients lower turnover and increased sales and says the tests are great for candidates too because they place them in jobs that fit their personality. But as with many employers, at Infor the tests are mostly reserved for the rank and file. Infor CEO Charles Phillips admitted he'd never taken the test when we spoke, adding, "I'm scared of what I might find."

ALLY HIZEL DOESN'T seem like the kind of young woman who should be anxious about looking for at job. At 23, Hizel has a degree in biomedical engineering from George Washington University, a credential valuable in roles from medicine to R&D.

But the process of landing her job as a design engineer at a manufacturing company turned out to be surprisingly stressful, thanks to the required personality test. After her mother's warning that employers don't like wishy-washy candidates, Hizel fretted as she realized that different parts of the test seemed to be asking similar questions. "I was really nervous," Hizel remembers. "I answered a question one way and I'd get to a similar question, and I'd be like, 'Wait, what if I actually think this other way?' And the deeper you get into these hundreds of questions, you realize you've got to just stick with what you've been saying."

Assuming, that is, that you can figure out what to say in the first place. Questions which try to divine your XQ can seem downright gnomic, immediately giving the test taker an impression that something beyond face value is being scrutinized. That's because it is. Take, for example, the true-or-false statement "I read at least 10 books a year." Robert Hogan, the co-founder of Hogan Assessments, who has been building these tests since 1987, says he doesn't really care how many books you read. He cares whether you care about making people think you read that many books.

"We are interested in what kind of a person will tell you they read at least 10 books a year. It is someone who wants to come across as intellectual," says Hogan. "People who say 'I read 10 books a year' do other things. They take courses. They go to museums. And they'll tend to keep up to date in their jobs." Similarly, people who say yes to "Our postal system is quite inefficient" are the kinds of people who are sensitive to their environment and willing to voice it to others—just the kind of person you'd want perfecting your smartphone.

For Kelly Ditson, the stress of answering mysterious questions was compounded by the sheer effort of taking test after test as she worked to pitch herself to different employers. The time required—a common complaint among workers who have been through this process—was no small thing for Ditson, a 24-year-old waitress and working mother who lives outside Pittsburgh. Her job at a small Italian restaurant wasn't paying enough for child care and the classes she was taking to become an ultrasound technician, and she wanted to get hired at a better-paying chain. When she started applying, she was dismayed to find that many chains required time-consuming online personality tests, often with hundreds of questions about things that hardly seemed relevant to the job.

She remembers tackling the job applications at night after she had finished her schoolwork and put her son—now 3—to bed, sometimes staying up as late as two in the morning to finish just four applications. On one particularly bad day, she sat with a laptop in a café desperately multitasking between a homework assignment and a bid to be hired at Chili's. Ditson says she made it to the 95th question on the Chili's application only to have the café's wi-fi connection cut out. She had to start all over.

Chili's had no comment for TIME. Ditson says she was exasperated. "I was thinking, If they want to know about your personality, this is a little bit of an impersonal way. Wouldn't they want to meet me in person?" In the end, she got her job the old-fashioned way: calling the manager at the Olive Garden until she hired her. She started in March.

THE NEW RAGE for personality testing is being driven by a collision of two of the business world's hottest trends. The first is Big Data, which preaches the value of collecting as much information as possible about practically everything so that it can be mined for lessons—and used to make immediate predictions about the

Do you find yourself getting angry easily?

future. The second is subtly different. It's called analytics, a broad term that describes looking for patterns in data that can be used to optimize performance. In the digital world, analytics helps identify the power of seemingly small shifts. For instance, analytics might show that moving the BUY button on a web page a few pixels to the left brings an unexpected 10% jump in sales.

The result is a mostly unchallenged belief that lots of data combined with lots of analytics can optimize pretty much anything—even people. Thus, "people analytics," the most buzzed-about buzzword in HR circles at the moment. Included in people analytics is everything from looking at the correlation between compensation and attrition to analyzing employees' email and calendars to see if they are using their time effectively.

Personality testing has become one of the movement's touchstones. Some 35% of HR professionals from around the world said they used "personality inventories" in 2012, according to a survey from HR consultant Development Dimensions International, up from 19% in 2005. Josh Bersin, an expert and researcher on corporate learning at Deloitte, says his surveys show that approximately 15% to 20% of jobs involve some sort of prehire assessment, whether it be a personality test, a cognitive ability test or an assessment testing situational judgment by presenting various scenarios that could come up on the job.

For all their current vogue, personality tests have a long and checkered history in the American workforce. The first notable example of their use was during World War I, when a psychologist created a test for the U.S. Army to screen for soldiers prone to shell shock. After the war, corporations used personality tests to weed out union sympathizers. In the 1940s and '50s, testing expanded, with newly minted tests like the Minnesota Multiphasic Personality Inventory (MMPI), Raymond Cattell's 16 Personality Factor Questionnaire and a test published in 1962 by a suburban housewife with no formal training in psychology—the Myers-Briggs.

The popularity of the tests waxed and waned. They stalled in the '60s amid a backlash against corporatization after the war. In 1965, Sam Ervin, a liberal Democratic Senator from North Carolina who later ran the Watergate Committee, organized congressional hearings to look into privacy concerns related to the federal government's use of the MMPI.

What's different now is the business world's nearly unbridled faith in data—faith that has been proved justified by everything from *Moneyball* baseball strategies to the money managers' arcane financial algorithms. Correlation is king, even when causation is far from clear. So it is only natural that data worship would take hold in hiring. Personnel are half a business's cost, after all. And if data can predict which chain of events will lead to failure and success, why not bring that same rigor to predicting job performance?

Do people say you are eccentric?

IF YOU IMAGINE you know where all this data crunching is taking us, you may be in for a surprise. Consider, for example, the world's largest hedge fund, Bridgewater Associates in Westport, Conn. It has nearly $170 billion under investment and about 1,400 employees. It studies its people with the same intensity it studies the stock market.

It begins with hiring. When looking to fill a new role, Bridgewater creates a job specification that not only describes the work involved but the attributes that will be advantageous to the person doing it—like meticulous thinking, say, or the ability to hold people accountable. The company then uses a Myers-Briggs-like assessment test to find applicants with those qualities.

"It's just like if you were going to order a piece of equipment, what kind of equipment would you need?" explains the fund's founder, Ray Dalio, who also happens to be one of the 100 richest people in the world according to *Forbes*. Dalio is a true believer in the approach and, as the brains behind much of the personality work at the company, one of the field's big innovators. In Dalio's vision, personality traits don't just help you find the right people; they help you understand them, manage those below you, work better with those above you and cooperate better with peers.

Which is why every Bridgewater employee, including Dalio, has a digital "baseball card"—a summary that lists key personality stats the same way a bubblegum card shows a player's batting average and RBI totals. Each employee's baseball card is visible to every other employee—a way for people to get a sense of what their colleagues are like and learn more about how their colleagues perceive them. In addition to a picture and a job title, the card displays some 50 different attributes, from creativity and reliability to lateral thinking, community-mindedness and the ability to learn from mistakes. The employee is scored on each attribute on a scale from 1 to 10, a number displayed on the card.

The data that comes to define each employee results from a constant stream of feedback from colleagues who tote iPads to meetings so they can log in to Bridgewater's proprietary app and award "dots" toward the different attributes listed on their colleague's cards. A teammate on a project, for example, could give a "good dot" for attention to detail and a "bad dot" for flexibility if her colleague executed a project meticulously but was resistant to changes in approach. There are even instant replays: almost every conversation at Bridgewater is recorded, so anyone can watch or listen to a tape of the moment when an employee earned a certain "dot." The result, says Dalio, is a "pointillist painting" of the employee's attributes.

Does all this risk buttonholing people according to some fairly subjective personality types? A meticulous thinker is no better or worse than a big-picture mind, but it's pretty clear which one you would like to have doing your taxes. Dalio says personality types shouldn't stop people from trying something they aren't well suited for but should alert their employer to help protect them from their likely mistakes.

For Dalio and many others, all this data can be the key to creating a true meritocracy, free from the old boys' network. "An

Find out if your personality fits your job

For a better sense of what these tests are like, TIME asked Hogan Assessments to devise a brief example for readers. The company's co-founder, Robert Hogan, is a fellow at the Society for Industrial and Organizational Psychology. He says he believes testing can strengthen organizations and place people in the right jobs—but adds that he's concerned about the lack of transparency and regulation in the growing test industry.

Instructions
Answer each of the following true/false statements. To get your score, give yourself a point each time you answered true to the following items: 1, 3, 6, 7 and 8. Give yourself a point each time you answered false to the remaining items (2, 4 and 5).

Spontaneity

T F 1. I follow my instincts wherever they lead me.
T F 2. Planning is one of my best abilities.
T F 3. My friends would describe me as impulsive.
T F 4. I always schedule my activities well in advance.
T F 5. I don't do anything without having a plan in place.
T F 6. I often do things on the spur of the moment.
T F 7. I go wherever the day takes me.
T F 8. My friends say that I am unpredictable.

Now add up your total score.

_____ **Score**

High (6–8):
You would fit best in jobs that offer flexibility and diversity. Others may turn to you for your spontaneity and willingness to change focus, but you might have difficulty with details and completing everything that you start.

Moderate (3–5):
You would fit best in jobs that offer some structure but still permit a change of focus and direction throughout the day. Others will view your ability to plan ahead while remaining flexible as an asset, but you might have difficulty prioritizing your work or quickly bouncing from one task to another.

Low (0–2):
You would fit best in a structured working environment where you can plan your day in advance and stick to that plan. Others will likely rely on you for your attention to detail and follow-through, but you might have difficulty recognizing when it is time to abandon one course of action for another.

Independence

T F 1. I prefer working alone.
T F 2. I am a social person.
T F 3. I don't like to rely on others to help me with my job.
T F 4. I usually spend my free time with friends.
T F 5. I enjoy working on teams.
T F 6. I like to work without distractions.
T F 7. Meeting with others is often a waste of time.
T F 8. I do not like to draw attention to myself.

Now add up your total score.

_____ **Score**

High (6–8):
You would fit best in jobs that allow you to work primarily by yourself. Others will likely value your ability to take on and run with your own projects, but you might have difficulties asking for or lending help to others when needed.

Moderate (3–5):
You would fit best in jobs that contain a mix of independent work and working with others. Others will value your flexibility, but you might struggle during long periods of solitary work or work that requires constant and regular interactions with others.

Low (0–2):
You would fit best in an environment where you are constantly surrounded by and working with others. You likely derive energy from others, which in turn attracts people to you. You might struggle, however, when asked to focus on specific tasks or goals by yourself.

Competitiveness

T F 1. Life is a competition.
T F 2. I don't care if others are more successful than I am.
T F 3. Some people think I am too competitive.
T F 4. There's nothing wrong with letting others win.
T F 5. More harm than good is caused by competition.
T F 6. It takes a killer instinct to get ahead.
T F 7. I enjoy testing my skills against others.
T F 8. I am at my best when competing with others.

Now add up your total score.

_____ **Score**

High (6–8):
You would fit best in jobs where success is defined by excelling over others. Others will likely value your drive, determination and willingness to put in more effort than your competition. You might, however, struggle to recognize when you need to put your own personal goals aside for the greater good.

Moderate (3–5):
You would fit best in environments that contain a mix of collaboration and competition. You are likely able to work toward both individual and team goals simultaneously but must be careful to recognize when to focus on one over the other.

Low (0–2):
You would fit best in a team-based, collaborative environment. Others will frequently turn to you for help and, in turn, be willing to offer you help as needed. You might, however, struggle in situations where your personal performance depends on your ability to outshine others.

evidence-based system is so much better than the cronyism of the past—where a boss can pick his best pal for a job and not have to say anything about the reasons behind that decision," says Dalio. Without data, we are no better than cavemen he says. "Society is in its animal, emotional state that is the equivalent of the dark ages. We are in this transition period where all that is hidden in darkness will come out through statistical evidence," he says.

IT IS DIFFICULT to listen to Dalio without becoming at least a little swept up in the potential. Objectivity in hiring—and managing—is a goal few would take exception with. It could help reduce discrimination based on gender and race, which can be overt or can stem, as studies have demonstrated, from subconscious bias on the part of the fallible humans doing the hiring.

But critics worry that most employers don't have the resources or the sophistication to use all this data properly and with perspective. As any parent of a school-age child knows, some individuals just perform better in testing situations than others. What if some people simply aren't good at dealing with personality tests—and what if that is its own form of discrimination?

"I think that what is going to happen with the tests is that people with disabilities are going to be screened out," says Jinny Kim, a senior staff attorney in the disability-rights program at the Legal Aid Society Employment Law Center in San Francisco. Lawyers who represent employers counter that testing doesn't look for disabilities, merely undesirable personality traits. As Eric Dunleavy, a consultant at DCI, an HR risk-management firm in Washington, D.C., puts it, "Pains-in-the-ass are not a protected group."

All of this skirts an even bigger question. Employees aren't spreadsheets to be crunched or search results to be optimized. They're humans with good days and bad moods, gritty tendencies and silly whims—in other words, often unpredictable. Data can answer a lot of questions, but it can't answer *all* of them. Are we truly comfortable with turning hiring—potentially one of the most life-changing experiences that a person can go through—over to the algorithms?

I.Q.

1912 German psychologist William Stern invented the concept of the "intelligence quotient," defined as the ratio of a person's mental age to his physical age, times 100. (A 10-year-old with a mental age of 10 would have an IQ of 100.) That formula has fallen out of favor, but intelligence testing is still used in some workplaces.

E.Q.

1990 Psychologists John Mayer and Peter Salovey defined "emotional intelligence" as a "set of skills" they believed contributed to a person's ability to judge and regulate emotion in oneself and others, and to use feelings to achieve in life. The concept took off in the business world, as leaders looked for those skills in employees.

X.Q.

2015 In the new wave of employer assessments, no official name has emerged for the qualities employers are testing for. In fact, they can often seem mysterious—a kind of X quotient, or XQ. Generally speaking, it is the practice of testing for personality traits that will lead to success in a particular role.

It may be a digital-age heresy to say it, but putting blind faith in the data can produce unexpected results, as some employers are beginning to learn. Daniel Rogers, a manager of 18 Little Caesars franchises across Virginia, Maryland and D.C., uses Infor's assessments through a website called Snag-a-Job. Though he says the tests are better than hiring blind, he doesn't rely fully on them, partly because they tend to screen out older, less computer-savvy applicants. "We've seen more females, younger applicants, people with some computer skills. That is not necessarily a better class of employee," Rogers says.

Even at the high altars of data, faith is mixed with doubt. Early in his tenure at Google, Prasad Setty, vice president of people analytics and compensation, wanted to come up with a better way to promote engineers. The company had been using an expensive event for this, flying in hundreds of senior Google engineers from all over the world to a Marriott in California to judge their subordinates' applications for promotion. Setty and his team discovered an algorithm that could predict, for some employees, who would get promoted with 90% accuracy. The next step seemed obvious: ditch the convention, use the algorithm.

Then a funny thing happened. The engineers revolted. "They wanted no part of an algorithm. They said these are such important decisions that we want people to make them. We don't want to hide behind a black box when someone comes and says, 'Why didn't I get promoted?'" Setty said, recounting the story at the Wharton analytics conference.

Google's executive in charge of hiring, Laszlo Bock—another rock star of the HR world—says the company's deep experience with data allows it to understand better than most the danger of imperfect algorithms. "I imagine someone who has Asperger's or autism, they will test differently on these things. We want people like that at the company because we want people of all kinds, but they'll get screened out by this kind of thing."

Bock also says companies shoulder a grave responsibility when they play with such data. "Google can tell you with very high confidence what phrase you are going to type, six letters in," says Bock. "On the people side, the levels of confidence are very, very different, but in a way, the impact is much greater. If I get a bad auto-suggest, my life doesn't change. But if somebody makes a bad assessment based on an algorithm or a test, that has a major impact on a person's life—a job they don't get or a promotion they don't get."

But ultimately, in Bock's vision, the solution is not to abandon analytics, but to double down, building an assessment system that goes beyond personality to span all sorts of factors and draw on a broader variety of workers and companies. "This will sound like hubris," he says. "If you could figure out a robust way to assess people's capabilities ... and if you could actually assess what makes people perform well ... you could go a long way to matching people to jobs. I actually think assessment is part of that, but it has to be a much bigger solution than dozens of companies and thousands of individuals. You need to actually understand how jobs and employment works across the country. And I think over the next five to ten years, someone's going to figure that out."

—With reporting by GIRI NATHAN/NEW YORK CITY ◻