

Curiosity Drives Innovation

We live in a time when the best thinking is needed to develop solutions to the greatest global challenges. All over the planet accelerated growth and mobility of populations have created a need for advances in energy generation and storage, sanitation, agriculture, healthcare, infrastructure, and more. The new Sustainable Development Goals - recently adopted by the United Nations - chart an ambitious roadmap to achieving the "world we want." Curiosity is the essential component that empowers us to discover the breakthroughs and innovations that deliver progress and improve the human condition.

Curiosity is about recognizing, seeking out, and even preferring things that are new, unusual, and outside of one's normal experience. Successfully generating new ideas and approaches demands openness to, and comfort with, things that have never been tried before. The courage to take risks, perhaps most importantly, requires perseverance.

Recent research outside of our study has led to a greater understanding of curiosity by shedding light on its psychological foundations and identifying its different dimensions. Numerous studies have attempted to measure curiosity, but at present no gold standard exists. What if we could learn more about what sparks curiosity and how it can be fostered inside organizations?

"We have been focused on innovation for many years. What we want to understand better is how we can foster this innovation in the first place. Curiosity is the critical ingredient to the future breakthroughs society needs."

Dr. Stefan Oschmann,
CEO, Merck

The State of Curiosity survey was conducted online by Harris Poll between August 13 and September 3, 2015 among 2,606 U.S. workers. Our goal is simple: devise a roadmap to help organizations foster a culture of curiosity to inspire people to keep discovering and innovating. This is what it will take to improve people's lives and make the world a better place.

Some good news: Through the State of Curiosity survey we found that American workers believe they are up to the task of innovating, scoring themselves highly on various dimensions of curiosity. Unfortunately, they believe their workplaces are less curious than they are themselves. Only 39% of workers report that their employers are either extremely encouraging or very encouraging of curiosity. Our study reveals several factors that threaten how curiosity thrives within our organizations, as well as those that foster a culture of curiosity.

We, the Curious

As the world's oldest pharmaceutical and chemical company - founded in 1668 - Merck has always been committed to innovation as a driving force for discovery and change. Innovation starts with curiosity. Curiosity drives scientific and intellectual inquiry. But where does curiosity come from? How is it generated? Can it be taught? These questions led us to explore the concept of curiosity and its relationship to innovation, discovery and generating new ideas. This is the beginning of our exploration. We are a vibrant science and technology company that is more committed than ever to relying on curiosity to develop novel solutions for a vast array of challenges in the areas of healthcare, life science and performance materials. www.merckgroup.com



Curiosity needs Champions

Despite curiosity's importance in advancing discoveries, only one in four workers (22%) describe themselves as "curious" at work. More traditional traits such as being "organized" (62%), "detail-oriented" (61%) and "thoughtful" (46%) ranked higher. Even "funny" (30%) and "talkative" (27%) are qualities people apply to themselves in greater proportion than curiosity.

One possible explanation we found is that our workplaces present road blocks that threaten the cultivation of curiosity. For example, in our State of Curiosity survey, two in three workers (66%) report that they face barriers to asking more questions at work.

In fact, in every single industry included in our survey, employees ranked themselves personally as being more curious than the employers they work for – a clear signal that our organizational structures are creating unnecessary handcuffs, thereby stifling innovation and discovery. To be sure, American workplaces are doing many things right when it comes to fostering curiosity.

About the Curiosity Index

Curiosity in the workplace is a multi-faceted concept that can be measured in a variety of ways. To offer a birds-eye view of the concept, we have developed a "Curiosity Index". (See figure 1) The index is based on responses to questions that correspond to the dimensions of curiosity. (See figure 2)

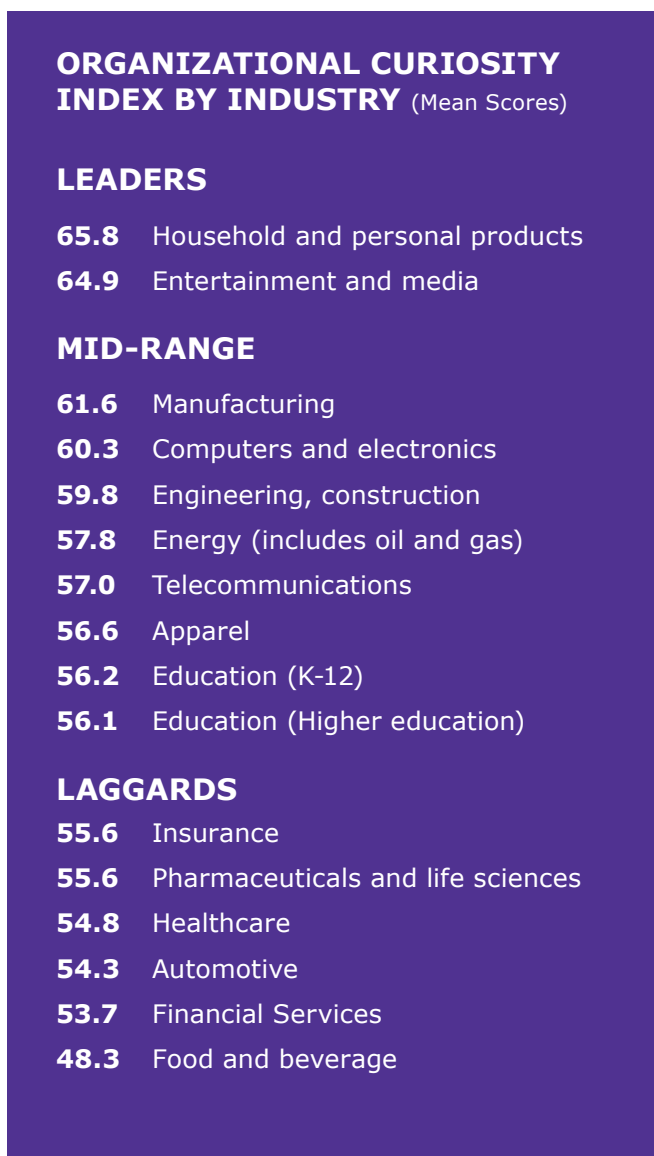


FIGURE 1

Idea Generators

Two-thirds of workers say coming up with new ideas is often or sometimes a requirement in their job, yet less than one in four describe themselves as curious and three in five say their workplace presents barriers to practicing curiosity.

Coming up with the next big thing: Regardless of company size, workers' ages, and company governance, the majority of workers (67%) say that generating new ideas is an important part of their job. It's true for Millennials, GenXers and boomers, and pretty much the same across all geographic regions. Even though most people (88%) acknowledge that it's the curious person that will most likely bring new ideas to life at work, relatively few (22%) actually describe themselves as curious. More than half believe a curious person is more likely to be promoted (61%) and earn a high salary (52%), but 60% say their workplace throws up barriers to integrating curiosity into their work. Those with five or more years in their industry are under slightly more pressure to come up with new ideas than those with less than five.

Employees with a high Curiosity Index score are much more likely to report that they are responsible for frequently generating new ideas (90%), while two in five (38%) of employees with a low Curiosity Index score report this responsibility. So it is not surprising that employees with a high Curiosity Index score place a greater emphasis on the value of new ideas, saying they would rather be known for always trying new ideas as opposed to relying on widely accepted practices. Nine in 10 (93%) of those with a high Curiosity Index score want to be known as idea generators compared with just four in 10 (42%) of those with a low Curiosity Index score. Those at smaller companies tend to value new ideas more as well: 78% at companies with two to 99 employees; 77% at companies with 100 to 4,999 employees; and 66% at companies with 5,000 or more employees.

Dimensions of Curiosity

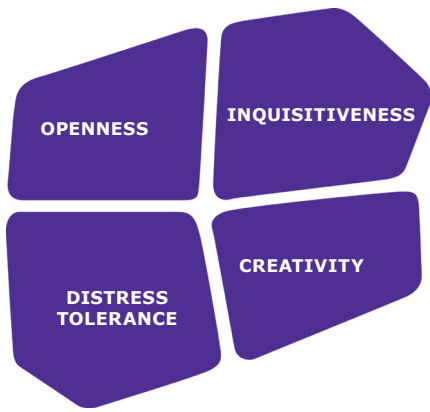


FIGURE 2

INQUISITIVENESS: Engaging in exploratory behavior such as moving beyond one’s own job requirements and ability to freely ask questions.

CREATIVITY: Acting on a desire or willingness to challenge the status quo in novel ways, identifying new approaches to problem solving.

DISTRESS TOLERANCE: Approaching the new, complex, mysterious, obscure, unexpected, and/or unfamiliar with courage rather than avoiding it; there is an interest in taking risks to identify new discoveries and advance ideas along with a high degree of perseverance.

OPENNESS: Possessing an attitude about experiences with a preference.

Supporting Curiosity

Nine in 10 workers agree that it is the curious person who is likely to bring a new idea to life at work. So organizations may accelerate their success by encouraging workers to ask more questions and generate more ideas. We are finding that many organizations do not foster a culture of curiosity, and it is to their detriment.

Across the board we see new ideas more highly valued in smaller organizations versus larger ones and by those with a great deal of decision-making power versus those with less. “Thinking up new ideas and being creative” is valued by 86% of those with a high Curiosity Index score as opposed to just five percent for those with a low Curiosity Index score. How are managers supporting curiosity?

Managers in engineering and construction, entertainment and media, household and personal products, and manufacturing get high marks from employees for allowing them to develop original ways to get work done. Managers in food and beverages and pharmaceuticals/ life sciences get the lowest scores for this, with just 12% of employees saying their managers empower them to be creative in their approach to getting work done. Nine out of 10 workers with high Curiosity Index scores agree that managers allow creativity in how work gets done versus about half (49%) of those with low Curiosity Index scores. In organizations with high Curiosity Index scores, more than 9 in 10 workers (94%) say they experience at least one support for curiosity in the workplace, compared to only 50% of workers in organizations with low Curiosity Index scores.

WHICH OF THE FOLLOWING, IF ANY, DOES YOUR ORGANIZATION DO TO SUCCESSFULLY SUPPORT YOUR ABILITY TO PRACTICE CURIOSITY IN YOUR WORKPLACE?*



*Respondents could choose all that apply

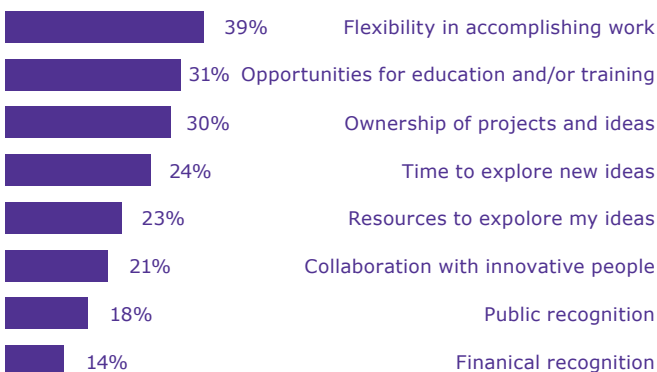


FIGURE 3

WHICH OF THE FOLLOWING, IF ANY, ARE BARRIERS TO YOU BEING ABLE TO PRACTICE CURIOSITY IN YOUR WORKPLACE?*



*Respondents could choose all that apply

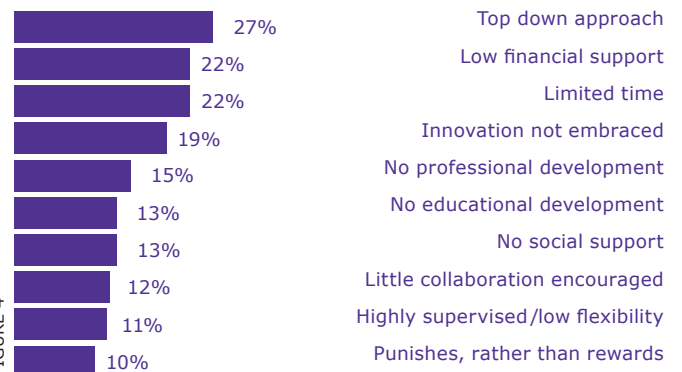


FIGURE 4

Another way to benefit from a culture of curiosity is for organizational leaders to show a strong preference for new and unfamiliar ideas. We measured 14 different attributes of organizational curiosity and companies' preference for new and unfamiliar ideas received the lowest scores. Organizations that want to be seen as promoting curiosity should focus on how their workplace accepts new ideas and new ways of thinking. For those who strongly agreed that their leaders prefer new and unfamiliar ideas, those in manufacturing gave the highest

rating, and that was only 27%. 10% or less of the respondents in nine industries strongly agreed that their leaders prefer new and unfamiliar ideas. Leaders in the west get higher marks than leaders in other parts of the country. Less than half (43%) of boomers think their leaders prefer new and unfamiliar ideas compared with 55% of genX and 62% of millennials. Nearly nine out of 10 employees in high-scoring Curiosity Index companies agree that leaders do this versus less than one in three for low-scoring ones.

QUALITIES OF HIGHLY CURIOUS COMPANIES

Percentage of respondents who "strongly agree" or "somewhat agree" their company and its leaders exhibit these qualities.

73%	Managers accept the possibility of failure
72%	Managers allow experimentation with my original ways to get work done
71%	Leaders open to hearing and sharing bad news
70%	Access to interesting/bright people to learn from them
66%	Courage to move in directions different from the competition
65%	Leaders view problems from multiple perspectives
61%	Leaders accept all viewpoints, including dissenting ones
61%	I would describe leaders as imaginative
60%	Prepares people to handle unexpected changes
54%	Leaders prefer new and unfamiliar ideas

FIGURE 5

Profile of a curious employee

Survey participants who scored high on the Curiosity Index tend to be:

- More likely to view themselves as: organized, detail-oriented, thoughtful, energetic, engaging - and a number of other positive attributes.
- Decision-makers - More curious workers are four times as likely as less curious peers to say they either have significant input/influence in decision-making or have final decision-making authority.
- More positive about their organization and their role. They are more likely to rate their company as above average in performance, to report that their company is doing great and can't get any better and to be extremely satisfied with their jobs.
- Working at a curious organization - Those with high curiosity are significantly more likely than those with low and medium curiosity to say their organization is extremely encouraging of curiosity.

"If you want great work, and not just good work, encourage leaders and workers to foster all dimensions of curiosity when confronting the unknown. Curiosity is the springboard to innovation and discovery."

Todd B. Kashdan, Ph.D
 Author of "Curious? Discover the Missing Ingredient to a Fulfilling Life" and Professor at George Mason University, Virginia, USA

About Merck

Merck is a leading science and technology company in healthcare, life science and performance materials. Around 50,000 employees work to further develop technologies that improve and enhance life - from biopharmaceutical therapies to treat cancer or multiple sclerosis, cutting-edge systems for scientific research and production, to liquid crystals for smartphones and LCD televisions. In 2015, Merck generated sales of € 12.8 billion in 66 countries. Founded in 1668, Merck is the world's oldest pharmaceutical and chemical company. The founding family remains the majority owner of the publicly listed corporate group. Merck holds the global rights to the Merck name and brand. The only exceptions are the United States and Canada, where the company operates as EMD Serono, EMD Performance Materials and MilliporeSigma.

About the Survey

The State of Curiosity survey was conducted online by Harris Poll on behalf of Merck between August 13 and September 3, 2015. The research was conducted among a total of 2,606 U.S. adults employed at companies with two or more employees, including a nationally representative sample of 1,013 workers and at least 125 workers in 16 select industries. Data for the national sample was weighted where necessary by education, age, gender, race/ethnicity, region, income, company size, employment status (full-time vs. part-time) and propensity to be online to bring them in line with their actual proportions in the population. The industry oversamples are not weighted.