

# state of curiosity

## EXECUTIVE OVERVIEW



Merck KGaA  
Darmstadt, Germany



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## 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. Curiosity requires the courage to take risks and the perseverance to push through challenging situations.

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, The Curious

As the world's oldest pharmaceutical and chemical company – founded in 1668 – Merck KGaA, Darmstadt, Germany, 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, backed by a 350-year history of innovation. As we look to the future, we are more committed than ever to relying on curiosity to develop novel solutions for a vast array of challenges in the areas of healthcare, life sciences and high-tech materials.

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"We have been focused on innovation for many years and believe that curiosity is a critical ingredient to future breakthroughs. What we want to understand better is how to cultivate curiosity in our business."

### Dr. Stefan J. Oschmann

*Deputy CEO, Merck KGaA, Darmstadt, Germany*

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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 road map 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.

The State of Curiosity survey reveals that American workers seem to 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. Only 12% of workers report that their employers are extremely 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.

# Curiosity Needs Champions

Despite curiosity's importance in advancing discoveries, only about 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%) rank higher. Even "funny" (30%) and "talkative" (27%) are qualities people apply to themselves in greater proportion than being curious.

One possible explanation 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.

Across all industries, employees give themselves higher scores for curiosity than the scores they give the companies they work at – a clear signal that our organizational structures are creating unnecessary handcuffs, thereby stifling innovation and discovery.

American workplaces are doing some things right when it comes to fostering curiosity. Nearly three in four employees (73%) cite at least some organizational support of curiosity. Companies can support curiosity at work by allowing flexibility in accomplishing work, providing educational and training opportunities, and dedicating time to explore new ideas.

## 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 non-profit versus for profit status, the majority of workers overall 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. This underscores the importance in ensuring employees have the support and tools necessary to generate ideas and new ways of thinking. Even though most people (88%) acknowledge that it's the curious person that will most likely bring an idea 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 being able to practice curiosity in their workplace. Those with five or more years in their

industry (70%) are under slightly more pressure to come up with new ideas than those with less than five (61%).

### Organizational Curiosity Index by Industry (Mean Scores)

**LEADERS**

- 60.3 Household and personal products
- 57.8 Entertainment and media
- 56.9 Manufacturing

**MID-RANGE**

- 53.8 Engineering, construction
- 53.8 Computers and electronics
- 52.1 Telecommunications
- 51.8 Energy (includes oil and gas)
- 51.5 Apparel
- 51.0 Education (K-12)
- 50.6 Pharmaceutical and life sciences
- 50.6 Education (Higher education)

**LAGGARDS**

- 49.8 Insurance
- 49.3 Healthcare
- 48.9 Automotive
- 48.8 Financial services
- 44.6 Food and beverage

"We firmly believe the culture of collaborative discovery and the ability to think in generations, not quarters, is critical to making tomorrow's breakthroughs."

**Dr. Karl-Ludwig Kley**  
CEO, Merck KGaA, Darmstadt, Germany

Employees with a high Curiosity Index score are much more likely to report that they are responsible for frequently generating new ideas (90%), than those with low Curiosity Index scores (38%).

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. Overall, nearly three in four (74%) say they want to be known as idea generators. Those at smaller companies tend to value new ideas more: 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.

### About the Curiosity Index

Curiosity is a multi-faceted concept measured in numerous ways. For a birds-eye view of the concept we developed a "Curiosity Index". (See figure 1) The index scores responses to questions corresponding to the dimensions of curiosity. (See figure 2)

Figure 1

# Dimensions of Curiosity

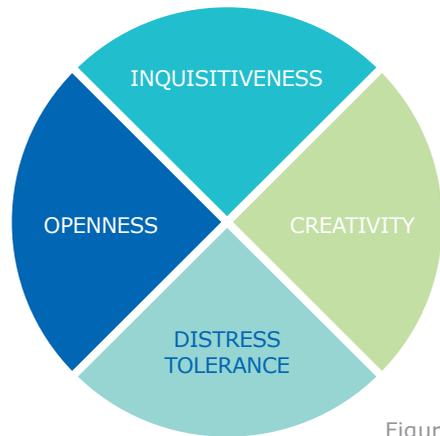


Figure 2

**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 for variety, aesthetic appreciation, and attentiveness to distinctions in the world and internally; embracing ones own new ideas and the ideas of others

## Supporting Curiosity

About nine in 10 workers (88%) agree that it is the curious person who is likely to bring an idea to life at work. So organizations may accelerate their success by encouraging workers to ask more questions and generate more ideas. This is often not the case. Two in three workers report facing barriers to asking more questions at work.

But organizations are offering support for curiosity in a variety of ways. Nearly three in four (74%) say their employer successfully supports their curiosity in at least one way. In the past month alone, one in three (33%) workers have been provided formal opportunities to learn about areas beyond their job responsibilities.

Nearly all employees (99%) at highly curious companies report they are allowed to experiment with original ways to get work done. This suggests that a focus on results as opposed to process is empowering for employees and could help spark curiosity.

### Which of the following, if any, does your organization do to successfully support your ability to practice curiosity in your workplace? \*



\* Employees could choose all that apply.



Figure 3

### Which of the following, if any, are barriers to your being able to practice curiosity in your workplace? \*



\* Employees could choose all that apply.

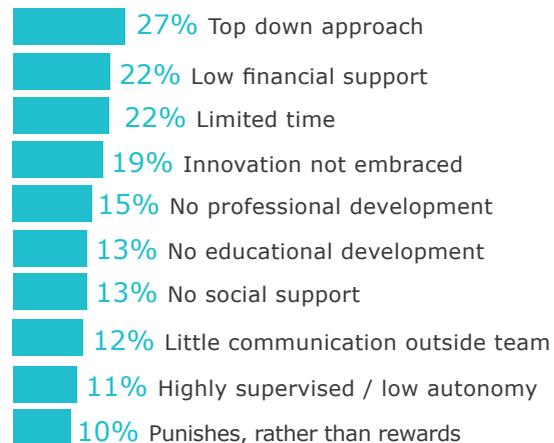


Figure 4

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%. Only 10% or less of the workers in nine industries (out of 16 total) strongly agreed that their leaders prefer new and unfamiliar ideas. Leaders in the west get higher marks than leaders in the Midwest. Less than half of Boomers (43%) think their leaders prefer new and unfamiliar ideas compared with 55% of genX and 62% of millennials. Employees at highly curious companies overwhelmingly report (89%) that their leadership shows a strong preference for new and unfamiliar ideas.

### Qualities of Curious Companies

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

- 73% Managers accept anxiety at possibility of failure
- 72% Managers allow experimentation with original ways to get my 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

### Employees who score 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.

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"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

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### About Merck KGaA, Darmstadt, Germany

Merck KGaA, Darmstadt, Germany is a leading science and technology company in healthcare, life science and performance materials. Around 40,000 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 2014, Merck KGaA, Darmstadt, Germany generated sales of € 11.3 billion in 66 countries. Founded in 1668, Merck KGaA, Darmstadt, Germany is the world's oldest pharmaceutical and chemical company. The founding family remains the majority owner of the publicly listed corporate group. Merck KGaA, Darmstadt, Germany 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 Millipore and EMD Performance Materials.

### About the Survey

The State of Curiosity survey was conducted online by Harris Poll on behalf of Merck KGaA, Darmstadt, Germany 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 are 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.