

CULTURE

Stuck at Home: Does the Virtual Office Stifle Creativity?

by Andrew Heng and Roy Chua



Image Credit | Ian Harber

Remote work boosts flexibility but may stifle creativity

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In her office one day last summer, Charlotte Christ, a 27-year-old marketing executive with the German office of one of the world's leading automotive suppliers, did something she doesn't think she could really do at home even though she often works there. At the office, she fell into a random conversation with a colleague, and together they came up with new ideas for her marketing campaign on how to offer incentives to the company's target audiences, truck drivers.

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“We got some greater ideas through conversation and brainstorming,” said Christ, who generally works at home three days a week and goes into her office two days a week. “I don't think this is also possible via Microsoft Teams because the discussion wasn't on purpose,” as Teams and Zoom meetings invariably are. “It was just so random.”

One could argue that creativity itself is random, that it's the sudden, unexpected burst of ingenuity that, in the modern business world, often comes not on Teams, but in teams. Think about the team of engineers at Apple who reinvented the phone and the team of AI experts who invented ChatGPT. Were they creative? Certainly. Were their inventions the product of one deep thinker working at home alone? Of course not.

That being the case, one wonders what would have happened if Charlotte Christ had been working from home the day that she and her colleague tried to come up with those new incentives for her company's truck drivers. Would those new incentives even exist?

That's an important question in the post-Covid business world, which isn't entirely post-Covid.

All around the globe, companies are allowing their employees to continue working virtually years past the peak of the Covid-19 pandemic. In many cases, employees love the flexibility that working from home provides – but, as Charlotte Christ seems to realize, working at home comes with a cost.

Our research indicates that working from home can stifle creativity.

We set out to study the impact that working from home has on creativity at one of the world's top 10 automotive suppliers. In the process, We surveyed 410 people who work at the same company where Charlotte Christ works, about half of them in Germany and about half in China. In addition to asking them how often they work from home, we presented them with a hypothetical problem involving the company and asked them to provide a one-paragraph reply as to how they would solve the problem with the help of artificial intelligence.

In doing so, we were testing their creativity. And by doing so, we found that:

- The more an employee works from home, the less creative he or she is likely to be.
- The older an employee is, the more likely it is that working from home will stifle his or her creativity.
- Working from home somehow seems to limit the creativity of female employees – but not their male counterparts.
- Chinese workers, steeped as they are in a culture that depends to a greater degree on relationships and nonverbal cues, see their creativity decline more sharply when they work at home, compared to German workers. So do lesser educated workers.

The bottom line? The virtual office could conceivably hurt the bottom line if creativity is the key to a company's success.

Growing concerns

The world shut down as the Covid-19 virus spread across the globe in March 2020, and in some ways, it remains partially shut down. Many U.S. government agencies, for example, still operate virtually most of the time – although President Joe Biden **wants feds to return to the office soon**.

Things are changing faster, though, in the corporate world amid growing concerns that the virtual office may not be the best office. **An increasing number of companies**, ranging from Amazon to General Motors to Starbucks, are now requiring corporate employees to return to the office for at least three days a week.

And upon returning to Disney, CEO Bob Iger ordered employees back to the office for at least four days a week.

“In a creative business like ours, nothing can replace the ability to connect, observe, and create with peers that comes from being physically together,” Iger said in a January 2023 **memo** to employees.

Previous research seems to indicate that Iger may well be right. Working from home turns almost every meeting into a video conference or phone call – yet studies have shown that such virtual interactions hinder relationship building and trust among employees when compared to face-to-face interactions. Virtual meetings also tend to be less effective in promoting group cooperation and the exchange of knowledge, likely due to the lack of non-verbal cues, which can lead to misinterpretations and misunderstandings. Earlier research has also found that work-from-home arrangements have a negative impact on relationship formation and trust among employees.

That being the case, we hypothesized that working from home would result in less effective communication, which would therefore impede the exchange of knowledge and the development of creative ideas. And empirical evidence proved our hypothesis.

Among both German and Chinese respondents to my survey, the more that employees worked at home, the more poorly they generally responded to the creativity test we gave them. The more virtual their office was, the worse they responded when we had them try to

devise a solution to a work problem. What's more, other factors that you might think would affect the results – such as gender, age, and education – did so, but they did not eliminate the negative effect that working at home appears to have on employee creativity.

The issue appears to be this: Creativity is a collaborative rather than a solo phenomenon, and the virtual office is more solo than collaborative.

Simon Chen can attest to that. A 41-year-old senior product manager for the auto supplier I studied, Chen works from home in China three days a week and goes into the office twice a week. He said he likes this arrangement because it gives him more personal and family time.

Yet he acknowledged that working from home could take a toll on his creativity.

Meetings on Microsoft Teams are time-limited, he noted. Colleagues work their way through the agenda and then usually leave as soon as the agenda is exhausted.

But Chen found a different way of working on a work trip to the United States.

“In my recent trip to America, I had many off-agenda face-to-face discussions,” he said. “During such discussions, we had many new ideas... Face-to-face meetings are way better in developing creativity via unplanned and casual discussions.”

A digital divide

While my research showed that working from home negatively affects the creativity of employees of all ages, my work also sheds new light on a long-known and much discussed digital divide between younger employees and older employees. We found that digital natives appear to have an advantage over their older, less tech-savvy colleagues when it comes to creativity in the virtual office.

This, of course, comes as no surprise. For years, research has shown that inadequate tech skills leave older workers behind. In early 2023, for example, the National Skills Coalition, in conjunction with the Federal Reserve Bank of Atlanta, found that 92 percent of the jobs

studied required digital skills. And earlier National Skills Council research found that a third of workers don't have the digital skills they need to thrive in the modern economy.

“Adult workers need timely, relevant education and workforce development opportunities at mid-career and later in their working years, as their jobs continue to change beneath their feet,” **the new report** said.

The same might be said for older workers in the home office. My research found that younger employees are more creative compared to older employees, and that that effect increased with higher work-from-home frequency.

There are likely some obvious reasons for this. Older employees may have more experience and expertise in their field, but they may also be more set in their ways and less receptive to new ideas or approaches. And in a virtual environment, the lack of non-verbal cues such as facial expressions, tone of voice, and body language may make it more difficult for older employees to understand and interpret the ideas of their younger colleagues.

In contrast, younger employees who are more familiar with virtual communication tools may be better able to adapt to the lack of non-verbal cues and find alternative ways to express their ideas and collaborate with their colleagues. Additionally, the negative impact on creativity that comes from working from home may be amplified with age, as older employees may have more difficulty adapting to the new work environment and the different communication styles and technologies that it requires.

Some older workers frankly acknowledge that they have struggled with technology at times while working at home.

“I experienced challenges in developing an interesting presentation story board for the recent dealer conference when I'm working from home,” said Winnie Wei, a 47-year-old marketing specialist for the auto supplier in China.

Wei works at home three days a week but in the office two days a week – and it was there that she was able to develop the presentation she wanted to develop.

“After coming to the office, I interacted with other presenters to get their views, which provided me with the structure and direction to develop the presentation,” she said.

Worse for women?

Not only is there a digital divide that hampers older workers in the home office, but there is a gender divide as well.

Several studies in recent years have made it clear that women have it harder in the work-from-home world than men do:

- Women get interrupted while working at home more than men, researchers from the University of Connecticut, the University of Minnesota, and the University of Washington found in **a 2021 paper** published in the Journal of Applied Psychology.
- Stress levels for women with children skyrocketed while working at home in the early stages of the pandemic, researchers from the University of Nevada Las Vegas, the University of Kansas and Michigan State **found**.
- And **a study** by the U.S. National Institute on Occupational Safety and Health found that partly because of the combined pressures of working at home and raising children, women showed higher levels of psychological distress when working at home than men did.

Simply put, “the shift toward intensive work-from-home has uncovered an important source of gender inequality,” said Nora Madjar, a professor of management at the University of Connecticut and the lead author on that study on work interruptions.

Not surprisingly, then, we also found that working at home was worse for women than men. My results showed that the virtual office limited the creative responses of women, but that it did not do so for men.

And the reasons for that finding could go well beyond the increased interruptions and higher levels of stress that other researchers have found. Women are often socialized to be more attuned to non-verbal cues and emotions in communication, which could make it

more challenging for them to communicate effectively and generate creative ideas when working from home.

Whatever the reason may be for the work-from-home gender divide, Jasmine Hu, a management professor at Ohio State University who has also studied the issue in China, noted that working from home is not likely to end soon, no matter its impact on women.

“People have really gotten used to the benefit of working from home and many won’t want to go back to the office full time,” Hu **said**.

That being the case, she sees hybrid work as the work of the future.

“This will allow employees to have the flexibility they get from working at home, while also having the opportunity to interact more with colleagues at the office, which can increase collaboration and inspire creativity and innovation,” she said.

Other findings

Of course, where you work isn’t the only factor influencing a person’s creativity. Culture and educational levels matter, too – and my research indicates that those factors are important when considering exactly how working from home affects an employee’s ability to come up with great new ideas.

Specifically, my research found that:

- The creativity of Chinese employees who work at home appears to suffer more than that of their German counterparts who do the same. Cultural differences between the two countries most likely explain that finding. Social scientists describe Chinese culture as “high context,” meaning that communication depends much more on nonverbal cues than it does in “low context,” more direct cultures such as that of Germany. And it only makes sense that in a culture that depends on nonverbal cues, creativity would suffer more in a virtual environment where those cues could be much harder to detect.

- Chinese women were more likely to be less creative when working from home than their German counterparts were. This is because Chinese women would be especially dependent on nonverbal communications clues, given that both their gender and their culture make them so. As such, Chinese women may find it more challenging to communicate effectively and exchange ideas with colleagues when working from home, where nonverbal cues are less available. Consequently, this may negatively impact their creativity and ability to generate innovative ideas.
- Highly educated employees tend to retain their creative abilities in the home office better than lesser educated workers do. In fact, higher-educated employees demonstrated increased creativity when working from home, possibly because they tend to have stronger tech skills. In contrast, lower-educated individuals exhibited lower creativity when they frequently worked from home, possibly because some might struggle with articulating ideas in a remote setting.

So what are managers to make of all these findings, knowing all the while that employees have become accustomed to working at home and may have come to hate the idea of a nine-to-five, five-day a week office existence? Most likely, managers will simply have to accept a middle ground, where the hybrid work schedule is the work schedule of the future.

No doubt echoing the thoughts of millions of others, Andre Korff said: “I love the hybrid arrangement.” The 50-year-old head of communications concepts at that multinational auto supplier who lives at home in Germany with his girlfriend and young daughter, Korff works from home two to three days a week and enjoys the flexibility the arrangement provides. He noted that when working at home, he can take ten minutes off to go pick up his daughter, which simply would not be possible if he were in the office.

But Korff acknowledged that working from home may not produce the most creative work. During online meetings, people just don’t speak as freely as when they are together in the office, he said. Jokes don’t fly as readily. The overall vibe is one of occasional distraction, which is certainly not the vibe that produces the best ideas.

Still, Korff and millions of others will continue to work from home on occasion, which is why Korff spelled out a truth that managers and employees ought to heed in the new hybrid working world.

“For days when we need to concentrate on a topic that does not require interactions, working from home is good,” he said. “On days when you need high creativity, meeting in person is good.”



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