The Changing Nature of Collocation: Physical vs. Virtual Teams

It is nearly impossible to wrap one's arms around the multitude of different aspects of how humans communicate with each other, never mind the dynamics of multiple people interacting over time to achieve a common goal. The crux of the problem lies in the five human senses: sight, sound, smell, taste, and touch. The sixth sense of intuition or perception is also in play.

Worrying about all this was never an issue until the dawn of globalization in the 1970s. People, for the most part, designed and built products either in the same facility or within a few hours drive of the necessary facilities. If a phone call wouldn't get the job done, you'd hop in your car and meet in person. Today, that's almost the last alternative we consider.

Physical Collocation: The benchmark study, and many still reference it, was the 1970s work of Thomas Allen at MIT. In his book, *Managing the Flow of Technology,* Allen examined the propensity of people to communicate with each other based on the distance of their physical separation. His work examined the interactions of people who were part of the same team versus those who were simply working for the same company but did not have a shared responsibility. Allen found that people who were seated more than 10 meters apart had only a 5% chance of meaningful interactions if they did not share a common task. If they did share a task, that figure rose to 15%. Needless to say, this concerned corporate leaders.

Office Layouts: Buildings were once designed with fixed office layouts and floor-to-ceiling partitions and corridors. It was a major project to rearrange the layout. Partition manufacturers, such as Westinghouse, Steelcase, and Herman Miller, quickly caught on to Allen's findings. To convince corporations to incur the significant costs of changing to modular designs, suppliers and corporations needed their own studies to justify the switching expense. AT&T's conclusion, made public in 1990, was that the "probability of communication decreased 80% when people are more than 50 yards apart." Steelcase adopted the "50-foot rule"; if you shared an objective, then you should be within 50 feet of each other. Over the next 15 years, facilities around the globe were transformed to open layouts with only a few private offices and shared conference rooms.

Mobile & Conferencing Technology: The dust from office rearrangements had barely settled by the time email and personal cell phones had achieved full penetration. Video conferencing for groups had also come of age. It almost didn't matter any longer where one was located, individuals could communicate as necessary and groups could "meet" despite long distances. Suppliers of these enabling technologies continually lectured us that virtual was equivalent to physical, even though only two senses had been supplanted by technology—sight and sound. And for these, they were only at the instant of communication. One couldn't tell if someone was in the middle of something, nor if they were in a good situation to have meaningful communications.

Instant Media & Virtual Collocation: Here we are today. Every waking moment we are surrounded by media. There are monitors everywhere, hundreds of cable channels, thousands of ads, we all have several business and personal devices, and the world is now on the cusp of "augmented reality."

In 2007, the ABC Evening News informed us that "people are interrupted once every 10.5 minutes and it takes 23 minutes to restore your train of thought." A highly cited study from UC Irvine *(https://www.ics.uci.edu/~gmark/CHI2005.pdf)* finds we work on tasks for 11 minutes at a time and interruptions push almost a quarter of planned daily work out one or more days. A Microsoft and Carnegie Mellon study *(http://bit.ly/2AMDf9A)* finds virtual workers are effectively shut out from physically collocated workers due to a variety of social norms and that "rich informal communication" is inadequate. It all makes sense; technology has still only simulated two of the human senses.

We have come a long way, but we are still not there yet. If possible, when you share a common goal and time objective, your best bet is to make every effort to meet and communicate in person. md

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