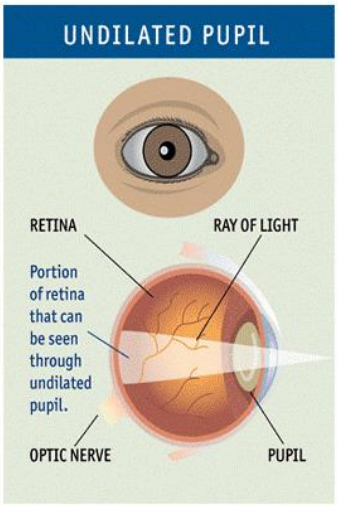
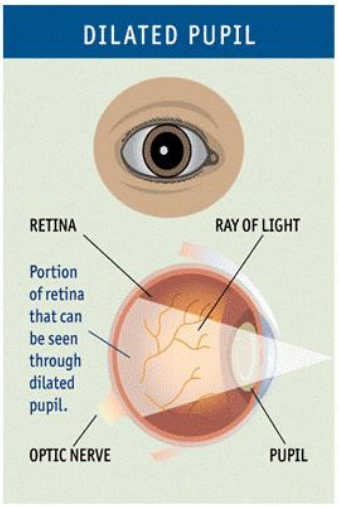
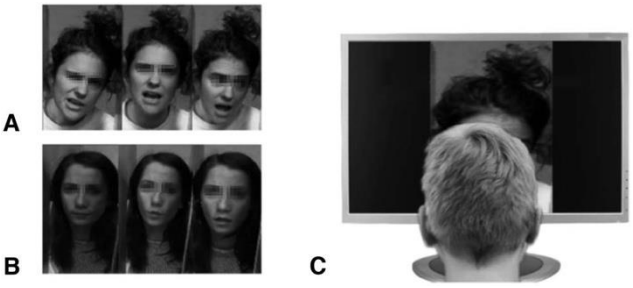
Have you ever felt super engaged or disconnected while someone told you a story? Researchers used eye tracking to determine the pupil dilation patterns of speakers and listeners became synchronized whenever attention was at its highest, occurring most often at emotional peaks.

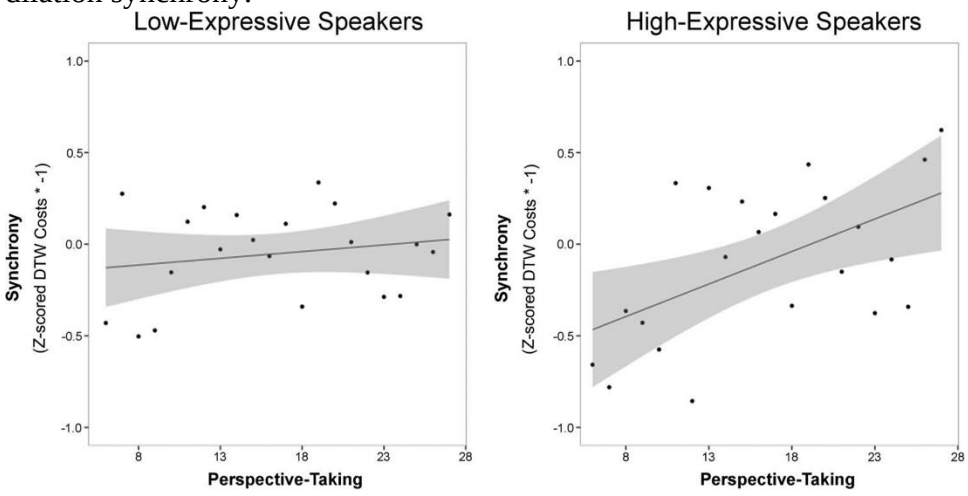




In this study, researchers found that people's pupils dilate in sync when sharing attention. The more expression a speaker uses, the more in sync pupils become.



Researchers found that pupil synchronization happens within people tested through pupillometry, a method of eye tracking. Higher empathy and expression from the speaker showed greater dilation synchrony.



Tweet Summary (lay): Music: distraction or useful study tool? While distractions like listening to music are often seen as a threat to learning and memory, psychologists found that there divided attention may not necessarily be all that bad come time to study for finals.

Tweet Summary (scientific): Psychologists find that there may not be a direct connection between learning/memory and studying in the context of multitasking. The presence of distractions throughout working and/or studying may not have much of an effect on an individual's performance of what he or she is working toward. Does this mean new study strategies need to be evaluated?

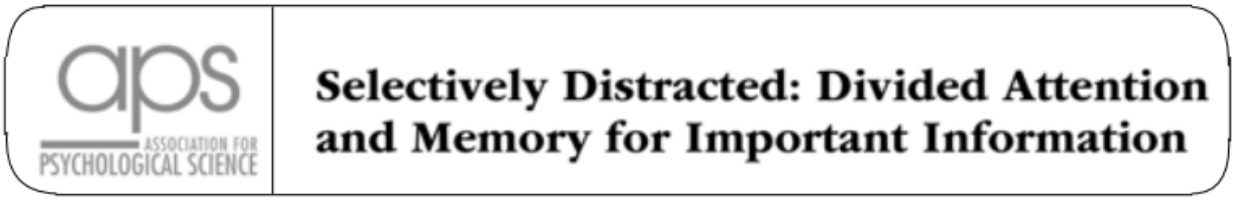
Eyes Are the Windows of the Mind: A New Study Suggests that Our Pupils Dilate in Accordance to Others When We Share Attention.

We all know that we express emotions through our eyes as a way to form connections with others. A new study conducted by Olivia Kang and Thalia Wheatley from Harvard and Dartmouth suggests that our pupils dilate in synchronized patterns when we share attention. In their study, Kang and Wheatley recruited college students and divided them into speakers and listeners. The speakers were videotaped when talking about highly emotional past experiences. The listeners watched the recordings of the speakers, and were asked to rate the speaker at the end. Pupil dilation patterns of both groups were measured with eye trackers and were compared at the end to generate the level of synchronization. The researchers found that pupil dilation synchronization was the highest when both the speaker and the listener paid the most attention. This suggests that when we share attention with others, our pupil dilates in the same pattern as them. However, Kang and Wheatley point out that such result is only salient when the speaker is highly expressive, and is dependent on how empathetic the listener is in nature. In addition, they denote that visual cues may not be necessary to elicit synchronized pupil dilation patterns. Future research may look into how auditory cues alone affect pupil dilation

Lay Audience: “Scientists have found that our eyes can become synchronized with the eyes of another person when we are listening to them tell a story that we're interested in.”

Science community: “Research suggests that shared attention exists. By measuring pupil dilation, researchers found highly expressive speakers paired with highly empathetic listeners created the greatest mental coupling while low expressive, low empathetic pairs had the least.”

Why does our generation fall behind in finding the best ways to study? Here they address and talk about the real issues.! All the answers you want and WHAT YOU CAN DO!



Summary for a lay audience:

Humans are social animals who rely on shared attention to communicate with one another. A study now shows that you may be able to tell whether people are sharing attention by looking at their eyes. An experiment was conducted in which a listener watched a video of another person telling a story. The listener's pupil dilations were then measured and compared to the speaker's pupils to see whether the listener's pupils synchronized with the speaker's. The researchers found that the pupils of the listener did indeed synchronize with the pupil of the speaker if the listener was engaged, interested in the story, and emphatic. Furthermore, the speaker had to be expressive.

Summary for a scientific audience:

Researchers hypothesized that people would spontaneously share pupil dilations as a result of sharing a connection. Furthermore, if the dilation of pupils does indeed mirror the "ebb and flow of one's attention", two people should share the same pupillary dilations when sharing attention. So, an experiment was conducted to test whether pupil dilations really do spontaneously synchronize as a result of a shared connection. The null hypothesis was that pupil dilations are not affected by shared attention and the type of conversation. The alternative hypothesis was that people do indeed share pupil dilations as a result of attention sharing. The researchers rejected the null in favor of the alternative hypothesis when it was found that the pupils of the listener did indeed synchronize with the pupil of the speaker under certain conditions. Specifically, the synchrony of pupil dilations depends upon and is positively correlated with the expressiveness of the speaker, the level of empathy of the listener, and the general nature of the conversation. The more expressive the speaker, the more empathetic the listener, and the more interesting and emotional the conversation, the more likely the listener's pupils are to synchronize with the speaker's pupils.

SCIENCE TWEET: “New evidence suggests that as two people share attention, their pupil dilation will synchronize as well. A new approach to the outstanding human act of intersubjectivity.”

COMMON TWEET: Telling a story to a friend? Turns out that as we share with others, our pupil dilation will synchronize with theirs. A new approach to the windows of the soul.