

Why Our Minds Spend 50% Of The Time Zoned Out Or Wandering (M)

Mind wandering is experienced as a kind of zoning out from what is going on around us.

Part of the function of mind wandering is to allow the brain to work on our memories, research suggests.

Mind wandering — which may make up 50 percent of our daily thinking time — is experienced as a kind of zoning out from what is going on around us.

During this time, researchers have found, many areas of the brain quiet themselves to focus on output from the hippocampus.

The hippocampus is a structure in the centre of the brain that is critical for memory and learning.

However, the output from the hippocampus is very weak, which the researchers charmingly describe as whispering.

So, the rest of the brain has to be particularly quiet to listen and further encode these memories for long-term storage.

Dr Koen Vervaeke, study co-author, explained that this is where mind wandering comes in:

“We see that during sleep and in a state we call ‘quiet wakefulness,’ we are usually less aware of what is happening around us.

We can daydream or let our minds wander.

When we find ourselves in this state, the hippocampus sends electrical impulses that encode various memories.

It is a bit like how different barcodes uniquely identify a product in the store.

This happens thousands of times a day without us being aware of it.

So even when we think we are not doing anything useful, our brain is very busy storing new memories over time.”

The whispering hippocampus

The conclusions come from a study on mice, and how nerve cells in their brains behave during mind wandering.

Mr Christoffer Nerland Berge, study co-author, described the results:

“We found that during quiet wakefulness, the hippocampus only sends weak messages about past memories to the rest of the brain.

So weak that these messages are lost in the clutter of information that the rest of the brain experiences.

This finding led to the next question: How can the brain hear this whispering from the hippocampus?”

The researchers discovered that one or two seconds before the hippocampus ‘whispers’ a memory, many other parts of the brain become quiet.

Dr Anna Chambers, the study’s first author, said:

“This helps explain how memories are transferred from the hippocampus to other areas of the brain where they are eventually stored.

When we are awake but disengaged—perhaps daydreaming—we are less aware of events that are taking place around us.

Our research shows that this happens for a good reason.

The brain is busy listening to memories instead.”