

What happens in your brain when you 'lose yourself' in fiction

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If you count yourself among those who lose themselves in the lives of fictional characters, scientists now have a better idea of how that happens.

Researchers found that the more immersed people tend to get into "becoming" a [fictional character](#), the more they use the same part of the brain to think about the character as they do to think about themselves.

"When they think about a favorite fictional character, it appears similar in one part of the brain as when they are thinking about themselves," said Timothy Broom, lead author of the study and doctoral student in psychology at The Ohio State University.

The study was published online recently in the journal *Social Cognitive and Affective Neuroscience*.

The study involved scanning the brains of 19 self-described fans of the HBO series "Game of Thrones" while they thought about themselves, nine of their friends and nine characters from the series. (The characters were Bronn, Catelyn Stark, Cersei Lannister, Davos Seaworth, Jaime Lannister, Jon Snow, Petyr Baelish, Sandor Clegane and Ygritte.)

Participants reported which "Game of Thrones" character they felt closest to and liked the most.

"Game of Thrones" was a fantasy drama series lasting eight seasons and concerning political and military conflicts between ruling families on two fictional continents. It was ideal for this study, Broom said, because it attracted a devoted fan base and the large cast presented a variety of characters that people could become attached to.

One of the key findings involved participants in the study who scored highest on what is called "trait identification." In a questionnaire they completed as part of the study, these participants agreed most strongly with statements like "I really get involved in the feelings of the characters in a novel."

"People who are high in trait identification not only get absorbed into a story, they also are really absorbed into a particular character," Broom said. "They report matching the thoughts of the character, they are thinking what the character is thinking, they are feeling what the character is feeling. They are inhabiting the role of that character."

For the study, the participants' brains were scanned in an fMRI machine while they evaluated themselves, friends and "Game of Thrones" characters. An fMRI indirectly measures activity in various parts of the brain through small changes in blood flow.

The researchers were particularly interested in what was happening in a part of the brain called the ventral medial prefrontal cortex (vMPFC), which shows increased activity when people think about themselves and, to a lesser extent, when thinking about close friends.

The process was simple. While in the fMRI, participants were shown a series of names—sometimes themselves, sometimes one of their nine friends, and other times one of the nine characters from "Game of Thrones." Each name appeared above a trait, like lonely, sad, trustworthy or smart.

Participants simply said "yes" or "no" to whether the trait described the person while the researchers simultaneously measured activity in the vMPFC portion of their brains.

As expected, the vMPFC was most active when people were evaluating themselves, less active when they evaluated friends, and least active when they evaluated "Game of Thrones" characters.

But for those who were high in trait identification, the vMPFC was more active when they thought about the fictional characters than it was for participants who identified less with the characters. That [brain](#) area was

especially active when they evaluated the character they felt closest to and liked the most.

The findings help explain how fiction can have such a big impact on some people, said Dylan Wanger, co-author of the study and assistant professor of psychology at Ohio State.

"For some people, fiction is a chance to take on new identities, to see worlds through others' eyes and return from those experiences changed," Wagner said.

"What previous studies have found is that when people experience stories as if they were one of the characters, a connection is made with that character, and the [character](#) becomes intertwined with the self. In our study, we see evidence of that in their brains."

More information: Timothy W Broom et al, Becoming the King in the North: identification with fictional characters is associated with greater self–other neural overlap, *Social Cognitive and Affective Neuroscience* (2021). [DOI: 10.1093/scan/nsab021](https://doi.org/10.1093/scan/nsab021)

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