

Reading in company boosts creativity

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We process language differently depending on whether we are reading alone or in the company of another person, according to a study carried out by teachers and researchers from the Complutense University of Madrid (UCM) and the Carlos III Health Institute (ISCIII) and published in *Cortex*.

The results of recording [electrical activity](#) in the brain indicated that when we read in company, our [language processing](#) is more heuristic, i.e. more global, controlled, integrated and possibly more creative.

"However, when we read alone, our language processing is more algorithmic, in other words, more automatic, limited and subject to rules," explained Laura Jiménez Ortega, a researcher in the Department of Psychobiology at the UCM and the UCM-ISCIII Centre for Evolution and Human Behavior.

To compare the effect of company and solitude on language comprehension, the researchers measured [electrical brain activity](#) using electroencephalography (EEG).

Participants read texts containing syntactic or semantic errors, half of them in solitude and the other half in company. Those reading in company showed activity in the precuneus, an area of the brain involved in social and attentional processing. In addition, their language comprehension was more global and integrated compared with that of subjects reading alone.

In the [social situation](#), syntactic errors elicited a pattern of electrical activity characteristic of semantic processing (N400), which is considered more heuristic and integrated. However, electrical brain activity in subjects reading alone showed a LAN pattern, characteristic of early, automatic processing.

The [social isolation](#) caused by the current coronavirus pandemic has created an unprecedented opportunity, prompting researchers to change perspective and conduct more research into social aspects of behavior and language comprehension.

"Given that company favors a more creative and integrated

understanding whereas isolation leads to more detailed and systematic processing, we need to start thinking more about the impact of social interaction in research, in education and in professional settings where [language comprehension](#) is fundamental," concluded Jiménez Ortega.

More information: Clara Hinchcliffe et al, Language comprehension in the social brain: Electrophysiological brain signals of social presence effects during syntactic and semantic sentence processing, *Cortex* (2020). [DOI: 10.1016/j.cortex.2020.03.029](https://doi.org/10.1016/j.cortex.2020.03.029)

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