Master's thesis topic: Interactive activation model of working memory and linguistic system.

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Working memory is a key function in humans. It allows us to temporarily maintain small amounts of information (*i.e.*, generally less than 3 or 4). If we draw a parallel with computing, we could compare it to RAM memory. This cognitive function is one of the most studied in the world of cognitive psychology. Nevertheless, some of its aspects still remain misunderstood. Working memory abilities have been shown to increase as a function of linguistic characteristics of stimuli. For example, the words "paint, table, brush" will be easier to memorize and manipulate than the words "tire, biped, demography". Working memory is therefore not an isolated function, but seems to interact in a complex way with the linguistic system.

The goal of this project is to better understand the interactions between working memory and the linguistic system. To do this, the student will have to adapt a so-called interactive activation model. This type of model makes it possible to explain a large number of phenomena occurring within our memory. The problem with these models is that they are particularly unstable and difficult to handle. The challenge of this project will be to adapt one of these models, in order to make it more stable and able to model the behavior observed in humans.

Keywords: interactive activation model, working memory, language.

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