

# Unconscious language learning

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Looking up in a dictionary. Credit: Tanakawho on flickr

When linguists talk about unconscious or implicit language learning, they don't mean learning while you sleep. Rather, they are talking about one of the most intriguing of all mental phenomena: the ability to learn the complex and subtle regularities that underlie a language without even realising.

For children, such 'implicit' language learning seems to happen spontaneously in the first few years of life; yet, in adulthood, learning a second language is generally far from effortless and has varied success.

So marked is the difference between first- and second-language learning – at least when it takes the form of classroom learning – it might suggest that implicit learning makes no significant contribution to learning a second language. Or it may indicate that typical foreign language teaching doesn't take full advantage of the process.

The challenge that faces linguists is how to test whether implicit learning is taking place. How can you differentiate between a person consciously recognising a certain pattern or rule in the language they are learning and the same person unconsciously knowing that something sounds right simply because their brain has judged it to be right?

The new approach to solving the puzzle taken by Dr. John Williams at the Department of Theoretical and Applied Linguistics and his collaborator, Dr. Janny Leung from the University of Hong Kong, has been to invent an artificial language. Participants were tested to see whether they correctly acquired, over periods as short as one hour, an understanding of patterns embedded within the artificial language.

An example of their technique is to teach participants four novel forms of the word 'the' (gi, ro, ul and ne), telling them that the forms encode a certain meaningful dimension (e.g. gi and ro should be used for describing near objects, ul and ne for far objects). The aim is to see if the participants can spontaneously pick up a correlation with another, hidden, meaning (e.g. that gi and ul should be used with animate nouns and ro and ne with inanimate nouns). The novel forms are embedded in English phrases such as 'I was terrified when I turned around and saw gi lion right behind me'.

Do they pick up on the concealed pattern when tested? "The answer is yes," said Dr. Williams, whose research was funded by the Economic and Social Research Council. "We found significantly above-chance selection of sentence constructions that were 'grammatically correct' according to the hidden pattern. Yet, the participants had no awareness of what they had learned or how. Moreover, we were able to show learning of the same material by native speakers of two typologically very different languages, English and Cantonese."

Interestingly, picking up the hidden pattern unconsciously doesn't always

happen – if, for instance, the hidden pattern is linguistically unnatural, such as a correlation with whether an object makes a sound or not. “One explanation could be that certain patterns are more accessible to language learning processes than others. Perhaps our brains are built equipped to expect certain patterns, or perhaps they process some patterns better than others,” he added.

The research provides a window onto unconscious learning processes in the mind and highlights an important element that has practical implications for language teaching. In each test, the learner’s attention was directed to the part of the sentence that contained the hidden pattern. By directing attention, it seems that other elements of the sentence construction are picked up unconsciously.

“In a teaching situation, merely teaching the rules of a language may not be the only answer,” explained Dr. Williams. “Instead, using tasks that focus attention on the relevant grammatical forms in language could help learners access unconscious learning pathways in the brain. This would greatly enhance the speed of acquisition of a second language.”

Provided by University of Cambridge

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