

A distinctive language acquisition process

By DAVID GAGNON,

Speech acquisition is an incredibly complex ability, one that most children will master before the age of 4, without any real consensus on exactly how this happens.

With this in mind, it appears self-evident that language acquisition must involve some type of exposure- English is not “coded” in our genes! In typical language development however, it does not seem as though all forms of exposure are created equal. Indeed, a source which does not involve any social interaction (e.g. television, radio) will not have the same impact as language heard in interactive contexts (e.g. parent speaking to their child, child playing with another person). For example, research has shown that infants aged 6 to 12 months were able to learn sounds specific to a foreign language when in an interactive situation with another person,

but that simple exposure to a video with these same sounds was insufficient. These findings become extremely significant when one considers that ability to recognize sounds in the mother tongue at 6 months is a good predictor of language ability at 2 years old. In line with this theory, case studies have demonstrated that television and radio exposure are not sufficient for language development in non-autistic children. In fact, screen time could lessen interactions with parents. This is consistent with findings that children with more screen time are at increased risk for language delays.

It should therefore not come as a surprise that many psychologists and language specialists consider social skills and interaction to be at the heart of language acquisition. Consequently, language delays in autistic

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children are often attributed to difficulties with interaction and social communication. However, a recent article from Belgian linguist Mikhail Kissine forces us to reconsider this language acquisition paradigm for certain autistic children, who appear to acquire language independently of social interaction.

This ability was in fact described in a sample of Tunisian children. In Tunisia, and in many other parts of the Arab world, Arabic exists in two different forms:

- 1) Spoken form: this type of Arabic is spoken by the entire population and therefore corresponds to the language spoken within the child's social environment.
- 2) Formal form: usually only written, or sometimes spoken in formal, academic, or religious settings. Formal Arabic is also spoken in certain cartoons, which would be the main (or even only) exposure to formal Arabic for a child in Tunisia.


Spoken and Formal Arabic are different in several ways. Formal Arabic contains many noun and verb variations, and a more diverse grammar. The etymological roots of the two forms are not the same, and there are variations in consonant pronunciation. Furthermore, sentence components are inverted, with Formal Arabic using a verb-subject structure, whilst Spoken Arabic uses a subject-verb structure. Ultimately, these are two distinct language systems.

Following extensive speech analyses of 10 to 20 minute informal conversations with 5 autistic Tunisian children aged 5 to 10, Dr. Kissine found that speech in these

children was comprised of up to 56% Formal Arabic, which remains practically non-existent in non-autistic children of the same age. Several of their sentences seemed to use a "mixed" form of the language, meaning that the two forms of Arabic were used within the same sentence, blending both vocabulary and grammar.

This study thereby demonstrated that autistic children learned a language, Formal Arabic, which was not spoken in their social environment. These findings bolster the well-known observation that most autistic people end up developing speech, despite persistent difficulties in social interaction.

The authors hypothesize that this atypical ability could indicate different speech learning patterns in autistic versus non-autistic people. Indeed, they suggest that autistic children may focus more on language structure during speech development (sounds, order of words, repetition based on certain patterns etc....) rather than communicative aspects. This different approach to language could support the idea that autistic people are able to learn a language regardless of whether exposure stems from a video or social settings. Language spoken by a real person would not be of higher value for these children. Kissine's study therefore suggests that, for some autistic people, the use of video material for language development could substitute direct intervention, as has also been found for other skills.

In sum, this article demonstrates that some autistic people, contrary to non-autistic people, do not depend on social settings for speech acquisition. 

Original paper:
Kissine M, Luffin X, Aiad F, Bourourou R, Deliens G, Gaddour N. Noncolloquial Arabic in Tunisian Children With Autism Spectrum Disorder: A Possible Instance of Language Acquisition in a Noninteractive Context: Noncolloquial Arabic in Tunisian Children With Autism.