



TITLE

What is multi-/bilingualism? Brain issue.

KEY IDEA

The knowledge of more languages will have an impact on how your brain works.

CONSPECTUS

1. Introduction: Monolingual, bilingual, plurilingual: meaning of these terms
2. Key idea: Bilingualism has consequences on the brain
3. Reasons
 - 3.1 Brain structure and its modifications
 - 3.2 Controlling tasks is easier for bilinguals
4. Consequences: Consequences of bilingualism in everyday life
5. Conclusion: Being plurilingual gives you some advantages

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OBJECTIVES

You can **categorize** people into *monolingual*, *bilingual* or *plurilingual* according to what languages they know.

You can **distinguish** the abilities of a bilingual brain from those of a monolingual brain.

FULL TEXT

1. Introduction

You are **monolingual** if you can sign or speak only one language. You are **bilingual** if you understand and use two languages. Also, it means that you are able to use one or the other language depending on the situation. You are **plurilingual** if you are able to understand and use more than two languages.

Being bilingual or plurilingual has an impact on the brain.

Imagine a deaf couple in which the mother is an American ASL signer and the father is a Spanish LSE signer. The couple has a deaf baby. The child learns both sign languages from the parents. Both languages are learned very easily. The child can express thoughts in the different languages he knows according to whom he is signing to. The child's brain will be able to switch between languages. Also, a child who knows more languages will be very good in focusing the attention on one task amongst many: for instance the child is reading a book and does not pay any attention to the notifications continuously coming from the phone.

When you are bilingual because you know both a signed and a spoken language, you don't only use two different languages, but also two different communication channels: vision and hearing. This is called **sign bilingualism** or **bimodal bilingualism**.

2. Key idea

If you are bilingual, the structure of your brain can be different than monolinguals.

3. Reasons

3.1 Brain structure and its modifications

Brains of bilinguals differ than monolinguals. In fact, if you learn more languages, the brain gets to do some additional activities. Because of the additional work, your brain will be denser in some parts, therefore stronger in some tasks. For example, some of the consequences are:



1. there are more chances to build **connections** in the brain. This means that when you learn something new, your brain tries to link the new information to old information which is somehow connected to it. The more connections there are, the better you learn and keep in memory. For example, you learn a new sign in ASL: “TREE” and that makes you think of a the tree in your garden, to the story grandma once told you about the big tree in the park; to the word ‘tree’ in English; to the shape of a flower; etc. The more connections you can build, the longer the sign TREE will remain in your brain.
2. more **activity** can happen in some parts of your brain when you are learning/using other languages. This means that your brain will be more active than a monolingual brain. Exactly as it happens for your whole body, also the brain needs to be fit and trained, this way it will be able to work better and longer in time.
3. the part of the brain which is in the front of the head will probably strengthen and be more **powerful**. This has consequences on the ability to focus on one task and not being distracted by others. For instance when you are watching to a friend signing to you, you do not pay attention to people coming and going in between you two.

The ability of signing/speaking and understanding a language corresponds to the left side of the brain. Adults tend to use more the left side of the brain to learn new languages. Babies, instead, are more **plastic** (flexible) and uses both sides of the brain to completely “absorb” the languages. This is why babies learn languages better and easier than adults.

3.2 Controlling tasks is easier for bilinguals

Some studies show that bilingual (or plurilingual) brains are constantly at work in keeping the languages separated. They need to keep divided the language in use and those which are not needed at the moment. The language which is not needed has to be kept “quiet” somewhere in the brain. This extra work has positive consequences in situations where one task is required (for example: watching an adult signing a story) but there are distractions which make it difficult to only focus on that one (for example: kids jumping and playing in the room).

Hearing children and deaf children who can both sign and speak do not have to do the extra work to keep one language “quiet” when using the other. In fact the two languages communicate through different channels (vision and hearing). On the other side, bimodal bilingual children (both hearing and deaf) get to do some “extra exercise” with language and vision. This extra work brings some other positive facts: bimodal bilinguals are better in recognizing faces (example they see one woman and they will recognize her even longer after they first met); they have a better lateral vision (180° from left to right); and they have a better spatial memory (for instance: they see an animal in a book and they remember its colors and shapes more precisely than a non-bimodal bilingual).

4. Consequences



If you are bilingual or plurilingual your brain is more trained in switching between languages. As a consequence it is also probably **better** in some situations. You can be better at switching between tasks (first you are drawing, then you stop drawing and immediately start reading a book and then you go back to drawing). You can be better at selecting what needs your attention and what does not (you pay attention to the speaker of the conference and you do not get distracted by the music in background). You can be also better at filtering information (for example when you read an article in a newspaper you can quickly pick up the information you need and avoid memorizing those you do not need).

If you are a bimodal bilingual, maybe you have less of the aforementioned advantages. You will be more similar to a monolingual person. Nevertheless you will have probably better visual and spatial abilities. Bimodal children are proved to be better in recognizing faces, in the use of lateral vision, and spatial memory.

Some studies even show the possible **social benefits** of being plurilingual. People who sign or speak different languages also have access to different cultures. As a consequence they seem to be more open-minded towards the others.

Knowing more languages will allow you to learn other languages with less efforts. Also, bilingual children seem to have better intuition regarding language purposes. For example they understand faster what is the goal of a sentence (Is it a question? Is it an order? Is the person questioning my ideas? etc.). They are also better in understanding non literal meanings. Being a more skilled communicator could be important in the job market. Knowing more languages is also a good help when travelling abroad.

Some of the advantages mentioned before (attention, switching between tasks, filter information) are kept also in old age, helping to slow down the decline of brain functions, both in normal conditions and with diseases (for example Alzheimer).

5. Conclusions

Understanding and using two languages according to the situation makes you a bilingual. When you can do that in more languages, you are plurilingual. If the languages you can use are a sign language and a spoken language then you can experience bimodality.

Because of the extra work that your brain must do when controlling more languages (in the same modality), you can have some advantages in everyday life tasks. For example it will be easier for you to switch between tasks. You will be better in selecting the important information amongst many and in using attention properly. The advantages can also be social: you are more open-minded when meeting other people and cultures; or linguistic (you can learn other languages easier). Knowing more languages can be useful if you are looking for a new job and it can be of help in travelling more comfortably.

Being bilingual makes your **brain healthier** and actively engaged.