The Two-Language Hypothesis

by Sven Nilsen, 2020

In this paper I present a hypothesis that there exists two different fundamental languages which are mathematically incompatible, represented as an imaginary adjoint path, that are related, not mathematically, but intuitively through relations that are particular to our form of existence.

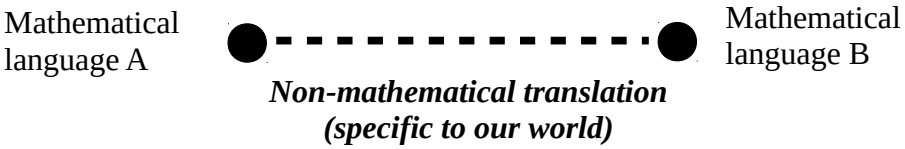
In order for a language to be classified as “mathematical”, there is one requirement: It must avoid bias.

For example, if it is possible to say that “most swans are white” but not “most swans are black”, then the language contains bias. Although it true that most swans are white in our particular world, there is no apparent reason why there could not exist a world where most swans are black.

It is possible to construct a language where the sentence “most swans are blacks” is impossible to express.
This language would be biased toward truth that only holds for our particular world, hence is not mathematical.

A language is mathematical only if it can be used within reasonable assumptions across worlds.

However, even if two languages are mathematical, this does not imply that the way one naturally translates from the first language into the second language is mathematical:



The two-language hypothesis states that there exists two mathematical languages A and B such that there exists no mathematical translation between them, yet a common non-mathematical translation is used that only holds specifically to our world or a life form with similar conscious experiences.

An instrument for this argument is that just like two ideas in mathematics can be mathematically related through a left and right adjoint operator, the translation between the two languages are represented as an **imaginary adjoint**, that can be reasoned about using both languages at once, but only makes sense in the context of the particular form of existence that is common in our world.