## The Optimization of Communication

## An essay by Blue-Maned\_Hawk

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A language is a method of communication, a means by which to transmit information from one entity to another. While there are many different kinds of languages, most humans will think of natural human languages, spoken and written and signed languages which are not biased towards communicating anything in particular (there's probably a term for that). While the human languages that exist today are good enough for most situations, they often falter in areas where precise communication is necessary, such as the law, the sciences, philosophy, and those few situations in everyday life where you just need to be really clear about something. It is the existence of this unfilled niche that leads me to campaign for the construction of a perfectly-precise formally-standardized international auxiliary language.

To clarify something up front: While this language *is* intended to be international, it is *not* intended as a general-purpose international language. If you find yourself needing to communicate across a linguistic boundary regularly, you are probably fine just learning the other language. And while there is a certain niche to be filled for occasions where a linguistic boundary needs to be briefly crossed to ask something like "Where is the restroom?" or "How much does this cabbage cost?" or "Are there bees in the area?", this is not the niche which the language i am suggesting would fulfill.

With that out of the way, let's now explore how this language would be designed.

To be able to describe something with the most precision possible, it must be broken down into its atoms, the simplest components that make it up which cannot be broken down further. Determining what exactly these semantic primes are would be difficult, but we don't really need to get it exactly right on the first try; if we realize that there's some atom we're missing, or that something we thought was an atom can in fact be broken down further, we can change the language to acknowledge that.

But of course, describing things exclusively in semantic primes would be difficult and tedious. For this reason, a dictionary of words is necessary, each of which is defined in terms of less complex words, down and down the chain until the semantic primes are reached.

But on the other hand, requiring users of the language to memorize so many different words would *also* be problematic. For this reason, the language must also have a robust and consistent word derivation system, so that one needn't memorize whole words, but only parts of words, parsing each word into those components on the fly. For maximum ease of understanding, this system needs to be consistent—for example, if we have two different words A and B and change them to A\* and B\* such that the way that A\* is morphologically different from A is the same way that B\* is morphologically different from B, then it should also be that A\* is phonologically different from A in the same way that B\* is phonologically different from B.

One might argue the opposite, claiming that if two words are morphologically similar, they should phonologically be very different, to reduce the risk of misunderstandings going unquestioned. This way, if there's a misunderstanding from ambient noise or something, the listener will hear something with a completely different meaning that generally will make absolutely no sense in the particular conversational context, and so they'll ask for clarification. This is a very good point,

but unfortunately, i can't think of any way that it could be made to work. Creating a system that would make similar words thoroughly different while still being completely reversible *and* performable on-the-fly when speaking seems to me like a contradictory task—in fact, systems that make similar things totally different are the basis of modern cryptography, and they're specifically designed to *not* be reversible. So unfortunately, unless we're taking transhumanistic brain enhancment bionics into account, i think it would overall be more useful for morphologically similar words to be phonologically similar.

It is very important that this language be formally standardized, and standardized *well*, too: it must maintain backwards-compatibility as appropriate, it must be very thoughtful in what it adds, and it must have facilities for extensions outside of the standard. Whatever body maintains this language must be free and open in its processes, and allow for external contributions. Remember, this language is intended as an *auxilliary* language to be used alongside natural languages, not as a replacement for natural languages that would be impossible and unreasonable to standardize.

This language would not be a panacæa for all the world's problems—after all, the world has been okay so far without this language. But i do think that this could potentially resolve some of them—there are many debates that are mere superficial arguments about what things mean, or where people have different meanings for something and each claim things about that thing that are contradictory to the other's definition, but compliant with their own. By creating a standardized language like this, we could thoroughly bypass such superficial arguments and focus on the things that truly matter, leading to a more rational, fair, and thoughful world.

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