Language as Cognitive Frameworks

Conlang Features for Influencing Thoughts

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Introduction

I'm designing ClarityLanguage (working title) to encourage more helpful ways of thinking (specifically, reducing cognitive distortions). In doing so, I've discovered and invented techniques for designing conlang features that influence thought. I present these techniques so you can make your own features that fulfill your language goals. In the final section, I address common criticisms of this approach.

Motivation

From studying psychology, I became fascinated with how the way we think about the world can improve how we live. Psychological research shows that certain thought patterns are self-destructive, and that other thought patterns are more beneficial.

For example, Catastrophizing is a common thought pattern where you are anxious that a bad outcome will inevitably lead to your life being permanently ruined - such as getting rebuffed at a party means you are doomed to be forever alone.

The healthier way to think about a bad outcome is to realize that there are other possibilities and to have faith in your own resilience. However, these coping techniques are hard to implement because the unhelpful thoughts and biases are automatic and hard to detect, especially in an emotional moment.

What if you were reminded of the healthier way to think as soon as you had those thoughts? What if the helpful thoughts were automatic? We often think using language (the "inner monologue"), so a constructed language has the power to fulfill these goals. Thus ClarityLanguage was born.

Techniques

This section lists a variety of conlang techniques that can be used to influence thoughts. For each one, I describe how it works and give an example of how ClarityLanguage uses it to reduce cognitive bias.

Conceptual Metaphors

People often like to think via analogy - comparing new things to what you already know makes the concept easier to understand. Using this tendency, you can influence how people view something by tying the words to other concepts via metaphor.

In ClarityLanguage, the word for *memory* shares a root with *fishing*, to emphasize the unreliability of memory. I strengthen the conceptual metaphors using idioms. To "catch a fish" means to successfully remember, to "fish a boot" means to misremember, a "fish trap" is a reminder, and "fish bait" is a mnemonic device.

Vocabulary Splitting

There are some concepts where the speaker could benefit from being more precise about the word in regards to a certain aspect. The conlang can accomplish this by “word splitting” - remove the vague general word and create words that include the meaning of the removed word and whatever extra properties you want. Since the general word doesn’t exist, the user must specify the specific subword with their respective property. This will influence the speaker and listener by requiring that a certain dimension is considered when using a word.

In ClarityLanguage, the conjunction *or* is split into two forms, “inexhaustive or” and “exhaustive or.” The exhaustive form means that the listed options are the only ones possible, and the inexhaustive version means that other unlisted options are possible. This distinction makes it much easier to spot the False Dichotomy logical fallacy (asserting that only the given options are possible), because both the listener and speaker upon hearing "exhaustive or" will be reminded to consider whether the given options truly are exhaustive. So saying "You are either with us [exhaustive or] against us" will prompt the listener and maybe even the speaker to wonder whether there are actually other options.

Additional Parts of Speech

Some concepts might be used so frequently that you want to encourage its use by making it a part of speech. This works best for meta-communication: concepts that apply to the sentence itself.

ClarityLanguage has a new part of speech called Intention, which specifies why the speaker is talking. This helps the speaker question why they are speaking and thus be more intentional about their communication. ClarityLanguage has also moved Mood into its own part of speech, explained in the next section.

Lexicalized Grammar

Some languages use word morphology (like verb conjugations) to alter the meaning of words/sentences. However, this can be limiting because the only options are those defined by the morphological rules. By moving some of these grammatical functions to be discrete words, you can have more variety and precision.

In ClarityLanguage, tense is given by words in the Mood part of speech. You can't know for certain what will happen in the future (and thinking you do know is a common cause of anxiety or overconfidence), so in order to say something will happen, you state the specific word that is your basis for the prediction. Examples: "I hope that…" or "Extrapolating from past experience…" or "I promise that I will…"

A separate use case for the same feature is evidentiality. Instead of saying something happened in the past, you say "I remember that…" or "I heard that…" or "Records state that…"

Limiting Word Forms

You might want to disallow words being used in certain grammatical cases. You can do so by not giving word forms for the usage.

For example, believing that you know what another person is thinking often leads to trouble (the "mind-reading" cognitive distortion). So in ClarityLanguage the word for "I think/believe" can only be used in the Mood case, and thus can only refer to the first person - the second or third person form simply doesn't exist and so cannot be used. In order to refer to someone else's thoughts, you need to say something like "I heard him say, 'I think that…'"

Phonotactical Reminders

Limiting Word Forms above might not work if your language is highly regular, and thus people can easily invent the missing forms. In that case, you can use phonotactics to remind people about valid word forms.

In ClarityLanguage, the word for *thought/belief* is *laburon*. As explained earlier, you use this word in the Mood part of speech to indicate that the sentence reflects the speaker's thoughts "I think that…" However, people might be tempted to use *laburon* as a verb so they can say something like "you think that…" which is discouraged.

The prefix for verbs is h- and using it with *laburon* produces the awkward-sounding *hlaburon* /ɣɻa.bʌ.ɯɑŋ/. Its unusual and difficult pronunciation is a powerful reminder about how the word is supposed to be used. All "mental state" words start with *l* so speakers can easily spot the pattern.

Lexical Recategorization

An entire class of words can be reclassified according to different dimensions, especially if the concepts are psychologically/socially constructed.

Emotions can be thought of as one way the body informs you about your needs (psychological or physical). In English, basic emotions are classified on whether a need is fulfilled. Happiness means that a need is being met. Sadness means that a need is not being met. Anger means

that something is preventing you from fulfilling a need. Fear means that a need might not be met in the future. Disgust means to stay away from something that does not fulfill a need.

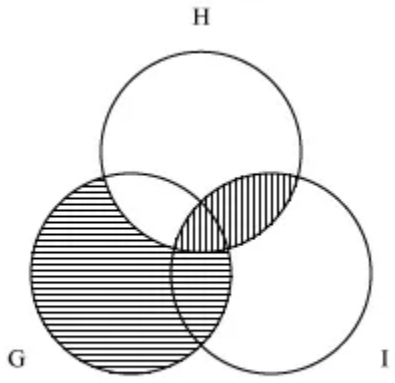
The issue with this classification system is that it is not always clear which need is not being met, or how to effectively communicate that need. Often, people will mislabel the need - like blaming their anger on something trivial a partner does when the real cause was not feeling respected at their job.

In ClarityLanguage, emotions are classified according to the specific needs. Instead of having a word for *anger*, there's a word that means "need for respect is not being met" and another for "need for connection is not being met" etc. Classifying emotions this way improves emotional intelligence because the speaker must think about which need they want satisfied, and thus are able to more effectively communicate and fulfill it.

Visualizations

Having certain concepts map easily onto visualizations can provide a powerful aide for understanding. The extra visual dimension makes certain aspects clearer than what could be achieved by words alone.

In ClarityLanguage, the logic vocabulary maps to Venn Diagram logic visualizations. In the visualization, shading represents that there are no objects that exist in that area. So instead of saying "All Greeks are human; No humans are immortal; Therefore no Greeks are immortal" you would say "The Greek non-Human portion is shaded; The Human+Immortal portion is shaded; Therefore the Greek+Immortal portion must be shaded". ("+" meaning the area that intersects both circles)



Venn diagram of the syllogism "All Greeks are human; no humans are immortal; therefore, no Greeks are immortal."

[diagram obtained from the link above]

The validity of this argument is self-evident in the visualization - the shading that was applied from the first two premises makes it clear that the conclusion is also true, without needing to memorize the rules of inference or trying to reason about it. More complicated arguments might not be visualizable, but everyday reasoning is generally simple enough to be visualized.

Required Morphology

You can require some conceptual dimensions to be specified on every verb or noun. In English for example, you must specify the tense of every verb; it is impossible to use a verb without indicating whether it happens in the past, present or future. This forces the speaker to consider that aspect for almost every sentence.

I have included this technique in the list for completeness, but ClarityLanguage does not use it. Reminders and framing for fighting cognitive biases are best applied to only the instances where the cognitive bias is likely to arise, so I use the more targeted approaches above. Otherwise there's a risk of making the language needlessly cumbersome and speakers might ignore the meaning due to the many false alarms.

Criticisms

This section addresses common criticisms regarding the use of language to influence thought.

Sapir-Whorf Hypothesis

Some don't believe it is possible for a language to influence the speaker's thoughts (the weak Sapir-Whorf Hypothesis). I make no claims here about whether it happens for natural languages, but for ClarityLanguage specifically, I give the following argument:

1. The way a concept is framed (phrased) affects how people think about it (a well-established phenomenon in psychology and the social sciences generally)
2. ClarityLanguage's vocabulary and grammar ensures particular frames for certain concepts (using the techniques given in this article).
3. Therefore, ClarityLanguage influences how speakers think.

Ethical Considerations

Some are reminded of Newspeak from 1984, where a totalitarian government alters the language to influence the populace into being more compliant. What makes Newspeak unethical is that the language is forced upon an unwitting populace.

For ClarityLanguage and similar languages, as long as using the language is voluntary, and the speaker knows how the language influences their thoughts (and the language delivers on those promises), then it is morally good. Learning the language is comparable to enrolling in a self-help course to influence their thought patterns - clearly ethical if it influences the person in the healthy way they desire.

It should also be noted that language influences but does not determine thought. Speakers that wish to think/communicate in a way discouraged by the language are still capable of doing so (though the sentences will likely be longer).

Language Evolution

Some think that the inevitable change to languages that happens over decades of use will lead to the conlang eventually being “watered down” to the point where it no longer has the properties that make the language beneficial.

While the language can and should change to keep up with the times, I am optimistic that it will retain or even strengthen its beneficial properties because the people who choose to learn the language want those beneficial properties and so will adopt changes in line with the language’s goals.

Even if the language does lose its potency over a century, having a positive impact for many people over such a long period of time is still a worthwhile accomplishment.

Concluding Remarks

Creating language to influence thoughts in helpful ways is an underexplored area of research, and I hope I have inspired other conlangers to try it. If you come up with something, I’d love to see it in the Cool Features You’ve Added thread in /r/conlangs which happens every Saturday morning ET. If you want updates on my specific project, join /r/ClarityLanguage.