Language and Cognition Portfolio

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Language, Cognition, and Linguistics

Cognition

Cognition is one of the most powerful tools we have at our disposal. It is the process through which we make sense of the world around us, and it is the underpinning of the most sophisticated system of communication on earth, namely, human language. But what exactly is it?

Cognition is, generally speaking, information processing. Our environment constantly presents us with information. Through our senses, we gather that information and manipulate it through the process of cognition. The information is then categorized. Some of the information is stored as memories, or as knowledge. Some of it invokes prior memories, or triggers the recollection of previously learned knowledge. Often it instigates a physical or emotional response. Cognition is a general term for all the various things that happen to information in our brains once it has been collected by our senses.

It is easy to conflate thought with cognition; however, thought is simply one facet of cognition, albeit an important one. Thinking about thinking, or metacognition, is a bit of a slippery undertaking, and it's easy to get lost in philosophy once you've started. In his book, *Talking the Talk*, Trevor Harley wrote, "I'll be bold and say that thought is the manipulation of ideas with an outcome that can enter consciousness - and be vague for now about what I mean by "consciousness" and "idea"" (Harley 2010, 90). If I had to pick up where Harley left off, I would say that ideas are the products of cognition. They are the output that we get when we put the input of information through the machinery of cognition. Thoughts are what emerge from the manipulation those ideas.

Of course, thoughts and ideas are great to have on their own, but that's not the end of the story. Lots of other animals display signs of cognizance, but what sets humanity apart in the animal kingdom is what we do next. Once these thoughts and ideas have been produced in our mind, we need a way to manipulate them. We need to be able to categorize them and, ultimately, we need to be able to perform the remarkable feat of getting them out of our own minds, and transfer them to the minds of other people.

This is where language comes in.

Language

Language is a remarkably sophisticated system of communication, unique to humans. Trevor Harley identifies three important aspects of what makes a language. "First, language is primarily a system for communication: its main purpose is to transfer information from one person to another" (Harley 2010, 3). This is the most important function of language: data transfer. However, this is the also the most important function of all communication systems, from the complicated dances that bees perform, to the songs that songbirds sing. What sets language apart from other systems of communication in this respect is that we can use language to talk about anything, including things removed from us in time and space, as well as things that don't even exist in the real world. This is called displacement, and it is a capability that bees and songbirds lack. They can only communicate about a narrow range of topics, like pollen and predators.

"Second, language is a system of words and rules for combining them" (Harley 2010, 3). This is where language starts to set itself apart from the communication systems of other species.

Languages have a lexicon, a set of words, and a syntax, a system of rules for combining them. In this way, language allows us to combine a finite set of elements in infinite ways, meaning that we can communicate a potentially infinite number of ideas. The only limits imposed on the number of creative utterances a single person is capable of uttering is that person's imagination, and their lifetime.

"Third, the relation between the meaning and appearance or sound of words is arbitrary: you can't tell what a word means by hearing it; you have to know it" (Harley 2010, 4). This means that there is no reason for a word to mean what it does. There is, for example, nothing clearly cat-like about the word cat, or Katze, or gato. Each of these words bears an arbitrary relationship to small feline house-pets. None of them mean "cat" in any symbolically inherent way, the way that an arrow pointing to the left means go left.

Language, then, is a sophisticated system of communication, used for the intentional transfer of information from one person to others. It is made up of words and a system of rules for combining those words in novel ways. These words bear an arbitrary relationship to the objects or concepts which they signify.

Language and Cognition

Language and cognition are clearly very closely related, but they are not the same thing. In his book, *The Language Instinct,* Steven Pinker writes, "Language is the most accessible part of the mind" (Pinker 1995, 404). It's easy to get caught in the trap of thinking that language is all there is to cognition, since it is the only part of our minds that other people are readily able to access. On top of that, our linguistic abilities aren't limited to visual or auditory speech production, made for the consumption of others. Language exists inside the mind as well. Most

of us have an inner voice that sounds like us and speaks like us and which is often present in our thoughts.

Steven Pinker addresses the problem of conflating language and cognition in this way: "People can be forgiven for overrating language. Words make noise, or sit on a page, for all to hear and see. Thoughts are trapped inside the head of the thinker. To know what someone else is thinking, or to talk to each other about the nature of thinking, we have to use - what else, words!" (Pinker 1995, 67).

The idea that language shapes our cognition is at the heart of the Sapir-Whorf hypothesis. At its most radical, the Sapir-Whorf hypothesis posits what is called linguistic determinism. This is the notion that the language we speak forces our mind to conform to a linguistic mold. It also means that, since our language is responsible for the way that we think, cognition without language is impossible.

Evidence for this theory has been trotted out in the form of things such as color naming. Languages occasionally draw color boundaries in different places. For instance, Russian differentiates between two shades of blue that English does not (Pinker 1995, 62). From there, it's easy to see how one might draw the conclusion that speakers of Russian somehow see more shades of blue than speakers of English. This cannot be the case. Whether or not we have words for them, we all see the same colors. We can't help it. It's simply the way our eyes work. As Pinker puts it, "No matter how influential language might be, it would seem preposterous to a physiologist that it could reach down into the retina and rewire the ganglion cells" (Pinker 1995, 62).