The Faculty of Language: What Is It, Who Has It, and How Did It Evolve?

In this paper, the authors promote a stronger connection between biology and linguistics in order to clarify each other's perspective on language and evolution. They take “language” to mean an internal component of the mind/brain, as opposed to its informal usage (i.e. English, Portuguese). They state that a distinction should be made in the faculty of language. In the broad sense (FLB) it should include an internal computational system combined with at least two other organism-internal systems called “sensory-motor” and “conceptual-intentional.” In the narrow-sense (FLN) the abstract linguistic computational system is independent of the other systems with which it interacts and interfaces. FLN is a component of FLB.

An interesting find was that many animal species have an impressive ability to discriminate between and generalize over human speech sounds. They can also tell the difference between two different languages based on the rhythmic differences between the two languages. I also think that it is interesting how the author pointed out that some animals have evolved exceptional abilities to imitate (i.e. songbirds, dolphins, and humans), while others lack this ability (i.e. apes, monkeys). I think this is interesting because humans evolved form apes, but somehow apes lack this ability that is very natural for humans.

The authors state that many human speech perceptions haven’t been investigated in animals and that the available data suggests that there is a strong continuity between animals and humans with respect to speech (much stronger than previously believed). Because of this, they argue that the continuity hypothesis should be a null hypothesis, rejected by comparative work. This seems like a very reasonable idea, especially since not a lot of speech perceptions have been investigated in animals. I am interested in knowing how they went about finding out which speech perceptions have been investigated and which haven’t, and if instead of considering the continuity hypothesis a null hypothesis, they could've made another hypothesis from the data that they did have.

I think that their study on how recursion evolved to solve problems is fascinating. It is very interesting that humans somehow evolved to solve computational problems and social relationships. It would be interesting to find out if any other animal species somehow evolved in a similar way and why the humans’ system of recursion operates over a broader range of elements (i.e. numbers, words) than other animals. Evolution is a very interesting topic and there is still a lot of research that needs to be done in this area.

This paper doesn’t discuss any specific visualizations but I think it would be interesting to somehow visualize what animals are the most similar to humans in different categories. There could be a perceptual map with several different categories on each axis. Each animal would have it's own color, and it's points for each characteristic would be connected, forming large multi-sided shapes. The larger the area of each animal, the more similar it would be to a human.
Social Catalysts: Enhancing Communication in Mediated Spaces

The *Microsoft Virtual Kitchen* installation linked three kitchens in two Microsoft buildings with audio and video connections. As an incentive to get people to talk to each other and to lengthen people's visits to the kitchen, the fourth screen was turned on to CNN. In her paper, Karrie mentions that the fourth window had the opposite of the intended effect; it was meant to provide content in conversations. I wonder if the results would have been different if instead of having the channel on CNN, it was on a funny episode of a TV show, such as “The Office.” However, the problem with this is that you don’t want to have something that is playing for 30-minutes at a time, causing people to want to hang around the TV too long and not go back to their desks. Another idea would be to show short YouTube videos that have been getting a lot of views. It seems as if these videos might encourage content conversations among viewers.

I really like the dormitory installation that converted students’ images into cartoons. Before, when students were under the camera’s view, they could not see what other people were seeing, only those in the other dormitory. It makes sense that students avoided the camera; people seem to have this sense of “I don’t want someone to see me, unless I know who is seeing me.” This somewhat resembles being stalked, since someone is watching you without you knowing that they are watching you. I like images were made into cartoons, not only making it playful, but also making the images more anonymous. I can see how this would be a big hit with students, and how they would want to see their own caricature. The images of the caricature are in black and white; I wonder if there was a specific reason for making the images black and white, or if that was just due to the video camera that was used.

*Visiphone* builds a portal between two spaces connected via Internet. Each space contains a dome with the visualization displayed on it. There are circles of two different colors representing the different people using the device. The size of the circle is proportionate to the volume of the audio. I think it would be interesting to somehow visualize emotion. When someone is speaking very loudly, they could be shouting angrily, or screaming excitedly about something. If there was a way to sense the emotion in the tone of voice of someone, the color of the circle could become brighter if the person seemed happy, and darker if the person seemed angry. Karrie states that they had not conducted formal user studies of *Visiphone*, even though it had been on display in public environments and used by hundreds of people. I wonder why they didn’t conduct formal user studies, which would be really easy given that it is being used by hundreds of people. I think it’s interesting that people found uses for it that Karrie hadn’t necessarily thought of, such as *Visiphone* being used for therapy. The reason for this is that it can easily detect patterns of interruptions and of individual conversational dominance. It would be interesting to do a formal user study on *Visiphone* being used for therapy, and seeing how many couples, for example, were able to save their marriage by using the device.
Primates on Facebook

Dr. Robin Dunbar has done research on social networks and has come up with the famous “Dunbar number.” This number represents how many stable networks the human brain allows a person to have; it is rounded up to 150. Petere Marsden found that Americans usually only have a handful of individuals with whom they “can discuss important matters.” Another study found that this number is on a downward trend. When researched numbers on Facebook, it was found that the average person has about 120 “friends,” even though some may have more than 500.

I think it’s interesting how Lee Rainie, director of the Pew Internet & American Life Project, stated that members of online social networks aren’t “networking,” but broadcasting their lives to an outer tier of acquaintances who aren’t necessarily inside the Dunbar circle.” This is interesting because I’ve noticed that among my friends, a lot of them do like to “advertise their lives” by posting pictures of themselves alone, having status updates about how wonderful their lives are, and posting information about what jobs they are having. I am one of those people who have more than 500 friends on Facebook, but I know for a fact that not all of them are really “my friends.” It seems to be socially acceptable to “friend” someone after having met them once. Facebook has definitely redefined the meaning of the word friend, when it comes to social networks.

Maintained Relationships on Facebook

In this article, the researchers defined users networks on Facebook in 4 different ways: All Friends, Reciprocal Communication (active exchange of communication), One-Way Communication (everyone the user has communicated with), and Maintained Relationships (visited their profile more than twice). The Active Network Sizes graph shows that as a function of the people a user communicates with, the user is passively engaging with between 2 and 2.5 times more people in their network.

I think that the Maintained Relationship category should have been defined as something else. To me, a maintained relationship implies that it is being maintained both ways. In the study it was measured by how many times the user visits someone’s profile. If the user is obsessed with a certain person, and is constantly looking at that person’s profile (when that person hardly remembers that the user exists), this doesn’t seem like it should be considered a “maintained relationship.” However, I do like that it was specified the number of profile visits that are necessarily to be considered a “maintained relationship.” The Reciprocal Communication category is defined by active exchange of communication, however, the word “active” was not defined. I think that the researchers should’ve have mentioned how they went about defined communication as active and non-active.