A guest lecturer for a class on animal communication

I bring in a dog as a guest lecturer on animal communication. (Since I am a dog trainer by avocation, I have a highly-trained dog at home.*) With the dog I show the students:

● Consider language as an arbitrary connection between form and meaning. Is a dog is also capable of understanding an arbitrary signal? Yes: SIT, DOWN, COME, etc.

● Can the dog discern the same range of phonetic distinctions we do? No. The dog hears SKIT, SLIT, SPIT, as SIT; and GOWN, TOWN, BOWN as DOWN. A student (in music) asks if it is the melody of the vocal command that the dog is responding to. We experiment. No, the dog is responding to the phonetics of the vocal signal.

● Humans are capable of understanding language in more than one modality: auditory, visual (ASL), tactile (Braille). Ask the students if they think the dog is capable of this as well. A student (in artificial intelligence) thinks not. Then we see that the dog also obeys hand signals for SIT, DOWN, COME etc.

● The dog has assigned some sort of meaning to some of our words. The dog doesn't react to the word *football.* But the dog reacts to the word *squirrel,* by looking excitedly all around the room and up at the pipes in the ceiling. Then have the students think about how we could tell if the dog has the same 'meaning' for *squirrel* that we do.

● Observe that I can tell the dog *squirrel,* but the dog can only understand it as *Squirrel here and now*. I cannot tell the dog *squirrel tomorrow, squirrel yesterday,* or *squirrel maybe*.

● Humans can use language to reflect different points of view. Can the dog manipulate different points of view? I can teach the dog different commands for left and right, but it has to be the DOG'S left or right. I cannot teach the dog commands for MY left and MY right.

- Compare the dog, the machine, and the human with respect to indirect speech acts. I can speak to the dog in an affectionate voice, using friendly body language, while calling the dog foul names, and the dog interprets this CORRECTLY as a friendly communication, while of course understanding none of my words. The machine (natural language processor of some kind), on the other hand, would understand the words and interpret the communication INCORRECTLY as unfriendly. The human would understand the words and STILL understand the communication as friendly. How the dickens do we do that?!

- Moral: The dog and other higher mammals have many but not all of the cognitive abilities underlying the human capacity for language. But the dog has no recursion. No grammar. (This makes a good jumping off point for discussing ape language research.)