

Here is a wonderful summary of *The First Word*, our January 2009 topic, by the presenters: Paula Wolk, David Reisen, and Gail Doherty.

Dr. Reisen began by giving a brief overview of the history of linguistics.

Originally the study of language was tightly allied to the classical disciplines of drama, poetry, and rhetoric. With the advent of the 20th century greater awareness developed regarding the languages of Native Americans many of whose dialects were felt to be at risk of extinction. Efforts to research these languages were led by Edward Sapir, Franz Boas, and Leonard Bloomfield. Their efforts were much in the spirit of Carolus Linneaus, that is, classificatory without the kind of undergirding Darwin provided later.

A major attempt at providing that substructure was made by Chomsky in the late 50's and early 60's in his books, *Aspects of the Theory of Syntax* and *Syntactic Structures*. Chomsky was struck by several observations, especially the universality and rapidity of language acquisition (as opposed to mathematics, for example), the capacity of a child to generate an infinite number of sentences, the mastery of the rules of the native tongue, and what he called the "poverty of stimulus," that is that all of this mastery occurs in the face of the child's having heard a small number of examples, thus ruling out imitation as the mechanism. He further argued that all languages were, at the deepest level, the same structurally and that this pointed to what he called a universal grammar and the existence of inborn equivalents to grammar genes.

The lack of attention by Chomsky and his followers to evolutionary forces and animal studies led Bloom and Pinker in 1990 to challenge his views. The Chomskian vision basically posited a [saltation](#), a bolt from the blue, as it were, in the emergence of the human language capacity. Pinker and Bloom argued the case that [anlage](#) of human language exists in many species in the form of alarm calls, gestures, etc. and that Chomsky's approach was ultimately reductionistic and impoverishing. The field is now attempting to resolve the dispute by focusing on what is specifically human about language, for example embedded phrases and the general capacity for recursion, as opposed to what is shared with other species.

Ms. Doherty summarized the second section of the book.

In this section, [Kenneally](#) summarizes a wealth of scientific studies and orders them in a purposeful way. Each section describes one of the ways in

which humans share linguistic aptitudes with other animals. Both have something to talk about, both have words, both have gestures, both have speech, both have syntax, both have brains, and both have genes. Each section presents examples of the similarity of human and other animals regarding language as well as noting the particularly adaptive uses that distinguish human language. [Kenneally's](#) conclusion is that further research, particularly genetic research, will bring us greater understanding of the ways in which human language use differs from that of other animals.

This section is a sustained challenge to Chomsky's claim that humans are hard-wired to learn language, and that language does not evolve. [Kenneally](#) returns to earlier concerns -- about animal speech and the influence of environment on speech -- only now it can be understood more accurately.

Dr. Wolk summarized the last section focusing on the discovery of the FoxP2 gene and its role in language and speech.

The hypothesis that the correlation between the changes in this gene and the blossoming of human culture was presented. Further, the research at Mount Sinai altering this gene in mice with the intention of then observing their expression, behavior and neuroanatomy was discussed. She then went on to discuss the 2006 Genetic Research Project which will sequence the entire Neanderthal genome which will allow many comparisons, including that of the FoxP2 gene, with ours.

Dr. Wolk emphasized that the take home message of this entire book was that language is an aggregation of many abilities...It is an adaptation...a polygenic ability which is also profoundly affected by post-natal psycho-social determinants.

[Kenneally's](#) message is that we are increasingly in a position to test the contribution of many of these hypothesized determinants.

All three discussants agreed that this book was a very helpful contribution to our thinking about the development of language and mind and quite readable.