Darwinian Linguistics Robert C. Berwick, MIT

Famously, in The Descent of Man, Charles Darwin extended his theory of evolution to human language. First, Darwin speculated that language emerged through sexual selection: "some early progenitor of man, probably used his voice largely ... in singing"; and "this power would have been especially exerted during the courtship of the sexes" (1871,56). Second, Darwin pictured organism and language "family trees" phylogenetics - as essentially one and the same (1871, 60). How well do Darwin's proposals hold up in light of modern comparative biology and linguistics? In this talk, we demonstrate that one should not over-inflate Darwin's metaphor. Language's origin and then its change over time cannot be exactly equated to biological evolution, because linguistic principles and parameters are not precisely equivalent to genes or DNA, and language inheritance is *not* equivalent to biological inheritance. As a result, any facile 'lifting' of techniques originally applied to biological evolution may be plagued by false equivalences. Biological methods make particular assumptions about how evolution works that are not met in the case of language, particularly with respect to genes, inheritance, and genetic variation, the basic 'fuel' that evolution burns. Unlike biological evolution, where mutations in DNA boost variation and lead to new genes, duplicated whole genes or genomes, novel traits, and new species, so far as we know the humanspecific shared genetic endowment for language has been frozen since its emergence. The implications of these differences is illustrated by several recent analyses of language geographic flow and language phylogenetics that have conflated Darwinian biological evolution with language evolution, and so arrive at doubtful conclusions.