Workshop
"Pattern in Language and Linguistic Theory"
Berlin, May 28th 2010

PATTERNS IN BIRDSONG: VARIATIONS, REGULARITIES AND RULES

Carel ten Cate
Behavioural Biology, Leiden Institute of Biology
Leiden University
c.j.ten.cate@biology.leidennuniv.nl

Birdsongs come in many varieties, with each species showing its own specific characteristics. In some groups of birds (songbirds, parrots and hummingbirds) vocalizations are learned, while in other groups learning is not involved in vocal development. I will briefly discuss how birdsong researchers characterize song structure and next compare the structure and plasticity in vocal production for some learners and non-learners, showing that lack of developmental plasticity not necessarily implies lack of plasticity in production. Next I will present a more in-depth analysis of the song structure in some songbird species (chaffinch, zebra finch) to explore the regularities and 'rules' in their song production. While the production of birdsong shows no evidence of being more complex than a finite state grammar (even though this might be an intricate one), there is some debate about whether songbirds may be able to perceptually detect and process more complex syntactic structures, such as recursive ones. I will discuss the evidence for this claim.