

CS 4100, Spring 2012  
Writing Assignment 4  
Due May 18, 2012

From the MIT Encyclopedia of Cognitive Sciences:

### **Linguistic Relativity Hypothesis**

*The linguistic relativity hypothesis is the proposal that the particular language one speaks influences the way one thinks about reality. The hypothesis joins two claims. First, languages differ significantly in their interpretations of experience -- both what they select for representation and how they arrange it. Second, these interpretations of experience influence thought when they are used to guide or support it. Because the first claim is so central to the hypothesis, demonstrations of linguistic differences in the interpretation of experience are sometimes mistakenly regarded as demonstrations of linguistic relativity and demonstrations of some commonalities are taken as disproof, but the assessment of the hypothesis necessarily requires evaluating the cognitive influence of whatever language differences do exist. Accounts vary in the proposed mechanisms of influence and in the power attributed to them -- the strongest version being a strict linguistic determinism (based, ultimately, on the identity of language and thought). Linguistic relativity proposals should be distinguished from more general concerns about how speaking any natural language whatsoever influences thinking (e.g., the general role of language in human intellectual functioning) and discourse-level concerns with how using language in a particular way influences thinking (e.g., schooled versus unschooled). Ultimately, however, all these levels interrelate in determining how language influences thought.*

To paraphrase, linguistic determinism maintains that people in various cultures think differently *because* of differences in their languages, while linguistic relativity maintains that there are cultural differences in cognition that are correlated with linguistic differences between cultures. The combined principles of linguistic determinism and relativity are sometimes referred to as "the Sapir-Whorf hypothesis."

### **Assignment:**

Consider linguistic relativity and determinism in the context of programming languages and our discussions of tools. Based on your experience with programming and programming languages, decide if you believe either or both hypotheses can be supported in this context. Clearly state your claim and provide evidence to support it in a well-reasoned argument. Your evidence is expected to include specific examples of programming language structures. Please limit yourself to two pages.