

Sharon L. Thompson-Schill – Abstract

### **Conceptual Integration**

For the past two decades, I (and many of my colleagues in the fields of cognitive psychology, neuropsychology, and neuroscience) have been trying to understand the cognitive and neural structure of long-term memory for concepts by “taking the concepts apart”. This had led to a very feature-centric approach to concepts (i.e., a lime is green, round, and tart; a carrot is orange, tubular, and sweet). In recent years my group has begun to attempt to “put concepts back together”, specifically, by focusing on the integration of features into concepts and the integration of simple concepts into complex concepts. In this seminar, I will present some new fMRI research demonstrating our approach to understanding conceptual integration. To begin, I will illustrate how we can measure both segregation and integration of two visual features (shape and color), and I will briefly comment on the role of feature diagnosticity in their integration. Next, I will report a new finding regarding integration of an abstract feature (value) with a visual feature (shape). And finally, I will discuss our recent foray into the study of conceptual combination, and some preliminary evidence for the functional specialization of two anatomically-distinct conceptual hubs. If there is time, I will also touch on related work concerning fast-mapping of new concepts and metaphor comprehension, both of which draw on our ideas about conceptual integration.