Syntax and cognition

The talk will apply cognitive linguistics to the choice between phrase structure and dependency structure, and will introduce a new synthesis which combines the best features of both.

One of the tenets of cognitive linguistics, which I shall assume, is that knowledge of language is not special, so it requires no more than the domain-general cognitive apparatus that we use in thinking about things other than language. The talk will explore some of the consequences of this approach by taking four reasonably well-established facts about ordinary cognition and showing how they challenge some widely-held assumptions about syntactic structure. These facts are:

1.   Knowledge is a network, in which nodes can connect freely; so words should be able to connect directly (as in dependency grammar but not in phrase-structure grammar).

2.   Therefore, linear order (like spatial relations) must be recorded as a special relation within the network between items and their 'landmarks'; so each word's position is one of its attributes, and 'phrasal integrity' (the tendency for phrases to be continuous) results from general principles governing landmarks.

3.   The logic for inference is default inheritance, based on the 'isa' relation in the network; so a word's default position may be overridden by a more specific one.

4.   New concepts are created as needed for items of ongoing experience, and each item may need several distinct concepts as its representation becomes richer; so each word token is represented mentally as a distinct concept not only from its permanent type, but also from earlier representations of the same token.

Facts #1-3 favour dependency structure over phrase structure, but fact #4 moves dependency structure in the direction of phrase structure by introducing extra nodes which correspond to the latter's 'mother' nodes, but with 'isa' rather than part-whole relations to the daughter nodes.