Immediate Excitation

A continuing problem with creating an object that is a participial, say, is that the properties and meanings of the object are lost as it is turned into an InterimParticipial and then a Participial. If the relation is immediately created with the object, it becomes much easier to see what other objects (subject, object, second object) the relation is looking for.

This would also apply for components of a noun phrase – the components can find each other in the phrase. It also should help when it is necessary to determine where a split may occur in a noun phrase – "I showed John aspects of the plan" – "show" can be ditransitive, so ToShow can be used to parse the following components of the object noun phrase. ToShow has a second object, normally only accessible through a preposition

 He sold the car to John

If marked as ditransitive, and it is not followed by the characteristic preposition, then

He sold John the car

There are several problems:

There may be several meanings for a RELATION2 or RELATION3. We keep a list of the possible meanings, prune as more information on subject and object arrive.

Some relations have RELATION2 or RELATION3 meanings –

He included it in the report
The report included the information

We can use the immediate building of a RELATION2 with a list of possible meanings, then change to RELATION3 if we find a second object, or the type of subject forces a change.

Quite a lot of words can be either an object or a relation –

His arm hurts – They will arm the device

It is not always clear which use is meant – we need to be able to wait. One way is to see that the word cannot be a relation, as there is no suitable subject or object. Having the word sitting on a list of ambiguities which are constantly looked at in parallel with the parsing should enable a quicker resolution of NounVerb phrases.

To use this method effectively, we will need more detail on the relations, and more detail on associated prepositions.

This is the semantic approach to parsing. It is at least simulating the way that, in a human, the use of each word starts excitation of the meanings, allowing resolution based on what the sentence means, rather than on the grammar of the sentence.