

elementary tree by introducing a set of feature-value pairs, so that JTAG is able to express control and feature constraints. Control constraint is used to deal with Equi-NP Deletion and Passive transformation. Feature constraint is used to constrain a feature of a node whose value is expected to be defined by a separate specification.

As a result, JTAG can formally deal with some linguistic phenomena often found in a typical Japanese text: passivization, topicalization, relative clauses, embedded sentences, etc. The framework of JTAG is now used as a text generation mechanism in an intelligent on-line help system NeoAssist. However, JTAG is still in its evolving stage, and it needs further refinement. For example, we could include in the framework of JTAG some semantic constraints such as 'a sentence can be transformed into the passive one, if the subject of the sentence is volitional'. Such a semantic constraint could be specified by using feature constraints described above. We have not yet explored what kind of features and their values should be prepared to express semantic constraints. We could also augment JTAG with the mechanism to deal with given and new information. This problem is closely related with the context of a sentence, we must develop the mechanism along with the selection mechanism of auxiliary trees. Such refinements and improvements will continue.

**Coordination in TAG
in the manner of CCG (Combinatory Category Grammars) :
Fixed vs Flexible Phrase Structure**

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So far there is no good account of the coordination phenomena in the natural language in the framework of TAG. The best account of coordination so far is provided by CCG. Lexicalized TAGs are very close to CCG except for the fact (and a very crucial fact) that the elementary trees of TAG (lexicalized TAG) do not have a carried representation. The categories in CCG are represented as carried functions. In my talk at the Dagstuhl workshop on TAG, I tried to show that this crucial difference can be exploited for constructing a CCG-like account for coordination in TAGs without - giving up the phrase structure defined in the set - of elementary trees. In CCG there is no fixed phrase structure, almost any contiguous sequence of lexical items (words) can be grouped together as a constituent, thus creating groupings which ordinarily will not be considered as constituents. There are a number of questions about my approach that need to be settled, in particular, it is necessary to investigate the power of the resulting system and to make sure that no additional complexity is added while trying to get rid of the multiplicity of constituents in CCG. Interaction with the participants promised me a lot of new ideas about how to settle these questions.