Most of the recent efficient algorithms for dependency parsing work by factoring the dependency trees. In most of these approaches, the parser loses much of the contextual information during the process of factorization. There have been approaches to build higher order dependency parsers - second order, [Carreras2007] and third order [Koo and Collins2010]. In the thesis, the approach by Koo and Collins should be

further exploited in one or more ways. Possible directions of further exploitation include but are not limited to: investigating possibilities of extension of the approach to non-projective parsing; integrating labeled parsing; joining word-senses during the parsing phase [Eisner2000].