

- ▶ IAN PRATT-HARTMANN, *A Complexity-Theoretic Study of some Fragments of English*.

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By a fragment of a natural language we mean a subset of that language equipped with a semantics that translates its sentences into some formal system such as first-order logic. The familiar concepts of satisfiability and entailment can be defined for any such fragment in a natural way. The question then arises, for any given fragment of a natural language, as to the computational complexity of determining satisfiability and entailment within that fragment. We present a series of fragments of English whose satisfiability problems range in complexity from NLOGSPACE-complete to r.e.-complete, showing how different combinations of grammatical constructions conspire to yield the observed complexity. Thus, this talk constitutes a study in how to investigate the logical properties of grammatical constructions in natural language.