

**From generalized quantifier theory to the Adjective-noun distinction:
A new approach to the research of adjectives and some results**

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Generalized quantifier theory is one of the applications of Montague grammar by virtue of which formal semantics has gained its position as a discipline of linguistics. An important achievement of this theory is the following (Keenan and Stavi 1986). A highly constrained set of basic interpretations for determiners was defined, such that the Boolean closure on this set provides a suitable domain of interpretation for all natural language determiners. Boolean closure (which results in the set of conservative determiners) rules out most ways we might associate sets with determiners. To illustrate, the ratio between the set of all determiners and the set of conservative ones for a domain of but 3 individuals is no less than $2^{37} \cong (137,000,000,000)$. This constraint on possible interpretations of natural language determiners limits the task faced by the language learner – thus helps account for how the semantic system is learned.

My analysis of adjectives is based on a trivial observation that nonetheless enlightens a non trivial possibility whereby the set of adjectival interpretations is essentially based on Boolean closure on a domain of basic adjectival interpretations. Everybody will tell you, as a simple matter of language use, that if you are ‘healthy’, you cannot have any -serious disease, whereas if you are ‘sick’, you must have some disease or other. Hence, ‘healthy’ means healthy in ALL respects, and ‘sick’ – sick in SOME respects. While this type of interpretation is prevalent among adjectival antonyms, intuitions about typical count nouns (e.g., bird, chair) differ significantly. Thus, in the talk I will discuss some observations pertaining to the following questions.

1. What are the possible interpretations of natural language adjectives, as opposed to nouns?
2. Is there a set of basic adjectives, defined by certain formal properties of basic adjectival interpretations, such that we can build denotations for all other adjectives via Boolean closure on this set?
3. What natural subclasses of these interpretations can be distinguished?

Determiners are logical constants, Adjectives aren’t – their interpretation varies with context; so accounting for the learning task for adjectives is significant – we have to say which basic interpretations are allowed, how they arise, and when and why any of the Boolean operations is applied.