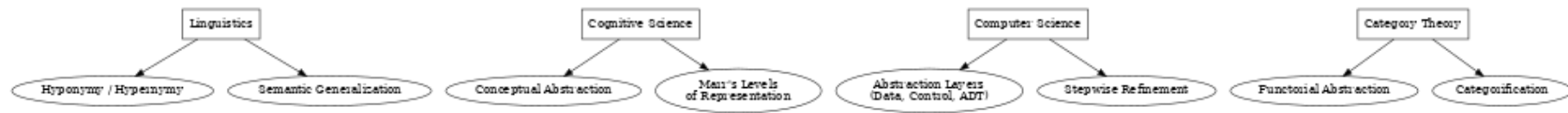


# Abstraction Terminology Across Disciplines



## Linguistics

Hyponymy/Hypernymy describe hierarchies of meaning (e.g., Dog -> Animal). Semantic generalization describes how specific terms are abstracted into broader categories.

## Cognitive Science

Conceptual abstraction underlies cognitive generalization. Marr's Levels of Representation describe abstraction from computational goals to neural implementation.

## Computer Science

Abstraction layers structure code (data, control, types). Stepwise refinement moves from general problem descriptions to concrete implementations.

## Category Theory

Functorial abstraction models mappings between categories. Categorification lifts set-based structures to abstract categorical relationships.