

# Views of Text-Meaning in Computational Linguistics: Past, present, and future

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## Abstract

Three views of text-meaning compete in the philosophy of language: objective, subjective, and authorial. Computational linguistics and natural language processing have traditionally ignored the competition and implicitly embraced all three, and rightly so; but different views have predominated at different times and in different applications. Knowledge-based systems of the 1980's emphasized the subjective view: meaning and interpretation depended on the system's own knowledge-base. Dialogue systems of the 1990's emphasized the authorial view: meaning was in the head of the user, as "author" of its inputs, and the system's job was to deduce what that was. Contemporary applications, however, mostly take the crudest view: meaning is objectively "in" a text. But underlying these divergences is the (untenable) tacit belief that in a "complete and correct" language-understanding system the three views would coincide. In the more-sophisticated applications of natural language processing that are now on the horizon, however, analytic Web-search and question-answering tools will seek to match meanings rather than merely matching strings. This will require that the views of text-meaning be made more explicit and distinct, and that the in-text view be subordinated. As the computer takes on the user's purpose, it must also take on the user's subjective views, and try to decide what a particular text means subjectively for that particular user in the context of that user's specific purpose. And sometimes, the user's purpose includes determining the author's intent. Thus the requisite view of meaning becomes part of the user's problem statement. Both these views of meaning, but especially the authorial view, require, among other things, an ability to determine what the author could have said but didn't --- a Saussurean perspective on communication. And this, in turn, requires a sensitivity to linguistic nuance, for which computational mechanisms need to be developed. I will briefly describe work with Diana Inkpen on a lexical knowledge-base that differentiates near-synonyms.