

On Interpretation

Due — Tuesday, February 13, 2001 (9:30 a.m.)

I. Assignment

- A. Issues of “interpretation” crop up all over the place, in discussions of computing:
1. On p. 116 of “Computer Science as Empirical Inquiry”, Newell & Simon describe symbol systems in terms of a notion of “interpretation.”
 2. In “Semantic Engines,” Haugeland talks about the interpretation of a computational system.
 3. In computer science, it’s common to talk about an “interpreter” of a language—such as the Lisp or Java (run-time) interpreter (used to run programs without compiling them).
 4. In logic, when doing semantics, one often defines an “interpretation function” mapping syntactic items onto elements of the model.
- B. Assignment
1. Compare and contrast these four technical notions of interpretation (plus any others you might want to add to the list).
 - a. If there is a common theme, say what you think it is (in your own words).
 - b. To the extent the versions differ, explain what the difference is, whether it matters, and (if you have any ideas about this!) why it might have arisen.
 2. The word “interpretation” is an ordinary term of lay English, as in such sentences as “I often have a lot of trouble interpreting what they say.”²
 - a. Which, if any, of the technical notions of interpretation above do you think is closest to this lay, English use? Or (if this way of putting the question “fits” better) what aspects of the lay usage do each of the various technical proposals get at?
 - b. Are there aspects of the lay use that *none* of the technical uses touch? If so, which ones?
 - c. If the answer to (b) is yes, do you think that they are relevant to computing? I.e., would it be an advance to introduce some (technical) version of these additional aspects to our conceptual repertoire?
- C. Note: You may find it useful to use some of the distinctions (very cursorily) laid out in my “100 Billion Lines of C++” paper, available on the class web site.³ Note, however, that what is said there is by no means “the answer” (though it may help in formulating parts of your response).

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¹This is something we’ll explain, in class, towards the end of Part III.

²It is also used in literary and philosophical discussions: for example in saying that Kripke has given us an “interpretation of Wittgenstein’s remark on the possibility of a private language.”

³<http://www.ageofsig.org/courses/b607/readings.html>