CSC416 Foundations of Artificial Intelligence
Beyond AI Study/Discussion Guide

Chapter Title: Symbolic AI: The Golden Age

Top Ten Salient Sentence Blocks

1. "But the computer opened up a whole new possibility: doing it from the top down, starting with symbolically expressed ideas (like this sentence) and figuring out what they are made of." (p. 61)
2. "Thus, stored-program electronic computers came to be called 'von-Neumann machines,' and the phrase 'Turing machine' is reserved for the mathematical abstraction." (p. 63)
3. "The genius of the test is that the computer can run, but it can't hide. The use of language in an interactive setting means that any suspicion of weakness entertained by the judge can be followed up and tested to any desired depth. There are some skills that cannot be conclusively demonstrated over a teletype, but it should be pretty hard to convince someone that you're intelligent if you're not." (p. 64)
4. "Would an AI that could pass the Turing Test be smart enough to be dangerous? What could any AI do that was dangerous in the first place?" (p. 64)
5. "Probably the most commonly re-implemented program ever written is Joseph Wizenbaum's ELIZA." (p. 65)
6. "This propensity of people to be fooled by simple tricks into thinking a computer understands something it doesn't is now called the *ELIZA effect*. It has been an albatross around the neck of AI since the 1960s." (p. 68)
7. "All of logic ultimately works out to the same general principle: a set of patterns that let you get new sentences from old ones. Over the centuries, the kinds of patterns have gotten more complex and sophisticated, and a lot more is known about what you can or can't get out of a mechanical logic machine." (p. 68)
8. "As John McCarthy began working on the problem of manipulating logical expressions in a computer, he decided to try using the lambda calculus as a programming language. The language that came out of the effort, called LISP, was a classic and is one of the tow programming languages that are still in use since 1960 (the other is FORTRAN, used for numerical calculations)." (p. 69)
9. "This was such an obviously good idea that it took the AI world by storm. Unfortunately, by the time it got out to all the researchers in the field, it had devolved into a buzzword; everybody took whatever datastructures they were already using and called them frames." (p. 76-77)
10. "A rational, deductive mind operating from a world model was the basic concept of AI that came out of the golden age." (p. 78)