

CSC416 Foundations of Artificial Intelligence

Beyond AI Study/Discussion Guide

Chapter Title: The Road to Intelligence

Top Ten Salient Sentence Blocks

- “On the other hand, the received and unshakable wisdom of the scientific community was that heavier-than-air flight was impossible.” (p. 34)
- “Computing technology, hardware and software alike, is still developing faster than aviation did in its amazing heyday. The only serious question is timing: will we have general human-level AI in eighty, forty, twenty, or ten years?” (p. 35)
- “On the other hand, a C-5 Galaxy can carry 270,000 pounds of freight at over 500 mph. Pigeons can’t do anything remotely similar.” (p. 35)
- “Can you ever be smart enough to build yourself, or does the job keep getting harder as you get smarter, always just out of reach?” (p. 36)
- “Two of the three classic ‘necessities of life’—food, clothing, and shelter—are *inventions*.” (p. 37)
- “Robots with all the physical skills and agilities of a chimpanzee would still hold no more threat to humanity than chimpanzees.” (p. 37-38)
- “There’s good reason to speculate that the abilities of hand manipulation and language grew up together. They seem to be concentrated in the same part of the brain, and people who learn a language of hand gestures, such as Ameslan, produce a behavior that is as syntactically rich and inflectionally subtle as spoken language.” (p. 39)
- “About forty-six thousand years ago, *Homo sapiens* (the Cro-Magnons) appeared in Europe, and within six thousand years, the Neanderthals had disappeared.” (p. 40)
- “One key aspect of intelligence, then, is the ability to be a memetic substrate—to absorb ideas *readily* from others, improve them, and re contribute them to the growing pool of knowledge we call culture.” (p. 42)
- “With our limited computational resources, we humans have to rely, instead, on remembered and copied skills almost all the time. Our creativity is just the tiniest sliver, like the first peek of the sun over the horizon as sunrise begins. But that’s a world of difference from darkness.” (p. 43)