

Open the Pod Bay Doors, HAL

Everyone knows the story of how the computer in Arthur C. Clarke's and Stanley Kubrick's spectacular movie, *2001: A Space Odyssey* was named HAL. Many believed it to be an intentional spoof on IBM. Just advance each letter in HAL by one letter, and you reach the name of the computing powerhouse of that generation. Both Kubrick and Clarke denied that, saying it was only a coincidence. Many people, including me, don't believe that. It is just way too coincidental.

In any event, fewer people know what HAL stood for: Heuristically programmed Algorithmic computer. Clarke and Kubrick accurately predicted the future, as modern AI technology makes extensive use of both algorithms and heuristics. Where they disagreed with each other was what caused HAL's breakdown. One point of view (explicitly endorsed in the sequel) held HAL had the equivalent of a nervous breakdown. HAL was ordered to accurately and truthfully process data, while simultaneously being told to keep the mission of the *Discovery* a secret. It couldn't reconcile the two irreconcilable commands. The second possibility is that HAL arrived at the conclusion that to keep the mission on track and not to violate the secrecy order, it was just simply best to exterminate the human crew. The original movie left open either possibility. Either is chilling. Either explanation is sufficient to explain the first recorded movie depiction of an autonomous computer killing human beings. .

Today, we are living in a world where AI does in fact kill humans. What is even more chilling is that computers killing human beings has become routine.. There is another side of this issue though. As I have recently written, AI holds out the prospect of faster diagnosis of potentially fatal diseases. I showed how that could have saved my wife's life if there was a large machine language AI available to diagnose her symptoms. In a recent article, a surgeon at Johns Hopkins University spoke about how AI can be used to diagnose pancreatic cancer earlier, giving the patient a better shot at survival.

I think we all need to keep in mind that AI is a tool. It is neither evil or good. It simply exists but can be molded as it develops. It has the potential for killing or the potential for healing. Lets not throw out the baby with the bathwater and ban AI. Lets put the proper guardrails in place and use it for the good of humanity. If we can't banish the spectre of HAL, let's at least put it in a cage where it can't harm us.