

Lost in translation: conversing with computers

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Nicholas Negroponte, in his 1995 book *Being Digital*, claimed that computers would be much, much smaller if we could only overcome the embarrassment of talking to them. In the absence of a keyboard or mouse, the most obvious way to command a computer would be to speak to it. Even though most people can speak much faster than they can type, and the technology for speech recognition has been around since the 1990's, most computer users choose the conventional mouse/keyboard combination to navigate their harddrives.

In one episode of *The Osbornes*, where the speech-impaired Ozzy tries to interface with his new automobile's voice recognition system, the car's computer is unable to translate Ozzy's mumbling into a comprehensible command. Although this is an extreme example (few people speak as badly as Ozzy) it's clear that computers are unforgiving when it comes to human speech with its endless variety of tone and inflection. The only experience I have ever had with speech recognition software was the source of much hilarity. No matter how clearly one spoke the computer would play back something entirely different from what was said. If the software had indeed been hooked up to the computer's mainframe and turned into action, the commands might well have resulted in a very serious bungle.

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Successful speech recognition systems (by successful I mean a recognition rate of between 98 and 99 percent in ideal conditions ie. a soundproof booth) require an extended training session to familiarise the software with the speaker's voice.

K.I.T.T, Michael Knight's uber-car in the 1980's TV series *Knight Rider* was capable of much more than merely taking instructions from David Hasselhoff aka Michael Knight, "a lone crusader in a dangerous world". If it were possible for people to commune with and depend on computers to this extent, is it possible that we would not need the company of other human beings except to mate?

As we increasingly entrust our souls to our machines, making them responsible for storing our work and the memories of our past, the race to create a solid bridge between the virtual and the real world is becoming more urgent. Writing changed the nature of memory by making the oral tradition extinct. What will computers do with the record of our collective unconscious?

The single most challenging problem in the field of computer science is to develop a computer that can actually understand human language (as opposed to taking dictation), creating a believable interface between man and machine so that a high level of synchronicity is achieved. Systems like these are called neural networks, imitations of the human brain comprised of a series of connections of varying strengths between neurons.

The computer's binary language is unparalleled in its ability to translate the mysteries of a universe that, like its own world, is dominated by a preprogrammed series of binary choices.

The human brain uses its capacity not only to store information but to improve its chances of survival by improving on a previous learned action. Computers are able to recall information in a conscious way, but the human brain has the facility of implicit memory, where a learned action improves with repetition. Computers are, by Einstein's definition, insane: they possess the ability to perform the same action over and over again with the same result.

A conversation with a computer is likely to be a monochromatic experience, uncoloured by the metaphorical language that we have adopted to make sense of our existence. Bereft of human emotion, it would also be painfully honest. A computer is unlikely to skirt the issue if asked: "Do these jeans make my bottom look fat?"

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