

Knock, Knock ...Who's There?

A forty year career using computers and software has firmly convinced me that online gaming, social networking and artificial intelligence (AI) should be used with caution. While I'm no stranger to games, networking and so on, there are troubling aspects associated with constant use of such online facilities and their long term effects upon how we experience our own humanity. Here's why....

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Way back in 1967 – when I began my association with computers – I was a newbie mainframe operator who was very quickly introduced to the ways in which those machines could be misused: for example, playing a basic tic-tac-toe program on an NCR 14k – yes, you read that right – mainframe for export to India. I was part of the acceptance testing team assigned to put the machine and peripherals through their computational and operational paces; and we should have been adhering to the set of test programs – not playing naughts and crosses. Boys will be boys....

Equally quickly, though, I came to realize a crucial aspect about computers: **those who use them are forever at the mercy or whim of those who program them.** With all the tests on those NCR computers, my choices were predetermined when executing the programs. Or any program, I concluded as I learned more.

You could argue that restrictions apply to using all things, of course. For example, when I drive my car, use a toaster, cut the grass and so on, I'm restricted by the functionality of the appropriate device for the task. Computers are fundamentally different, however: the software determines what the machine *becomes*.

Fast forward to 2011 and nothing much has changed, essentially. While computers are much smaller, more powerful, faster, more reliable, cheaper, more useful (and annoying, for many), more plentiful, and just *more*, we are still constrained by the dictates of the engineers, analysts and programmers who designed and programmed whatever software is used. And I *can* still claim that despite the advances in software engineering, program design and the growth now in artificial intelligence (AI), including automatic software generation.

But, as we all know, computers and software are now part of most people's everyday life. In fact, they are *indispensable* to many millions, if not billions of people; and to the effective functioning of the global economic, political and social systems so necessary for the maintenance of our civilizations. And all that in sixty years, give or take....

Not bad for a machine that burst onto the scene in the mid-twentieth century, wouldn't you say? The flip side is this, however: governments around the world are frantically trying to find fail-safe security processes to guard against national and/or global computing and communication catastrophe. And so they should. I'm not

about to comment more upon that security issue but we should all, of course, wish them success. Good luck....

Meanwhile, millions of people – including my adult sons and daughters – spend a large portion of their days engaged in online gaming and/or social media programs. Of the former, the World of Warcraft (WoW) is the one I’ve witnessed the most, but never played. I don’t *intend* to play it either for the reasons already outlined above.

There is nothing wrong in playing games, however. Psychologists and child specialists rightly emphasize the usefulness of games in early development. Sociologists praise the imprinting of rules-based systems and conformity to societal norms. And so on for aspects relevant to physiotherapists, physiologists, doctors, neurologists and other disciplines.

I love a good game of chess. I enjoy the *bonhomie* during a round table card game. I’m excited with a game of pool, snooker or billiards which, by the way, showed me only recently the extent to which my eye can trick me when shooting. I’m lousy at golf, but do I care? I go to the bowling lanes occasionally and lose most of the time, but I can often win at tennis, a legacy of the time I became expert at handball in my youth. Oddly though, my skill doesn’t extend to squash....

Fundamentally, I like to play a game with a real person, someone with whom I can shake hands and engage in conversation face-to-face. Only then can I get to know a person better, sympathize with their failures, praise their wins, and more readily identify with their humanity. Sure, I can play all of those games online, in one form or other, I suppose: but at what cost?

Well, in the first place, there is much anecdotal and empirical evidence about the effects of spending too many hours in front of a computer screen; the search term “effects of online gaming” returned 23 million pages, for example. Refining the search to “negative effects of online gaming” gave me 971,000 results – more than enough to wade through, I reckon. Too much of *anything* is never healthy.

Second, although one is electronically connected to a partner or competitor in online activity, there is an obvious disconnect from the real world. So, how long will it be before a person connects to a computer program disguised as a real person? Well, it’s already with us, of course. I was incensed, last year for instance, when my web hosting service used a very basic piece of AI chat software – instead of a real person – to assist me in debugging a software problem. As swift punishment, I devised answers that sent the online chat robot into a tizzy loop, exited and sourced a solution elsewhere. Who hasn’t been infuriated by the pervasive use of such annoyingly iterative programs?

Looking ahead, and with the development of **Dr Watson**, there is no doubt there will come a day when software and hardware will succeed in producing something akin to the fictional HAL9000 from **2001: A Space Odyssey**. That dubious outcome might even be achieved this 21st century.

Third, and most disturbing, humanity is now facing an identity crisis and perhaps in danger of losing all sense of what it means to be human. Technology has reached a

point where many organs and all limbs can be easily replaced, in one form or another; and in this century, *personalized* internal organ replacement will become commonplace.

It's not too fanciful, for example, to think of a just a human trunk and head (recall the horror of Dalton Trumbo's **Johnny Got His Gun**) with artificial limbs and organs, all encased in artificial skin. Only the human brain cannot yet be replicated artificially; but, technology seems to have no limits, so that must be possible. It's been done to death already in fiction with **Donovan's Brain**, **Blade Runner**, **I, Robot** and others....

Hence, by mid-century, who exactly will be responding when you, your children, your grand-children etc, log in to play NextGen WoW, for example? Or, when you log in to Facebook 15.0 or tweet on a Twitter derivative, will you always be texting (if that exists in forty years) with a real person, a human cyborg or a completely artificial human i.e. just clever AI software? How will you ever know for sure unless, as a first step, more intrusive and more robust security processes are used – for example a **CAPTCHA system** *par excellence*? Does the issue of pervasive and unrelenting AI even matter to you?

While I'm not against the use of online, interactive software of all types, it is certain that we all face these practical issues, and worse, forever. Just don't expect them to be perfect, any time soon. In fact, paradoxically and ironically, the more perfectly an AI system mimics a human person, the *more imperfect* it must be in order to disguise its true nature of just billions of zeros and ones circulating at lightning speed. In other words, the software should include all that's good and bad in human nature. That's why HAL9000 was so dangerous: "he" was so human, "he" lied ... and murdered. Tsk, tsk ... what a shame.

Thankfully, I console myself with the thought that no machine – however intelligent it might be – can ever experience sex, savor a good steak or appreciate **Jackson Pollack's No. 5** in the same way we humans do.

Besides, just like an EXIT, I make sure I *always* know where the OFF switch is.

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