

Everybody loves a mystery: cryptography, codes and ciphers

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Sunday, 21 May 2006
Last Updated Tuesday, 08 August 2006

In his 1995 book *Being Digital*, Nicholas Negroponte describes a transition from the digital age to an age of individualism, where machines might understand our individual idiosyncrasies with the same degree of subtlety as we would expect from another human being.

Traditionally, market researchers have attempted to decode our psychological makeup by assembling an inventory of our individual preferences and statistics: age, marital status, drinking habits, without heeding the information that lends us our uniqueness: why we might always choose to wear blue stripes on a rainy day.

Negroponte concludes that this intimacy with our machines is attained over time, until we are so well-acquainted that our machines can pre-empt our behaviour.

One day, your very personal computer will be able to tell you that you need to take your car in for a service because the car told it that its fan belt was worn, which garage stocks the most reliable fan belts and which route will get you there fastest.

The sequence of the final chromosome of the human genome was published this month. When the Human Genome Project was launched in 1986 by the Director of the US Department of Energy's Health and Environmental Research Programmes, Charles DeLisi, it was thought that the code was much more complex than it turned out to be, leading many to believe that its true complexity lies in the spaces between the sequences, in a spiritual realm where R2D2 cannot go (R2D2 was the malfunctioning robot in *Star Wars* who more often than not got it wrong).

The project is all about unravelling the infinite possibilities that determine our existence, until it is hoped we can finally uncover, through finding cures for whatever ails us, the Holy Grail of immortality.

Knowing the code for something means that we possess not only the means to use it to enhance its source but also to destroy the object that it defines. Code can be dangerous.

Until 1997, computer source code, the readable basis of computer software, was on the United States Munitions List and exporting the code without a license was regarded as an act of espionage.

At the heart of the conflict between the security-obsessed US government and scientists eager to impart their knowledge, was the question of whether computer source code is speech and therefore protected by the First Amendment, which states that speech is free, or whether it is merely a functional machine designed to fulfill a set task and therefore bereft of protection.

The homeless super-hacker Adrian Lamo, nearly 18 months into a two-year probation sentence for hacking *The New York Times* in 2002, recently violated his probation instructions by refusing to give the FBI his blood so that he could be tracked via his genetic code. Hackers crack code. Some are merely inquisitive and are usually benignly uncovering stuff that they need to know. Others are arsonists, bent on using their knowledge to sabotage and destroy.

Our collective fear of the destructive potential of computer viruses and the viruses that make us ill by mimicking our body's code not only makes us realise how vulnerable we are to attack but also reinforces our interdependence.

Can you imagine a future without bananas? The banana, World's Most Popular Fruit and fourth most important food crop, is in danger of extinction. Why? A fungus called *Black Sigatoka*. The genetic base for the banana, the wild bananas and traditional varieties cultivated in India, has collapsed. Only one disease resistant plant remains – in the Botanical gardens in Calcutta.

It remains to be seen if a Save the Banana campaign will unite mankind!© Debbie smit – The Sunday Independent