Column

"Always Interesting"
AI in the news

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A Robot in Every Home. Bill Gates. *Scientific American*. January 2007 (www.sciam.com). "[T]he emergence of the robotics industry ... is developing in much the same way that the computer business did 30 years ago. Think of the manufacturing robots currently used on automobile assembly lines as the equivalent of yesterday's mainframes. ... [S]ome of the world's best minds are trying to solve the toughest problems of robotics, such as visual recognition, navigation and machine learning. And they are succeeding. ... I can envision a future in which robotic devices will become a nearly ubiquitous part of our day-to-day lives. I believe that technologies such as distributed computing, voice and visual recognition, and wireless broadband connectivity will open the door to a new generation of autonomous devices that enable computers to perform tasks in the physical world on our behalf. We may be on the verge of a new era, when the PC will get up off the desktop and allow us to see, hear, touch and manipulate objects in places where we are not physically present."

UK Report Says Robots Will Have Rights. Salamander Davoudi. *Financial Times*. December 19, 2006 (www.ft.com). "Far from being extracts from the extreme end of science fiction, the idea that we may one day give sentient machines the kind of rights traditionally reserved for humans is raised in a British government-commissioned report which claims to be an extensive look into the future. Visions of the status of robots around 2056 have emerged from one of 270 forward-looking papers sponsored by Sir David King, the UK government's chief scientist. The paper covering robots' rights was written by a UK partnership of Outsights, the management consultancy, and Ipsos Mori, the opinion research organisation. ... The idea will not surprise science fiction aficionados. It was widely explored by Dr Isaac Asimov, one of the foremost science fiction writers of the 20th century. He wrote of a society where robots were fully integrated and essential in day-to-day life. In his system, the 'three laws of robotics' governed machine life. ... Robots and machines are now classed as inanimate objects without rights or duties but if artificial intelligence becomes ubiquitous, the report argues, there may be calls for humans' rights to be extended to them."

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– Jon Glick, Webmaster, AI TOPICS

Ethics Dilemma in Killer Bots. Philip Argy (National President of the Australian Computer Society). *Australian IT*. January 16, 2007 (australianit.news.com.au). "When science fiction writer Isaac Asimov developed his Three Laws of Robotics back in 1940, the first law was: 'A robot may not harm a human being, or, through inaction, allow a human being to come to harm.' Asimov later amended the laws to put the needs of humanity as a whole above those of a single individual, but his intention was unchanged: that robots should be designed to protect human life and should be incapable of endangering it. So reports out of Korea of newly developed guard robots capable of firing autonomously on human targets are raising concerns about their potential uses. ... Ethicists have always questioned the use of technology in weapons development, but the new robots are causing additional disquiet because of their self-directing capabilities. ... It is the responsibility of all technology professionals to ensure that those in our organisation and within our influence are both responsible and ethical in the way they develop and apply technology."

How Much Does SETI Require Robots? Adrian Brown. *SPACE.com*. December 21, 2006 (www.space.com). "A compelling theme in science fiction is the potential of humanity to create life and the hazards arising from such an endeavor. Perhaps Frankenstein was the first popular tale of a mad scientist creating havoc when the beings he created went haywire. The theme has been followed by writers such as Asimov in the Robot series, Philip K. Dick in 'Do Androids Dream of Electric Sheep?' (later adapted to film as *Blade Runner*).... In each artificial life creation story, there is always a cautionary line — questioning the right of humankind to create a consciousness that would otherwise not be present in our universe. Let us inspect that theme philosophically to gauge its true value to us today. ... How is this relevant to SETI [Search for Extraterrestrial Intelligence]? Of course, it has been stated by many authors (even in this column) that when we make contact with alien beings, they may be the robotic progeny of beings similar to ourselves."

In Search of Lost Time. Jo Marchant. *news@nature.com*. November 29, 2006 (www.nature.com). "The ancient Antikythera Mechanism doesn't just challenge our assumptions about technology transfer over the ages — it gives us fresh insights into history itself. ... This thing spent 2,000 years at the bottom of the sea before making it to the National Archaeological Museum in Athens, and it shows. ... These fragments contain at least 30 interlocking gear-wheels, along with copious astronomical inscriptions. Before its sojourn on the sea bed, it computed and displayed the movement of the Sun, the Moon and possibly the planets around Earth, and predicted the dates of future eclipses. It's one of the most stunning artefacts we have from classical antiquity. ... 'It's the same way that we would do things today, it's like modern technology,' says [Yanis] Bitsakis. 'That's why it fascinates people.' What fascinates me is that where we see the potential of that technology to measure time accurately and make machines do work, the Greeks saw a way to demonstrate the beauty of the heavens and get closer to the gods."

The *Discover* Interview: Marvin Minsky. Susan Kruglinski. *Discover* 28(1). January 2007 (www.discover.com). "[Q] So as you see it, artificial intelligence is the lens through which to look at the mind and unlock the secrets of how it works? [A] Yes, through the lens of building a simulation. If a theory is very simple, you can use mathematics to predict what it'll do. If it's very complicated, you have to do a simulation. It seems to me that for anything as complicated as the mind or brain, the only way to test a theory is to simulate it and see what it does. ..."