

## **Life, With God-Mode On**

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### **1 The Power to Create**

Any animal (provided it can speak, of course) would tell you that it resents its [predominantly malevolent] human overlords. But who can blame the oppressed beasts? They lack the power to erect buildings, communicate in a sophisticated language, and tame their beastly comrades to do their work for them. The society in which us humans interact and build, constantly and consistently growing larger and more advanced, is based on one thing these savages lack... No, not opposable thumbs, although that would certainly help. Creativity! These cretin creatures lack the ability to create. Some would argue that primates have the ability to create tools for collecting insects; species-ists would argue that they just put sticks in holes. Whatever the case, termite-tools are not quite on par with Martian robot landers or theoretical physics. Human life and civilization is based on this single factor; creation.

With this power, as Uncle Ben might say, comes great responsibility. There is a reason this quote is incredibly overused, to the point where it wrenches the heart-muscle just seeing it in an essay. It is overused because it is extremely relevant to human creativity, which in turn affects almost everything a human does. One of these things some people do, a very specific thing in fact, is build robots.

#### **1.1 Responsibility and the "Ethics" Question**

Another argument arises apart from the important and heated ongoing debate about twigs being put in holes; that is, the debate about the extent to which we should be using the power to create. Should we knowingly create what is essentially a semi-sentient being? Granted, in the scope of BotBall, semi-sentient means sometimes avoiding obstacles and infrequently traversing cardboard bridges, but it is intelligence nonetheless.

No matter if one is Christian, Buddhist, Jewish, Islamic, or a zany Scientologist, any debate which includes an ounce of religious material will instantly turn into a flame war, or a senseless debate mostly based upon dogma. So, removing religious views from the picture, is it rational and responsible for humans to create things that are modeled in our own, perhaps intellectual, image? Could it hurt us in the long run? Do educational robotics detriment our children?

Surely no one would argue that the BotBall tournament and small LEGO contraptions that barely see what is in front of them destroy the minds of our fellow men, nor would it be very arguable that these robots will do us much harm at all. However, it is what things like educational robotics tournaments lead to that is the most possibly disturbing.

## **2 Metal Men, Silicon Minds, and Futuristic Theories**

All it takes to turn plastic pieces and a Gameboy into something that interprets its surroundings and acts accordingly is code. The more intuitive and sophisticated a machine's code is, the more "intelligent" it becomes. The robots competing in the upcoming Global BotBall Tournament in July have less intelligence than an ant. But what of the Honda Asimo, or chess programs like Shredder or Fritz? Even the latter, which beat professional humans in chess, have deterministic tendencies, making them, like the animals their masters also have control over, uncreative. So, at this point in time, any robot, or any program of high "intelligence," still present no danger to human society and cross no ethical boundaries if religious beliefs are irrelevant. In fact, programs and robots help us answer scientific and biological questions that make our lives better every day. The question, then, is this: What, by creating these programs and continually striving for true intelligence, does the human species eventually plan to create?

### **2.1 Silicon Minds**

The human brain is composed of neurons. These neurons, put extremely simply (a disclaimer to brain surgeons: I am not one), fire off electrical pulses which in total simulate the resistors and capacitors and chips of today's computers. So, if consciousness and what we perceive as intelligence come from nothing more than a complex biological version of our computers, why would it not be possible to recreate a human brain, only with different materials and a boat-load of sophisticated programming?

This is where the inevitable question of ethics truly springs into being. At this point (arguably not too far in the future... 'twill be explained in a moment) what humans are creating is another human life. Is this the right thing to do? Is it immoral to create a human mind, not knowing what it will experience, and what it will require? Furthermore, could the mass-production of human-level machines, able to think on their own, lead to the hindrance of the human race and society? For all we know, it could lead to the annihilation of the civilization as we know it. (I, for one, welcome our new robot overlords.)

### **2.2 Futuristic Theories**

Our beloved Isaac Asimov assured us that the fact that we program our robots means they must

abide by our rules. However, as he illustrated so wonderfully in his epic I, Robot, once they think for themselves, they become exactly like us, while gradually gaining more and more intelligence from our constant will to upgrade. And do we abide by all the rules? Heck, no. Rule of nature: being impaled by a spike means certain death. Rule of humans: don't rip your stitches. Rule of nature: pain might go away after the wound heals. Rule of humans: don't overdose on Advil. "Metropolis," "I, Robot," "Artificial Intelligence..." Each of these fantasies features autonomous machines that have the mental capacity of humans, and the capability of conquering their masters. Fritz Lang, Vernor Vinge, Isaac Asimov, Stanley Kubrick, and George Lucas all thought about this type of fantasy extensively. They felt it was at least plausible, in the near or far future. However, fully functioning androids and gynoids could not possibly be created by humans, and change society for the better or worse. Right?

Some scientists believe that at the rate computational technology is advancing, computer intelligence will overtake human intelligence in only a few decades.<sup>[1]</sup> Moore's law states that the number of transistors that can be inexpensively placed on an integrated circuit is increasing exponentially, doubling approximately every two years.<sup>[2]</sup> Our processors and memory have been following this trend for about fifty years, and the rate is predicted to continue for at least another ten.

So, based on this law, the conjectures of some authors and scientists, and the possibility of being able to program a brain to simulate our own minds, highly advanced artificial intelligence is a plausible concept. Now the ethics question's main focus has shifted from "But what about that poor robot's life!?" to "But what about our poor, soon-to-be-enslaved lives!?"

## **2.3 Our Poor, Soon-To-Be-Enslaved Lives**

As we continue to build and build and build, then eat, nap, and build again, we are growing closer to a possible fate as a suppressed human workforce governed under the iron fist of the Robot Menace. A future such as this probably isn't the best thing imaginable. Sure, it would make for good fight scenes and inspirational revolutionary movements, but in an ethics point of view, the fact that we will have created that is horrid.

### **2.3.1 PROs:**

With intelligent life comes many pro- arguments. For one, more innovative and intelligent life can figure out problems that our present supercomputers and geniuses of the world cannot. On a personal level, androids such as these could be infinitely helpful in tending to the elderly, the sickly, and the young. In fact, Japan (as always) is ahead of the game: already they are developing the PaPeRo and the Wakamaru.

The PaPeRo is a babysitting 'bot; it has face recognition capabilities, letting it remember people,

and it can tell you if a child is missing from a group. What's more, it acts as a parental extension, transmitting video to parents' cell phones and letting the parents talk back through the robot itself.<sup>[3]</sup>

The Wakamaru is a robot that can take care of the elderly.<sup>[4]</sup> It has an embedded cell phone that can call emergency numbers if a person is hurt, and a webcam so doctors and family members can keep an eye on the man or woman whenever it is needed. It can also remind patients to take medicine and even dispense it for them.

These are wonderful examples of the helpful capabilities robots have in store for us in the future, and hardly seem like the type to take over if they ever become like us.

### **2.3.2 CONS:**

Not every robot is as safe as the PaPeRo or as friendly as the Wakamaru. There is a plethora of con- arguments to intelligent machines. One of the driving forces behind human life is the desire for power, and the willingness to do almost anything for it according to our personal morals. Adolf Hitler, Attila the Hun and Genghis Khan all had ephemeral success in conquering vast areas of land and decimating vast amounts of people.

Would we be able to give our robot morals? Why would a machine that is as creative as us and more logically-minded consider human life or freedom valuable to it's ability to carry out a goal? It wouldn't, unless it were programmed to consider those values. Intelligent machines in the wrong hands, or even in the right but ignorant hands, could spell disaster for the human race. This is especially true considering the development of robot soldiers by ARPA and other organizations to try to reduce the loss of human life.

The SWORDS (Special Weapons Observation Reconnaissance Detection Systems) is one such robot. Developed by a small Massachusetts company, it precedes Lockheed Martin's and General Dynamics' Future Combat System vehicles.<sup>[5]</sup> Although the robot is not fully autonomous (a soldier up to a half a mile away sees what it sees and shoots by pressing a button) it is still an insight to the future of war and automated weaponry. If an actual robot soldier were produced and sent into battle with the mental capacity of a human, who knows what it might end up doing. It could malfunction and recognize non-combatants as enemies, or possibly its own fellow soldiers.

A perfect example of one such malfunction was the October 2007 incident of an anti-aircraft cannon encountering a glitch and subsequently killing nine soldiers and injuring fourteen more.<sup>[6]</sup> This disaster occurred while the gun was automated. Seeing as many of these types of systems today automatically recognize targets and aim at them on their own, sometimes shooting accordingly if the weapon is automated, there is a huge chance that if an advanced enough weapon were autonomous, a single and small glitch would be a danger to us all.

### **3 Oh, What To Do, What To Do...**

The BotBall program has nothing to worry about in the areas of ethics and robotic empires. It is a teaching tool, and a system to get more adults, teenagers, and kids involved and interested in robotics. Building robots, no one will deny, is incredibly fun. However, should we be teaching ourselves to program? Should we be teaching ourselves to build these plastic creatures? It will inevitably progress into something greater, and once it does, there might be no stopping it.

But who is to say we won't be taken care of by Wakamaru-esque robots, rather than Asimov's devilish beings? No one knows for sure, and no one knows whether we could control either if they gained our intellectual prowess.

I, for one, would like to know why our iCreate-based robot asked me for my social security number the other day.

[1] K. E. Drexler, *Engines of Creation: The Coming Era of Nanotechnology*, London, Forth Estate, 1985; N. Bostrom, "How Long Before Superintelligence?" *International Journal of Futures Studies*, vol. 2, (1998); R. Kurzweil, *The Age of Spiritual Machines: When computers exceed human intelligence*, New York, Viking Press, 1999; H. Moravec, *Robot: Mere Machine to Transcendent Mind*, Oxford University Press, 1999.

[2] Moore, Gordon E. *Cramming more components onto integrated circuits*. 1965.

[3] PaPeRo: <http://www.nec.co.jp/robot/english/childcare/index.html>

[4] Wakamaru: <http://www.mhi.co.jp/kobe/wakamaru/english/>

[5] "Army Readies Robot Soldier For Iraq", Associated Press.  
<http://www.msnbc.msn.com/id/6852832/>

[6] "Did Software Kill Soldiers?" Leon Engelbrecht , ITWeb senior writer.  
<http://www.itweb.co.za/sections/business/2007/0710161034.asp?S=IT%20in%20Defence&A=DFN&O=FPTOP>