Chapter Five

ROBOTS AND A ANDROID FUTURE?

Are Android Robots in our future?

Marshall Brain in Robotic Nation describes a world were Androids will replace man for most jobs. He predicts by the year 2008 every meal in every fast food restaurant will be ordered from a kiosk or a similar system. You will simply sit down at a table, put credit card number in the center of a table and in less than two minutes a person with the food your ordered will set your order on the table and hand you your change.

By 2025 the first machines that can see, hear move and manipulate objects at a level roughly equivalent to human beings will be making their way from research labs into the marketplace These robots will not think creatively like human beings, but that does not matter. AI systems evolved rapidly will perform in ways that seem very human.

Humanoid robots will soon cost less than the average car.
The first wave of android robots will start replacing humans in the service sector around 2030.

In 2055 over half of the American workforce will be unemployed. Androids will be doing all the cooking, cleaning and order taking in most restaurants. In construction sites, androids will be pouring the concrete, laying brick, and building the home's frame. At hospitals robots will be flying the planes, selling the tickets, moving the luggage and handle security as well as keeping the airport

clean. They will be doing all the stocking in stores. On the roads robots will be driving the cars, trucks for companies like FedEx, UPS and at the post office large numbers of robots will sorting packages and making deliveries.

You don't think this will happen.
Well think about Moore's Law, It says that CPU power doubles every 18 to 24 months or so. History shows Moore's law very clearly. One of the capabilities limiting robotic expansion at the moment is image processing. The ability of robots to look at a scene like a human and detect all the objects in the scene. Without general, flexible vision algorithms, it is hard for a robot to do much. For example, it is hard for a blind robot to clean a bathroom or drive a car. Part of the problem is raw CPU power, but that problem will be solved in over the next 10 to 30 years when you put in Moore's law into the equation. We just do not have really good algorithms yet.
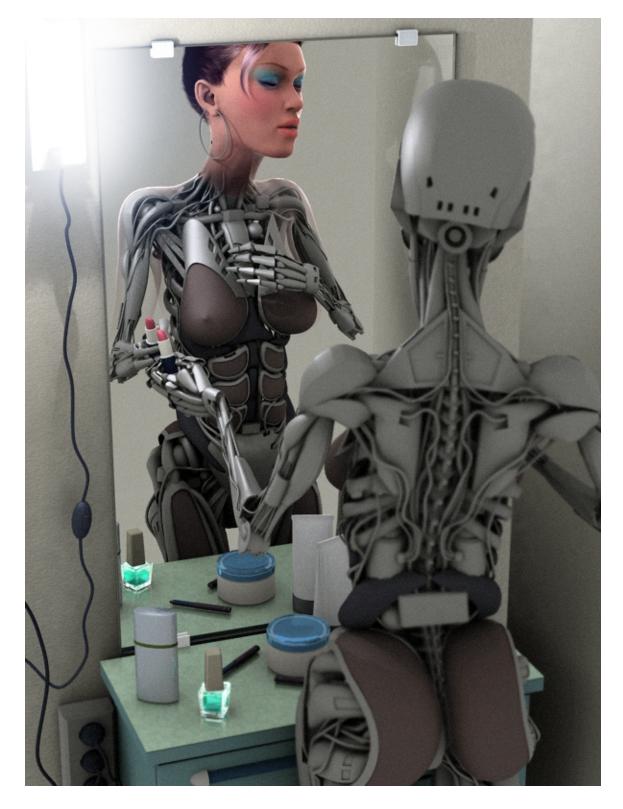
The computer power we will have in a home computer around 2050 will be utterly amazing. A typical home computer will have the processing power and memory capacity that exceeds that of a human brain.

In one or two decades, artificial intelligence will have increased to the level of human beings. They will be more useful than human employees in that they will be faster, more efficient, never need to eat, sleep, nor receive paychecks.

These androids will be capable of working for far longer periods than humans have. They will be able to regenerate their energy by simply moving; the kinetic energy caused by their many movements will actively recharge their batteries. Therefore, they will seldom need rest. Perhaps a 10-30 minute charge every couple of months will be all the rest they ever need. In terms of other maintenance issues, they will possess self-repair subroutines. In the event they cannot even repair themselves, android co-workers will step in to repair the android in question.

What will awe the employers even more is their ability to work several times faster than humans work today. Through this, productivity will increase and profits will rise. The fact that robotic employees will never complain nor have to receive pay will decide the employers choices even more.

Will 'sex-bots' become part of our future?

David Levy, in his recent book *Robots Unlimited: Life in a Virtual Age* suggests future robots will not only become caregivers, sensitive to the emotional and practical needs of the elderly, but that they will also become our friends if we want them to, and our companions, lovers and marriage partners. He adds that we should not downplay the importance of robots as a means of teaching and enhancing sexual technique. So many relationships flounder, he says, because of dissatisfaction in the bedroom, and so many men suffer, as do their partners because they are unable for whatever reason (including embarrassment) to work to improve their lovemaking skills. Levy believes that 'sex-bots' will be able to radically enhance the human sexual experience.

However, there is the question of how use of one's sex robot will affect a spouse or partner. Will people consider sex with a robot as being unfaithful? Will it be unethical in some way to say to one's regular human sex partner; "Not tonight darling? I'm going to make it with the robot." (Some couples will, of course, own two robots, a malebot and a fembot, and will enjoy orgiastic sessions in which three or all four of them take part.) Will robot swapping be similar to wife swapping?

Then there are issues relating to the use of other people's sex-bots. What will be the ethics of lending your sex-bot to a friend, or borrowing theirs?

Finally we might ask why people would be romantically attracted to robots in the first place. Why would they fall in love, want to have sex with; or even marry a silicon creation? Could there be some deep psychological attraction based on the impending human-machine merge that Kurzweil and other forward-thinkers tout?

Levy believes that the speed of development in this field will be extremely rapid, due in part to the enormous sums of money that the developers of such products will be able to reap, and partly because of worldwide interest in, and desire for better sex.

By 2015, experts say, this industry could produce more new billionaires than did any of America's past technological successes.
Most technologies, along with available information on the planet are advancing exponentially, which promise that a future will unfold radically different from today's world.

When IBM finishes reengineering the human brain (hopefully by 2030 or sooner), and Howard Hughes Medical Institute's Janelia Farms gets underway with eventually up to 300 of the world's top neuroscientists with goals to gain a clearer understanding of human thought, AI researchers will surely be able to pretty much duplicate human personality in a machine.

Now consider the oncoming molecular nanotech revolution that could produce a

robotic android indiscernible from human form, and we could easily find ourselves 'falling in love' with these silicon creations.

In fact, some forward-thinkers believe that future androids will possess many qualities that humans will want to incorporate into their bodies. Should this trend begin in the 2030s, by mid-century the line between humans and machines will blur – we will become them and they will become us!

This very forward future could become reality.

Growing Investment in Robot Army

The Pentagon predicts that robots will be a major fighting force in the American military in less than a decade, hunting and killing enemies in combat. Robots are a crucial part of the Army's effort to rebuild itself as a 21st-century fighting force, and a $127 billion project called Future Combat Systems is the biggest military contract in American history.

The military plans to invest tens of billions of dollars in automated armed forces. The costs of that transformation will help drive the Defense Department's budget up almost 20 percent, from a requested $419.3 billion for next year to $502.3 billion in 2010, excluding the costs of war. The annual costs of buying new weapons is scheduled to rise 52 percent, from $78 billion to $118.6 billion.

Despite the obstacles, Congress ordered in 2000 that a third of the ground vehicles and a third of the deep-strike aircraft in the military must become robotic within a decade. If that mandate is to be met, the United States will be spending many billions of dollars on military robots by 2010.

The Pentagon today owes its soldiers $653 billion in future retirement benefits that it cannot pay. Robots, unlike old soldiers, do not fade away. The cost of a soldier from enlistment to interment is about $4 million today and growing, according to a Pentagon study. Robot soldiers are supposed to cost a tenth of that or less.

Cyborg

US Marine Claudia Mitchell became the first woman to receive a bionic arm after a motorcycle accident. Controlled by rerouted nerves in her shoulder to muscles in her chest, the movements of her new robotic arm have become so sophisticated, she is is able to peel an orange.