Practical Robotics Advancements, in the Very Near Term

The practical “dollars and cents” things in the average person's life mean far more than the elaborate, pie in the sky projections of an amazing future. During Bill Clinton’s successful presidential campaign in 1992, his strategist James Carville coined a now famous phrase “it's the economy, stupid” as short-hand for a refocusing on issues that impact a voter’s wallet on a daily basis. The tactic placed less importance on huge existential matters that seem to never have a resolution and are difficult to intellectualize (Galoozis). As Logan Doyle was presenting the “The Robots Are Coming!” lecture; I noticed the theme of robots “moving from labs and factories into our everyday lives” (Sabanovic) and found it to be very true and well supported, but very far away. The reason this human-robot harmony is so far into the future? It's the economy, stupid. A $500,000 Assistant-type robot will not be replacing a $15/hr employee any time soon. The economics simply will not allow this to happen until major changes take place in the marketplace. My interest was piqued to find out what is paying the bills and making “dollars and sense” right now.

A recent article in Fortune magazine tackled this very issue and connects five specific examples to the types of robots projected to be practical solutions to everyday issues in the lecture (Vanian). The first example could be considered a hybrid of the ‘Models of human’-type and Assistant-type robot from the lecture. The robot, made by a
company called Rethink Robotics, is able to ‘mimic whatever the human in front of them is doing’ (Vanian) and then repeat that task. Initially this robot will be deployed in factories assembling pieces of a larger object, but as prices drop, it could be used to help people fold laundry or perform other tasks around the house. Since the robot learns from the user, no knowledge of coding will be required for the end-user. Since this robot is in production now, it has a place in the home in the very near future.

The second example is a practical example of the assistant robot. Just as a factory robot pays for itself by being more efficient and requiring less down-time than a human worker, this robot drastically enhances a warehouse worker’s productivity. ‘Instead of workers walking back and forth to drop items off, they hand it to the robot to shuttle around’ (Vanian). This is certainly an idea a corporate ‘bean counter’ can get behind. Fewer workers are needed and the ones that remain sustain less wear and tear on their bodies. As productivity soars, prices will drop, and a personal robot that helps with groceries will become a common feature included in every minivan.

The third example given is currently a common tool in the military. It is a mini tank equipped with cameras, radar, and sonar, made by American Robot Company. The class lecture steered clear of robots as weapons of war (one of the primary uses for robots today); however, what could be more helpful to the average person than a fearless robot that responds to threats faster than its human counterpart? It may never look like human. In fact, it might be beneficial for this type of robot to look menacing, but I feel it will be commonplace in shopping malls, schools, airports, and sports stadiums very soon. The fourth example is also a type that is already being used by the military through developments with DARPA (Palermo). It is called the SuperFlex exosuit by SRI
Robotics and is a ‘wearable’ robot. This is a variant of the ‘models of humans’ robot, as it uses the efficiency of human walking motion as a basis of its overall effectiveness. Sensors monitoring the user’s stride are used to control the extra force needed and in what direction. Soldiers carrying heavy packs are the primary focus at the moment, but very shortly; this wearable tech will make its way to stroke patients, children with muscular dystrophy, and the elderly.

The fifth and final example in the article is a retail information robot by Fellow Robots. It is already being used in a hardware store to help customers find specific items. Once again, economics drives this innovation. It would not be practical, or even possible, to train a human employee to have advanced knowledge of every single item in a store. A robot worker that never needs a break, integrates with the inventory system, and can interact with customers to help them find rare or specialized parts, is a huge resource and will have direct impact on sales figures.

This is an odd topic for me to tackle, as I am much more of an engineer than a ‘money person.” However, it was encouraging to take a look and see that the projections found in ‘The Robots Are Coming!’ lecture were not as far away as I originally thought. Sure, the perfectly realistic robot maid or nanny, indistinguishable from a human, may be decades away, but practical robotics applications, with direct connections to everyday life, are just around the corner.
Works Cited


