



## **Cyborgs and Cybernetics**

*What are cyborgs?*

### **Dr Manfred Clynes**

There's been a great misconception of what a cyborg is, in popular culture. Especially things like The Terminator which describes a cyborg as a malicious evil thing. In no ways it's meant to be that.

### **Narrator**

But Hollywood cyborg bears little resemblance to reality. And far from being a science of the future, cyborg technology is firmly rooted in the here and now. It focuses less on creating realistic robots. More on blowing the boundaries between technology and human beings.

### **Dr Manfred Clynes**

A cyborg basically is a re-design of the human organism to allow it to function better, in an environment that that organism chooses.

### **Prof Kevin Warwick, Reading University**

I see very much cyborg's as being an evolutionary step on from humanity, a technologically evolutionary step on as it were.

### **Narrator**

Some people believe we have always been cyborgs. A growing fusion of technology and humanity. To get to grips with today's use of the word, it helps to go back to its nautical imagery.

### **Christopher Kennedy, Linguist**

The word cybernetic was coined by Norbert Wiener in 1948. He described the emerging science of control in communication within living and artificial organisms. Wiener coined this term based on the Greek word 'kubernates', which refers to a steersman or the helmsman of a ship. This verb also shows up later on as the word 'govern'. Cybernetic systems are systems that are self-governing, self-communicating. They don't involve outside control.

### **Narrator**

So, does steering a boat make you a cyborg? The body uses the boat to travel on water. And the boat takes the body beyond its natural capabilities. The body communicates with the boat. The boat responds. This blurring of boundaries between human and machine means together they are cyborg.