From Cyborg to Replicant: The Historical Transition from Mechanical Transplants to Digital Genetic Intervention. The Heart Case

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Abstract

Since Descartes, the primary way to view the human body, and particularly the heart, has been mechanistically. In 1958, Kolf and Akutso placed an artificial heart inside of a dog, and Jack Steel coined the term *Bionic* to indicate the technological imitation of biological structures. Two years later in 1960, Manfred and Kline proposed the term *cyborg* to refer to the fusion of organic and mechanical parts.

At the same time a new perspective analyzing life in terms of the flow of information was emerging. This view came from Wiener, Shannon, Bigelow and Rosenblueth's works in the early 1940s. The discovery of restriction enzymes in 1970, use of genetically modified cells in medicine, and the Human Genome Project (HGP) allowed for research into cardiac tissue regeneration with stem cells and genomic medicine.

There has been a transition from a macroscopic, mechanistic view of human body to a genetic, mechanistic view with linguistic and digital explanations. An example of new representation of organism is in the film Blade Runner (1982) based on the novel by Philip K. Dick (1968) Do Androids Dream of Electric Sheep? Dick's Androids seem to be mechanical, and in Scott's movie they are clearly genetic. These changes in perspective on the human body and heart indicate new ways of thinking about the human body that I explore in more detail in this presentation.

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