I. Information Overload and Organization Hierarchy

Q. What has been the impact of information technologies, especially of artificial intelligence, on organizations. In The Sciences of the Artificial, you described systems that are adapted to the goals and purposes imposed by their environment. Have information technologies enabled business and governmental organizations to grow bigger, become centralized, or change in other ways?

A. Information technologies have had a great impact on the way in which information is gathered and disseminated, but their impact on the structure of the organizations has been rather limited. Certainly, there has been a scale change in organizations. Business organizations of the size of General Motors, AT&T, or IBM were inconceivable a hundred years ago. But, was that because people didn’t know how to create and run them, or because there wasn’t any need for them? These are two different questions.

The political process has seen large changes due to mass communication. Television allows the President of the United States today to speak directly to most citizens in their living rooms. George Washington could not have done that 200 years ago. Faster communication has made it possible for us to create more unified organizations spread over vast distances. When Wellington was sent to Portugal to fight the French, he was in charge. A message might have taken a week or more to get to and from England. Today, he would be in constant communication with London. The Vietnam War was fought from Washington. There never was a unified field command. Thus, the responsibility and authority domains of Westmoreland and Wellington were drastically different.