

Human-oriented Research and Development



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The phenomenon whereby collective intelligence can be more powerful than the sum of its parts has been observed across the spectrum of biological activity, from microbes to human beings. The example of ants working together to transport a large piece of food back to their nest is frequently quoted to demonstrate this point. There is no doubt that the exchange of information between individuals plays an important role in this phenomenon.

In our own human society, advances in IT (information technology) toward the end of the 20th century brought us the Internet along with the Web and search engines, suddenly expanding the scope of information exchange between people to a global scale. In the coming century, the infrastructure for information exchange that has resulted from these advances is likely to create an entirely new form of intelligence that encompasses the entirety of human society. If we are to look ahead to see what form this new intelligence will take, we believe it is important to renew our interest in research into human beings.

Since its formation in 1910, Hitachi has expanded its business into many new areas including electrical and mechanical products, transportation, materials, appliances, electronics, medicine, IT, and services. To ensure the depth of technical know-how needed

to drive these businesses forward, Hitachi has established a number of research facilities under the direct management of group headquarters, starting in 1918. Given the diverse range of Hitachi's business activities and the scale of the extensive technologies associated with these activities, one of the missions of Hitachi and its research and development work is to predict the future direction of society in the 21st century by taking advantage of having these researchers together under the same organization. This issue contains ten articles describing human-oriented research being carried out as part of Hitachi's research and development activities.

Hitachi Hyoron (the Japanese version of Hitachi Review) was first published in 1918 in conjunction with the establishment of the first research facility, and one of the principles stated in the first issue was to foster innovation through the open publication of information with the aim of "bringing about an alignment in the opinions of producers and consumers." We invite feedback from readers around the world about the potential for human-oriented technology as expressed by Hitachi in this issue in the hope that, with that cooperation, we can refine this potential even further.