A Note on Ergonomics and the Development of IEA

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Thirty years have gone by since I was first involved in the IEA activities and twenty years after my retirement from the IEA office. Throughout the past half century, all kinds of technologies in every sector of industries in our society have been developing rapidly, and that intentionally. We hoped and believed that industrial society would bring prosperity to human race. The result is, however, that now we must reconsider our principles: have we rightly intended in order to comply with the newly contrived philosophy arising from the rapid social change?

Before my time, IEA had organized successive congresses in the European continent from the beginning up to the 1976 Congress in Maryland, U.S.A. and the 1979 Congress in Warsaw, Poland. Indeed, IEA's activities were rapidly expanding and world-wide. As it was, the members of federated societies might have felt a certain psychological distance. So the 1982 Congress was held in Tokyo, Japan, the first congress in Asia. It was my honor to serve as the president from 1982 to 1985, when the next congress was held in Bournemouth, England. During the early stage of IEA, IEA activities were closely related with that of WHO, ILO, and ISO. I thought it was necessary to renew the ties with other international organizations, as well as with unaffiliated ergonomics societies. While I was in the IEA office, I accepted an invitation from the ergonomics society in Plague where the countries in the socialist bloc held their meeting. I gave some official greetings as a representative of IEA. Surprisingly, 15 national flags were displayed with the national flag of Japan for me. I heartily hope that those groups are the members of IEA now. Another thing which we planned was to organize sectional meetings in Hawaii in between the triennial congresses in Hawaii. Two sectional meetings have been developed since then.

Now I want to express my vision of future ergonomics from my past experience. As you may notice, the development of ergonomics has naturally depended heavily upon the change of human society. Physical labor has been decreasing while intellectual work has been increasing more and more because of the ever developing science and technology, such as computer science and robotics. Accordingly, the structure of human society has become extremely diversified, mechanized, and automated. Human work system has become unnecessarily too complicated and sophisticated to be accomplished easily by people's stereotyped skill obtained in the past training. Therefore, more and more intellectual ability to learn entirely new skill is needed.

Another aspect suggests in scientific and technological concepts are frequent alternation of unification and separation occurring in society, organization, the system of tasks, and even in workers' ability. In addition to the above, another related social and world-wide problem is the environmental factors, arising from the long time acceptance of excessive social demand. Now human society has come to understand the limitation of ecological capacity of the earth. Molecular, chemical and biological sciences and technologies are becoming urgent in order to secure our living environment. I believe human science and technology, such as ergonomics, must be with those areas of study in order to solve this serious future problem. Mass destruction of the social system, shortage of necessary materials, such as air and water, food, energy, etc., and also an excess of unnecessary wastes, are our human responsibility to solve. There are so many unknown and unsolvable matters and phenomena existing in front of us, such as rapid growth of human population, however, those matters and phenomena must be sometime in future solved by sciences and technologies.

After my retirement from the IEA office, I have been engaged in such a human-social-ecological area of research and in promotion of ecological engineering, and I came to think that this era does not require the human society an excessive demand based on the egoistically human-centered purposes. Thus, I believe that our technological system, such as production of goods, must make a balance with ecological capacity from the very early stage of the system design. I am still trying, firstly to find the right answer to the problems that arose from the past development of technology and secondly to find the scientific roles in order to create the new scope of "the human in future healthy ecological environment."