

■■■■■■■■■ **On the History of Interaction between Art and Technology**
Towards the Cultural Evolution of Human Beings

Introduction ■■■■■■■■■■

I would like to express my gratitude to the organizers of Prix Ars Electronica 2003 for awarding me the unexpected Golden Nica of Honour and the chance of giving my lecture at the Ars Electronica Festival last year. But then I was surprised by the offer to present it again this year at the Ars Electronica 2004. It is really beyond my expectations and I am very grateful for the offer.

But frankly, I am not an artist, nor a professional researcher on the history of art. I worked as a journalist for a daily newspaper after the 50s, and was able to cover the new movement of art and technology which was gradually becoming active around that time. I wrote many series of columns on the new movements based on my interviews with the artists, engineers and scientists, and also about many exhibitions of these art works. Besides I had the opportunity of organizing such art and technology exhibitions myself after the mid 70s, and after retirement from the newspaper company in 1990, I worked in educational institutions for 17 years, keeping up my activity as a critic and a curator for such shows. So my views are more or less based on my personal experiences in these intersecting fields of art, science and technology. For that reason, my lecture could not be very theoretical or systematic, but would be more a kaleidoscopic show full of images based on my personal experiences and feelings. For this reason I am afraid that it might be rather dogmatic or contain some biased views, and I not certain it is what will be required. I myself attended the Ars Electronica for the first time in 1982, and since then, I have visited it almost 20 times, and witnessed the growth of this unique festival

**The influence of digital technology
on the art world** ■■■■■■■■■■

I was asked by the organizer of the Ars Electronica Forum to talk on the theme of the historical changes in the influence of digital technology on the art world since the 50s, from the cultural, social and even the international point of view. However, I would not like to limit the contents of my talk to digital technology only, but would rather open it to wider fields of art works related to science and technology, including the analog works. I would like to discuss the origin of art, science and technology and how these relate to the structure of human beings themselves. Those activities have made human beings evolve from a mere biological existence to becoming more cultural beings with the passing of time.

I would like to introduce some of the artists and engineers whom I have encountered since the 1950s, by showing their real works, methods, and their way of thinking, with many audio-visual examples.

I would also like to talk about the relationship between the multi-layered function of human beings and their creativity in either art or science. Because of the different activities of the human body based on such different functions, from physical to metaphysical existence (through biological or psychological existence), art and science must have some different targets and value systems from the beginning, so that both activities have still

difficulty in really collaborating. For all that, despite the very critical conditions in social and global relationships, especially since the last century, I wish to convey how unique artists and scientists have been trying to integrate both fields. Even some of these creative people talked about the necessity of changing the consciousness and values of humankind for stepping up into the real cultural evolution.

Examples of Historical Evolution in Technological Art ■■■■■■■■

I am considering introducing real examples of the new arts by showing the audio and visual material, especially for the young generation. However, as their works are so varied depending on the unique technology or scientific concept, it might be difficult for laypersons to understand each work without some categorization. For this reason I have grouped the works in categories such as kinetic, optical, mathematical, phenomena, sound, cosmic, and also media, or digital art etc., following some of the categories in modern art. Yet if we look in more detail at each piece of artwork, we can identify how the technological method used for such new art was developing from the analog to the more digital type of application depending on the time, and the artist's concept. At the same time, the artist's target or sensitive dream itself seemed always to be kept naïve and simple in order to maintain a good relationship with nature, society, and even other human beings. We can even say that the creative activity in the field of technology used for such new art seems itself to have greatly advanced within this last half century, but not to have so drastically changed in artistic expression even compared with olden times, because its basic motivation seems to be more or less based on the innate sensibility of the artist.

Expanding the Future Role of Media Art in the Digital Age ■■■■■■■■

The change of definition and the meaning of such digital arts compared with modern or contemporary art can be shown on the basis of 7 types of difference. I have talked briefly about those differences, about net art and on-line gallery works, and even touched on their future possibilities as well as on their problematic aspects. But as this field is still drastically expanding day by day, and is involved in some criminal misuse or informational pollution, it is still difficult to make a simple forecast.

However, as the last example of the difference, in my last talk I also touched on the newer social role of such digital art, compared with traditional art. Here I would like to introduce the new idea on the cultural evolution of humankind which was proposed by Jonas Salk in 1985. It is already an old idea but I think it is still very important. When introducing his idea, I am considering adding some of my feelings about the possibilities of those digital media today. Within the history of modern art, art itself was created more or less by the artist's personal and expressional activity, based on his/her identity and imagination. But this digital media art is so strong as to bridge easily the hiatus between different cultures and nationalities, not only on the personal level but also on the social level. So I guess it has the power to spread the newly created artworks based on such cultural and anthropological consciousness. It could be that the new cultural media can unite different cultures, races and countries better than just the political and military power of the various countries that is what the world is normally most aware of.