

Lynn WHITE, Jr.: *Machina ex Deo: Essays in the Dynamism
of Western Culture.* Cambridge, Mass.,
The MIT Press, 1968, 186 pp.

As we enter the last third of the twentieth century, we have suddenly found ourselves in an unusual situation. The advancement of material civilization, increased industrial productivity, the pollution of the atmosphere, drinking water, river and sea, food and, above all, the human mind—all have awakened us to our unusual situation.

About three hundred and fifty years ago, Francis Bacon declared that man should become the minister and interpreter of nature, and that the training of the minister should be based not on scholastic philosophy, but on the “new” learning, that of science and technology. Now that Bacon’s exhortation has taken effect, and science and technology reign supreme, we are encountering unexpected difficulties. Once we imagined that we were nearing Utopia, or New Atlantis, but now we have found ourselves fallen into Inferno. What was the cause of these unwelcome effects? Which of the decisions made at the beginning of the Modern Age was at fault?

Regarding this unusual situation and these serious difficulties, Professor White, Jr. has some recommendations. Though the name and works of Professor White are little known in Japan, his studies of Medieval technology are highly regarded by European and American historians of technology.

His first article, entitled “Technology and Invention in the Middle Ages,” was published in *Speculum* in 1940. I was unable to read this until after World War II, but on doing so I was much impressed by its well-documented and completely revised account of technological development in the “Dark Ages”. Later, in 1961, Professor White published *Medieval Technology and Social Change*, in which he offered new insights into the organic relation between Medieval technological inventions (e.g. stirrup and harness) and the cultural changes of the feudal age. These works leave a deep impression of the author’s erudition and perceptiveness.

Machina ex Deo comprises eleven essays published in several journals by the same author during the years 1942–1967. Despite differences of title and date, all seem, at first sight, to be remarkably similar in intent. As explained on the book’s jacket, “He is concerned with bridging the present gap between the thinking of the engineers and that of the humanities—a mutual alienation that he considers historically unjustifiable”. And yet, if we look closely at these essays, we may discern some subtle differences in tone. The later essays are more gloomy, and, in par-

ticular, the very latest one, entitled "The Historical Roots of Our Ecological Crisis", is almost entirely pessimistic. According to the author's preface, this essay has attracted both enthusiasm and hostility. To us it appears reasonable, for it argues that the historical roots of the present ecological crisis lie in the anti-animistic and anthropocentric tendencies of the christian faith, and that the only way of emerging from this crisis is to follow the approach to nature suggested by St. Francis.

Turning to ourselves, we can easily recognize that we Japanese, though not Christians, not Catholics and of course not Franciscans, are yet encountering the same problems, and our crisis is perhaps even greater. How and where shall we find our way of emergence? If Japanese historians of science and technology can not reflect on our crisis, discover its historical roots and seek a means of confronting it, who can? Must we wait for the arrival ex Machina of St. Francis in Japan?

Seizo AOKI (Kobe University)