SOCIO-ENGINEERING PROBLEMS

ART, SCIENCE AND PUBLIC UNDERSTANDING

Historical use of art by churches to develop a
symbolic representation of their philosophy

Have we evolved to another level where new
symbols are needed?

Lines of force between two opposite electric charges

Characteristics of a transmission line

A plan for the representation of the levels of
natural phenomena in a church sancturary or
ethical culture meeting hall

Some pictorial representations of space geometries

10/10/57

No. 47

FEB 20 th

1961

Art, Science and Public Understanding.

Historically churches have used art to convey by pictures their philosophy to people who could not read. The pictures on the stained glass windows and the carvings in the cathedrals of Europe in the middle ages reminded people of the sermons they heard in church.

Perhaps we have evolved to another level in the development of the human race. Practically everyone in our country and many other countries can read. The problem now is to find ways by which the basic results of physical science and the behaviorial sciences can be understood by the layman. I don't mean that the layman should be expected to be able the equations of mathematical physics, but I do think it is possible for him to develop some perception of the significance of the principles of science to mankind.

Cannot the old technique of explaining the significance of philosophical principles through pictures in cathedrals be developed into another form through the cooperation of artists and scientists?
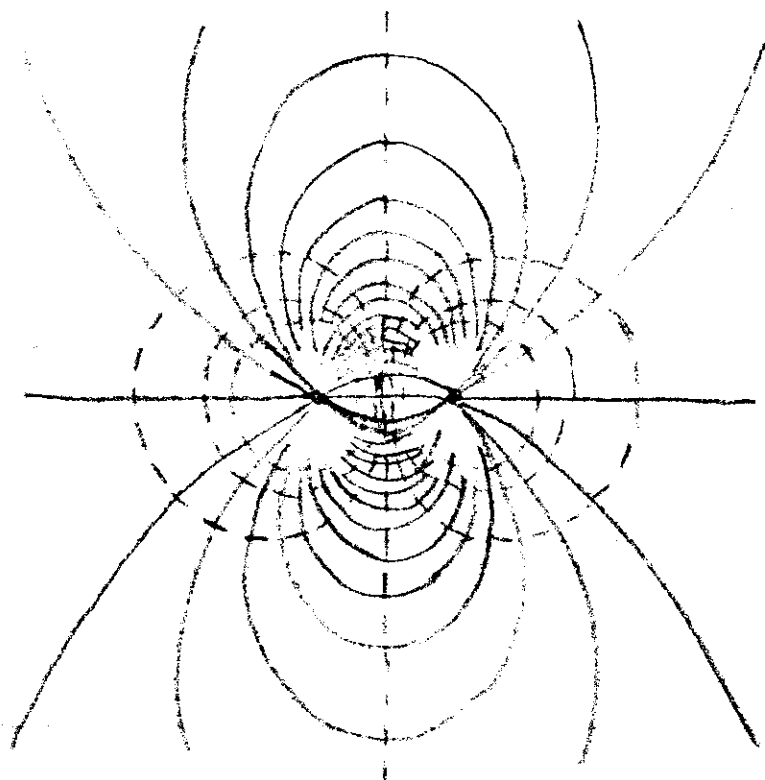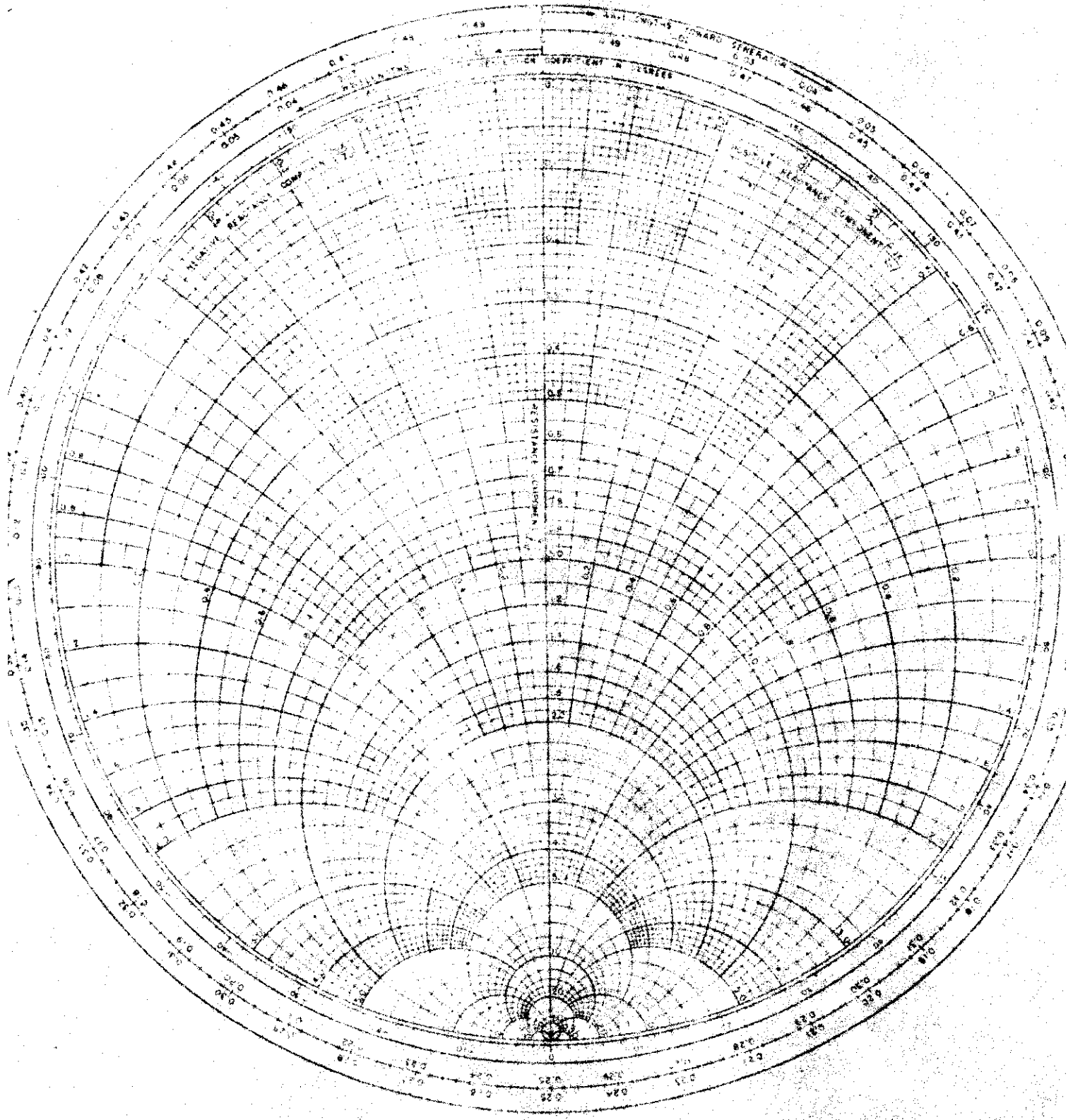
$$(x+a)\left[(x+a)^2+y^2\right]^{-\frac{1}{2}} \pm (x-a)\left[(x-a)^2+y^2\right]^{-\frac{1}{2}} = C$$

The above equation represents the lines of force between two electric charges of opposite sign which are drawn as heavy lines above.
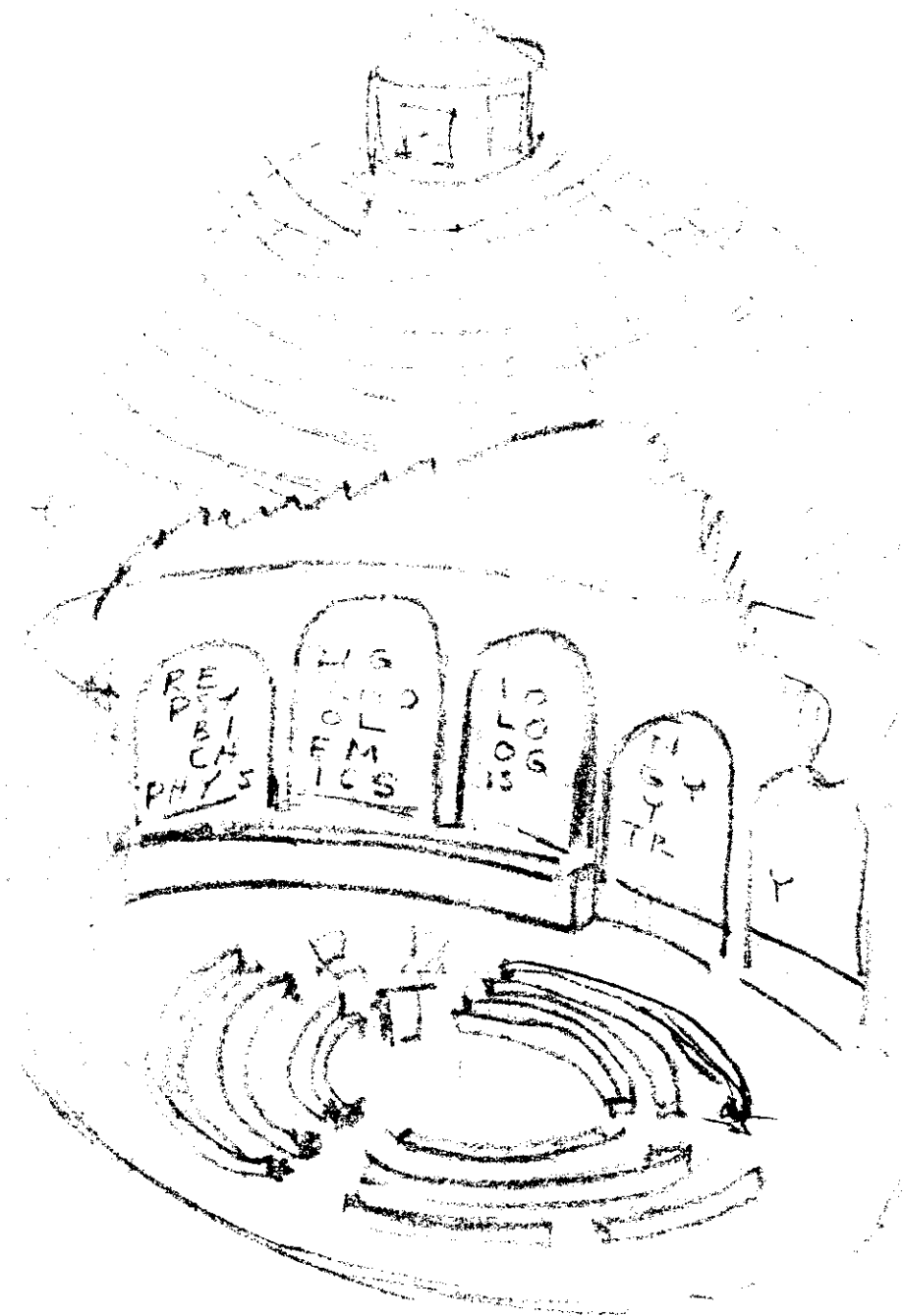
A way in which sections of the wall of a sanctuary could be
allocated to artistic representations of the different levels
of natural phenomena which contribute to the functioning of
human beings.

A way of representing the equations for the characteristics
of a transmission line.
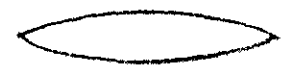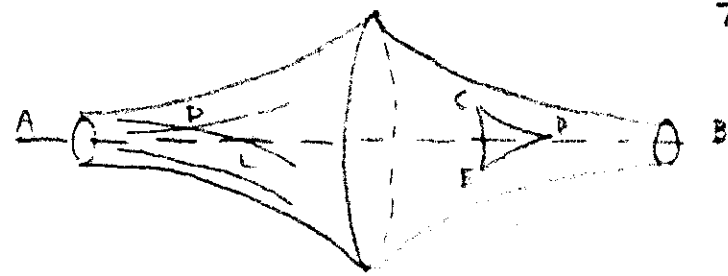
Pictorial Representation of Mathematics

Morris Kline[*] gives some illustrations of different geometries.
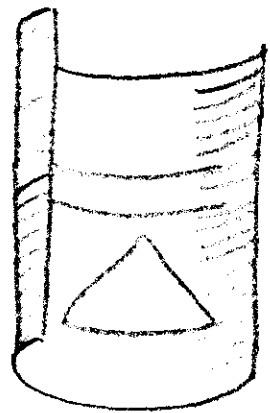
A New Pictorial Interpretation of Euclidean Geometry.

All perpendiculars to a line meet in one point.

Two straight lines enclose an area.

Pictorial interpretation of Lobatchevsky's and Bolyai's non-Euclidean geometry.

[*] Ref. (see p f-15) p420, 424
Morris Kline, Mathematics in Western Culture, N.Y.: Oxford(1953)