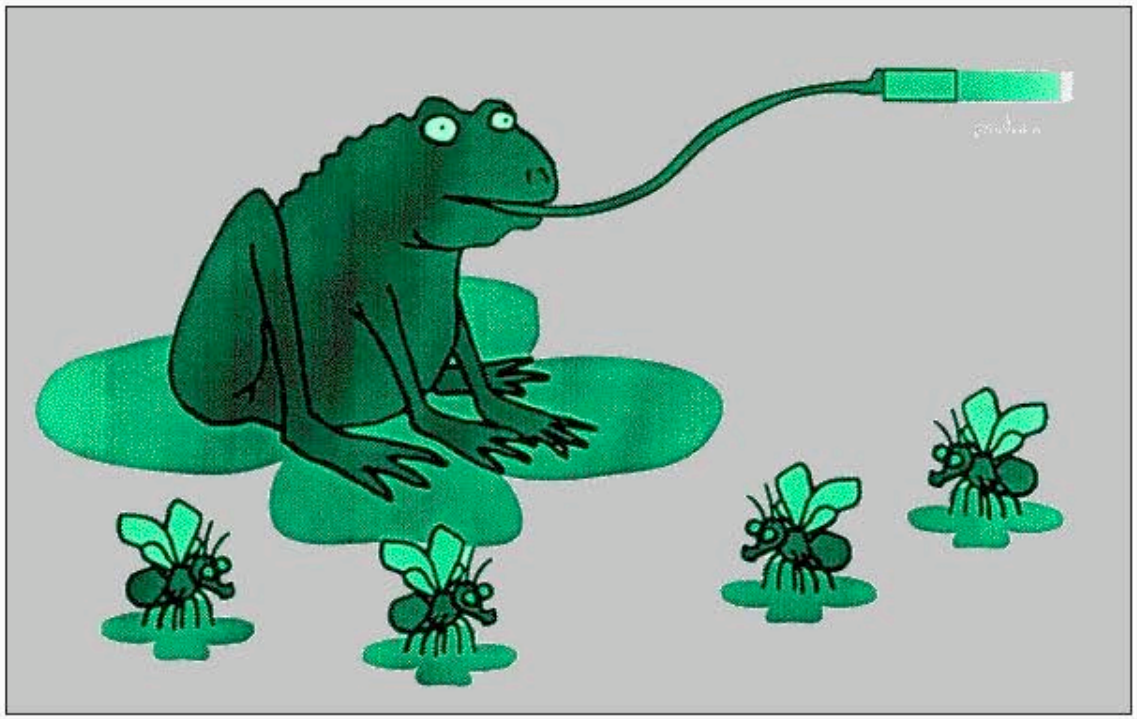
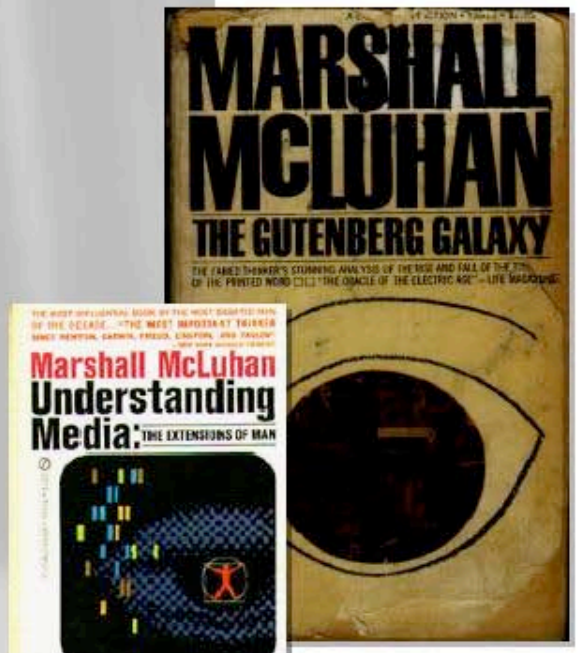
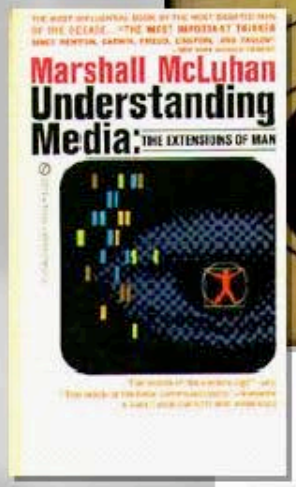
# Science ...

## ... the Art Of Not Being Fooled!



# Marshall McLuhan




"I don't know who discovered water, but it wasn't a fish!"

Kyoto Workshop

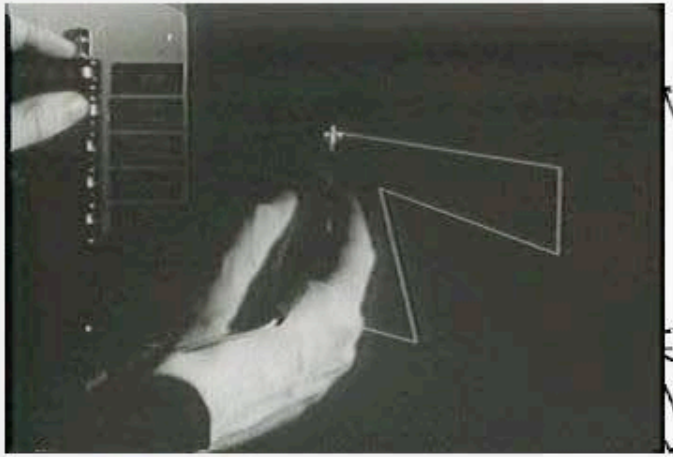
SKETCHPAD, A MAN-MACHINE GRAPHICAL COMMUNICATION SYSTEM

by

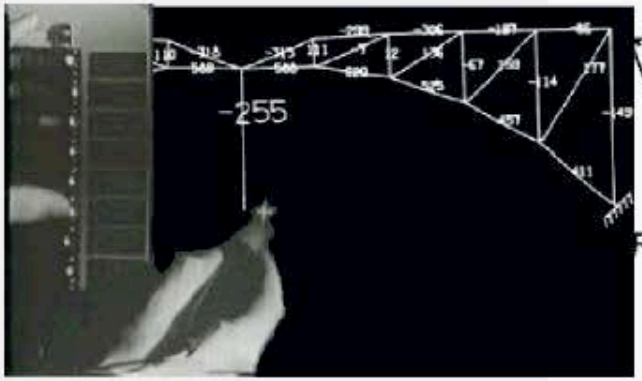
IVAN EDWARD SUTHERLAND

**"It is to be hoped that future work will far surpass this effort"**

**Ivan Sutherland**



Playit Stop



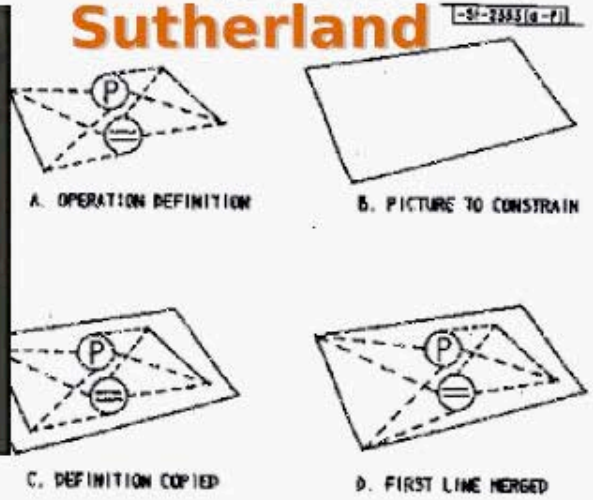



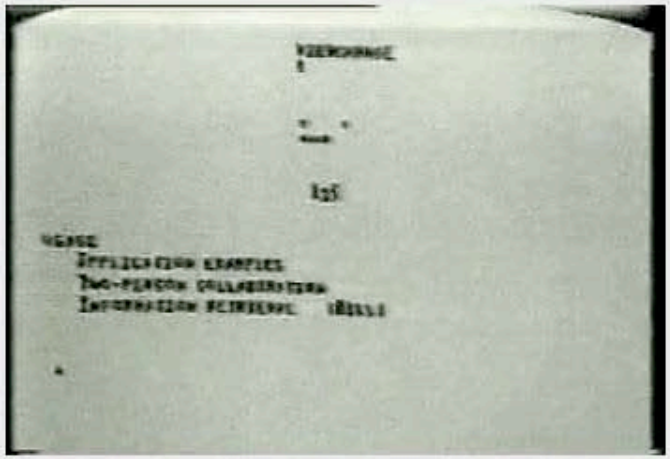

FIGURE 6.1. APPLYING TWO CONSTRAINTS INDIRECTLY TO TWO LINES
(P) PARALLELISM (=) EQUAL LENGTH

Kyoto Workshop

# Doug Engelbart

Playit

Stop

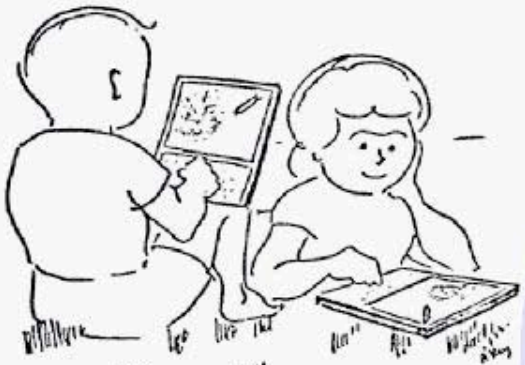


Play

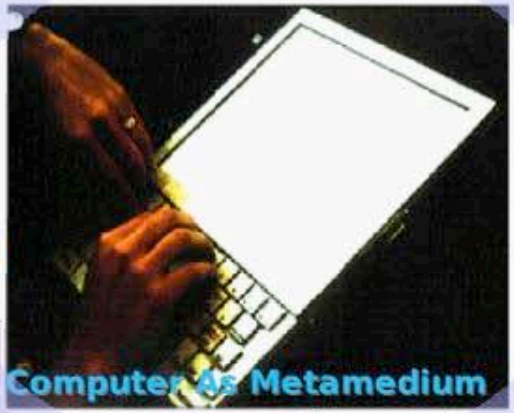
Stop

# What is a Computer for Children & 3rd World?

## The Dynabook: An Instrument Whose Music is Ideas

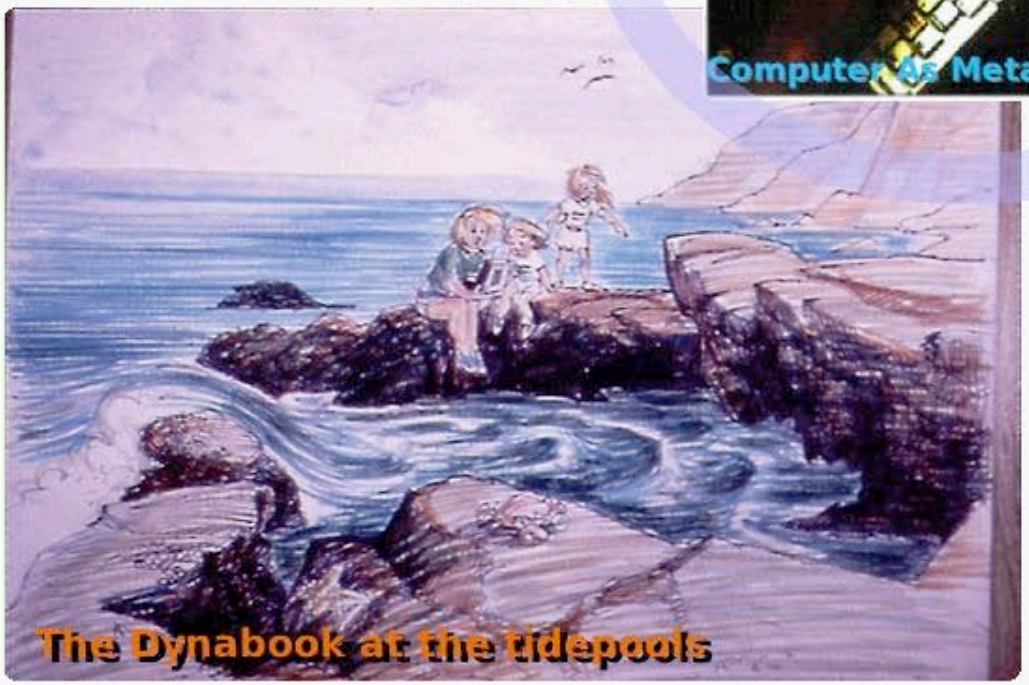


Learning math and science by making your own collaborative Spacegame

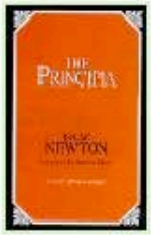


Computer As Metamedium

We have intimate relationships with our media



The Dynabook at the tidepools



# What's the ... of it?

James Clerk Maxwell as a young child:

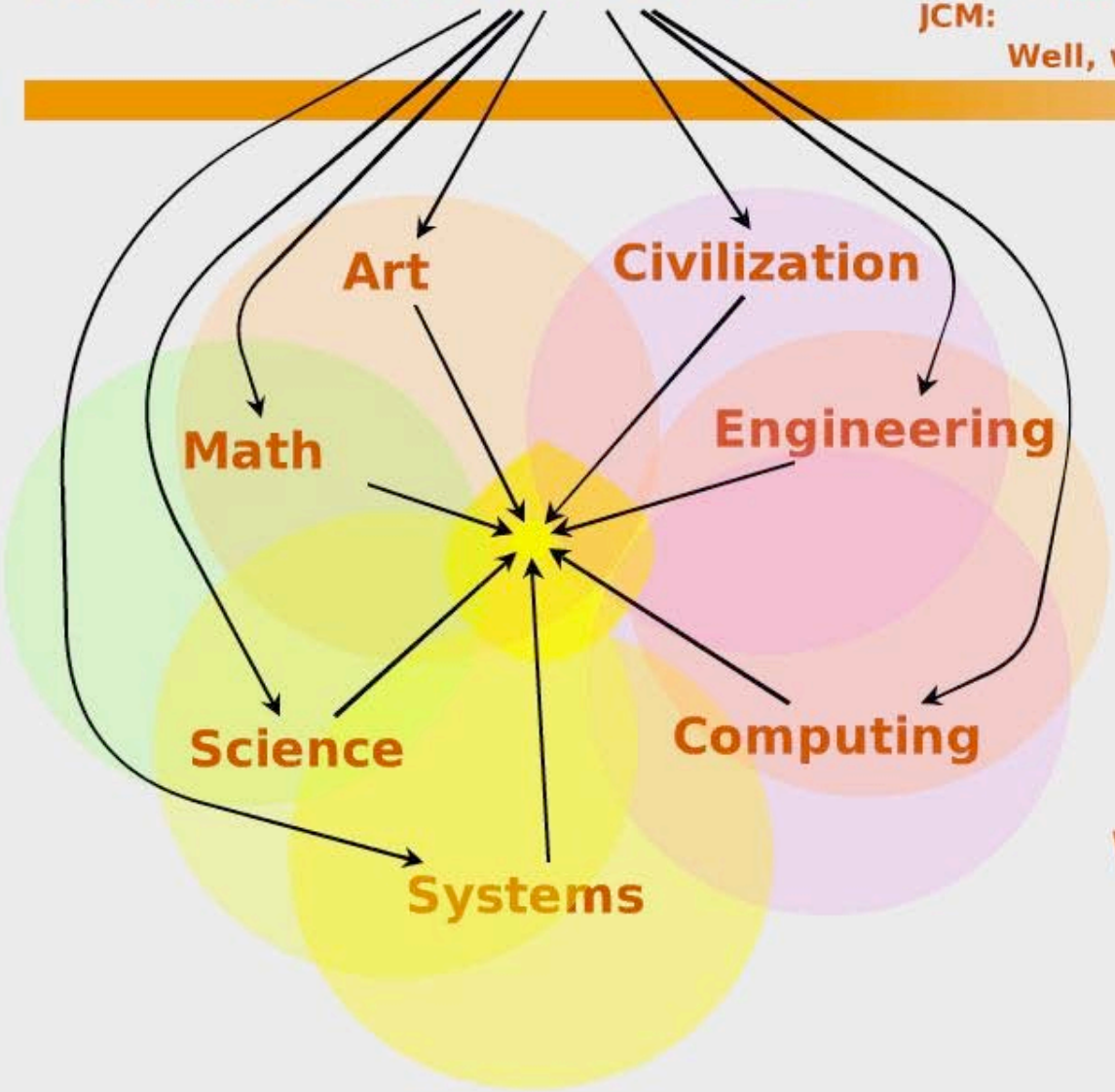
What's the go of it?

Adult:

... mumble ...

JCM:

Well, what's the *particular* go of it?



## Analogies To Writing and Reading and Literature

# Two Dimensions of "Primary Motivations"

## Reasoning & Change