

APR - 7 1981

10 year plan assumptions
Please let me free associate &
not take "last year" too strictly.

If your trip is just technical factors
that influenced technical strategy
I'm hard put to bring up much
more than the solidification of
genetic technologies for commercial
purposes. (Opportunity - and
threat [competition].)

If possible advances in toxic-
ological science.... see below

Still more automation in indus-
trial processes with cheap main-
frame processors. Can production
plants be designed and built to be
more flexible re product choices?

Catalysis only starting to be rational
science.

Can we look forward to better theoretical
understanding of polymer characteristics in
re fiber design?

Demographic + consumer ^① economic
issues.

Loss of self-reliance in wake
of OPEC.

Aging population
Immigration issues

Env - regulatory climate

(I expect deceleration more than
reversal except some cases with
wide economic impact like Clean
Air.

Maybe advances in scientific toxic-
ology that may improve national
response to threats of environmen-
tal toxicity. This may aggravate
impact on some existing markets
and production methods but
should improve climate of
innovation.

Transnationals entering US markets
More competition from foreign
giants, developing countries.
Trade wars?

More broadly
feedstock issues:
gas ↑ coal ↓ ??

Persian gulf oil - our strategic vul-
nerability. Afghanistan. Iraqi-
Iran war. How much do you bet
there won't be an intervention
at Hormuz?

U.S. economy
cost of capital
federal re-industrial policy
defense mobilization

Risks of further escalation of US -
USSR confrontation
Impacts on NATO, Africa, So. Asia,
So. America.

US manpower mobilization
(defense dollars in low
technology.)

Raw materials problems
esp. metals - may open up
new markets for substitutes.

Some product ideas

Non smearing newsprint systems
amenable to recycling.

Repairable fabrics (press on patches
adhesive...); buttons fastening.

① I believe we are experiencing an adjustment of life styles -- soberer expectations: at the same time fewer dropouts. These cultural shifts will surely affect markets

textiles
housing
and the heavy industry to support them
as well as manpower.

Food production patterns may have to take account of climatic cycles (possibly increasing droughts) that will affect many supply/demand factors in chemical industry.

Foreign demands now generally are in addition subject to political and economic (purchasing power) stresses

Will paper be materially displaced by electronic media (incl. plastic tape, disks; photographic fiche) within the decade? Not likely but barely possible.

Videodisks may in any case illustrate a significant market (and technical challenge) not anticipated 5 years ago.

CRT's and med-high speed TTY's also pose material challenges for substantial markets.