Intro 1990 - Need, Enjoy, Work at, Fear, hope for

Thinking of future → trends → Future tense → process

ask What then, implications?

Key Club Int'l.
Pasco, Wa.
Spring 1980

I. "Time Binding" most important human activity.

A. Korzybski return from WW I
   1. "Human affairs falling behind advances in technology"
   2. Wrote Manhood of Humanity, then Science and Sanity

B. Viewed plants as chemical binders, animals → chemical & space
   1. Humans - TIME BINDERS : learning from the past, anticipate future, to influence present

C. Wendell Johnson observed that -
   1. Humans only animal able to know history in any comprehensive sense, yet most of us hardly bother.

   2. In terms of present and future - "Most of us don't know what is going on in the world. Or why. And most of us resist finding out."

D. EBL observes that -
   "If we don't go far enough back in memory, and far enough ahead in hope, our present is impoverished."

So, if humans uniquely capable of time binding, how do I begin to time bind? Let's focus on anticipating the future.

II. Watching for future trends is major step in anticipating future.

A. One can see dominant themes (energy scarcity / transition) and emergent themes.

① Telecommunications / Information Processing

* 1860-1905 Agriculture // 1905-1955 Industry // 1955-ρ Information
now 53% of work force

Computer
micro-miniaturization

*** First computer (1946) - 30 Ton; Rm 30x50; 18,000 vac. tubes
* 1955 - 1$ bought 100,000 single operations (like addition)
1970 - 1$ " 100, million " "
* One micro-chip can do more (64,000 bits) than first computer.

** 3 generations (8 yr. each) storage capacity more compact than brain.
* (silicon intelligence next "evolutionary step."?)

TV
*** 1978 - 729 million TV's worldwide
- U.S. 98% have TV, 75% color, 50% 2 or more
- 80% world pop. has access to TV

Telephone
*** 1990 - 1 billion telephones, most direct dial, 17 digit no.

Satellite
*** Fiber optics
*** Satellites

Merge into HOME TERMINAL combine telephone, TV, personal computer, radio, video recorder, hard printer, etc.
► entertainment, info. access, elec. fund transfer, elec. mail, education, work

1988 $ billion industry

► England: dial computer, use key pad, get info: news, stock m., want ads, mail order cat., airline schedule (70 services)

*** Home satellite reception ($300) Spokesman Thurs. 4/10

② WORLD HUNGER - major problem of next 10-20 yrs (bigger than energy)

*** Energy depletion
* Hunter/gatherer societies took 1/10 calorie energy for 1 calorie food
US 17 calories energy for 1 calorie food.

*** Arable Lands
* Monocropping, petro fertelizers
* Iowa - 3 bushels topsoil = 1 bushel corn
* Palouse - 3/4 ton topsoil = 1 bushel wheat since 1934
U.S. - 10 lbs soil = 1 lb grain

* Desertification, deforesting world wide

** U.S. loses to development each year
3 million acres, 1 million choice (1 mill = 1/2 mile wide swath from NY to Cal; or 4 square miles/day)

*** Carrying capacity
* World wide grain yield per acre decline since 73
" " fish harvest decline since 73
* No. America last remaining net surplus food.

* CAMBODIA

③ LIFE ENGINEERING / life extension, genetic engineering (recombinant DNA, Interferon ?)

★★★ Reproduction: sex selection (in vitro separation X & Y chrom.)
test tube baby (rent-a-womb ?)

★★★ Life Extension / Euthanasia
- ▸ within 50 yrs drug "no more dying?"
- ▸ euthanasia - 1950's

★★★ Recombinant DNA
- ▸ Bacteria largest work force - E Coli - New life
- ▸ Insulin, oil eater <Supreme Court June 16>
- ▸ Gene implant in Mouse (CBS 4-10-80): restructure human genes to reduce cancer, sickle cell anemia, etc.
- ▸ INTERFERON:
  - Cost 10-20 billion / lb
  - Biogen has bacteria synthetic 1983 or earlier
  - Cold
  - Cancer

④ SPACE EXPLORATION
- ★ Space Shuttle: 8-13 Flights / yr by 1983
- ★ SETI: 1984 100" telescope up on shuttle
  - : 10,000 billion trillion stars
  - : probability of 10 billion earth type planets
- ★ Large Space Structures / Manufacturing
  - ▸ Late 1990's commercial industrial plants
    - metal alloy for cutting
- ★ Research contract on take off & land by 2000.

⑤ WEAPONS of WAR

* Nuclear disarmament :
  - ▸ US has 6,000 1meg. warheads (1 meg = 60 Hiroshimas)
    : takes 40 to Knock out Russia
    : one polaris sub can hit every major + med. city
    : Trident carries 24 missiles, 8-10 warheads

* Laser Weapon, Particle Accelerator (1983)
  Space Command ?

⑥ Occupations

* Widespread labor shortage in 2 areas · Kaufman, Futurist, Aug. 79
  1. high skill manual - mechanic, electrician, electronics repair
  2. low status manual - cleaning, dishwashing, janitor, etc.

* Science Ap 4, 1980 : shortage in
  1. Engineers, especially computer augmented design and manufacturing techniques.
  2. life sciences
* "Home Work" possibilities
  - ▸ automated office
  - ▸ Create a career, based on interest, knowledge of computer engineering, and ability to ascertain + serve human needs.

If these are emerging trends, (or if they are not) and if we want to be effective time binders, what do we do?

III. Begin thinking in the Future Tense

A. Common extreme responses to future
   1. Retreat into past
   2. Live for present

B. Rehearse future you prefer
   1. Not pure prediction (tea leaves, crystal ball, computer)

   2. Rather, create image of future we prefer, to act as magnet that draws us forward

Frederick Polak "Image of the Future" "The rise and fall of images of the future precedes or accompanies the rise and fall of cultures. As long as a society's image is positive and flourishing, the flower of culture is in full bloom. Once the image begins to decay and lose its vitality, however, the culture does not long survive."

C. Of course, imagining future doesn't get us there — because we don't respond to image as much as something else:

Eric Ashby "Institutions of society, like species of animals, adapt themselves not in anticipation of changes in the environment, but in response to changes that have already occurred. This we have to accept as a fact of social biology. To urge whole nations or their governments to become altruistic custodians of long term goals is a waste of time; if we are not to make the future intolerable for ourselves, the hope lies in step-by-step adaptation through the homeostatic mechanisms which respond to change as soon as change starts to bite."

Bites: Sputnik, oil embargo, 1 dollar gas, 3 mile island

Question is who decides where we go in response to bites

III. To help decide, you need to develop a futuring attitude, process

A. [Ask questions]:

1. What do you mean; how do you Know; What Then ?
2. Applications:
   - ⓐ Auto = LA, suburbs, etc.
   - ⓑ Elevator = manhattan
   - ⓒ Telecommun. = info. poor v. info. rich
     = family communication patterns
   - ⓓ World Hunger = war or
     share together // home, small scale food
   - ⓔ Life Engineering = how long, at what value

B. [Expect uncertainty]: as we move toward the future, the future will change - "the future is not what it used to be"

* Telegraph over telephone
* TV "no commercial value"
* Wright bro. Flight on sports pages

** Howard Edelson quote (Note Card)

C. Expect to learn

Conclusion

1. 80's & beyond call for effective Time Binding
2. Major character of 80's & beyond is CHANGE
3. Must merge and enhance individual responsibility & cooperation
4. John McHale

"The Question is not can we change the world, but what Kind of world do we want?"