

? - why - ?

- ## Response

-
- A series of horizontal lines, some solid and some dashed, drawn on a yellowed, aged piece of paper. The lines are dark and appear to be made with a pen or marker. There are approximately seven lines in total, varying in length and thickness. The paper has a textured, slightly mottled appearance with some discoloration and faint horizontal creases.

Underlying Message

- There is no way out, unless we can dominate the features just cited, since we don't know how to do this: We must continue the wheel of representation, mismatches, analysis/syntheses over and over again ^{until we find} ~~as~~ ⁱⁿ ~~an~~ ^a ~~basis~~ ⁱⁿ ~~to~~ ^{as} ~~convergence~~ ^{evolving reality}, & adopt it as an unfolding ~~model~~ ^{model} that reveals uncertain, ever-changing, & unpredictable

24/9/91

Human ^{consciousness} ~~construction~~ that make our world uncertain, everchanging, unpredictable

- Uncertainty associated with the incompleteness, undecidability, incompleteness theorems of mathematics & logic.
- Numerical imprecision associated with using the rational & irrational numbers in the ^{calculation} measurement processes
- Quantum Uncertainty associated with Planck's constant and Heisenberg's Uncertainty Principle
- Entropy increase associated with the Second Law of Thermodynamics
- Irregular ^(or erratic) behavior associated ~~the~~ with far-from-equilibrium, open, nonlinear processes or systems with feedback.
- Mutations ^{environmental pressure,} associated with replication ^{or unknown influences} errors in evolutionary biology.
- Incomprehensibility associated with inability ^{completely} to screen, filter, or otherwise consider spaghetti-like influences from a plethora of everchanging, erratic, unknown outside events.
- Ambiguity associated with natural languages as they are used and interact with one another
- Novelty generated by thinking & actions of unique individuals and their many-sided interactions with each other.

I

D&C

POC

ODCC

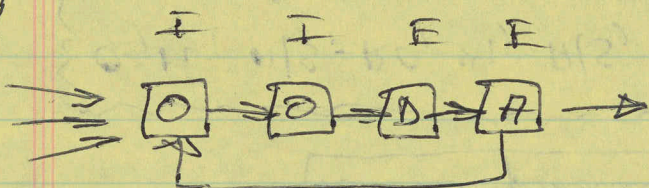
A/S; OODA; GH, CT, PE, UC;

TSG

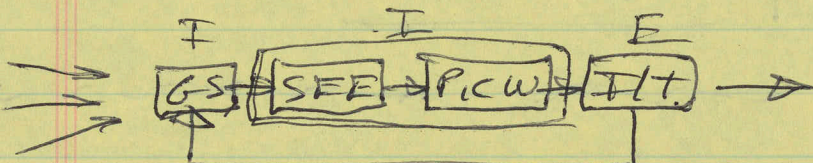
CS

GS, SEE, PICW, I/T; O, A/S, H, T.

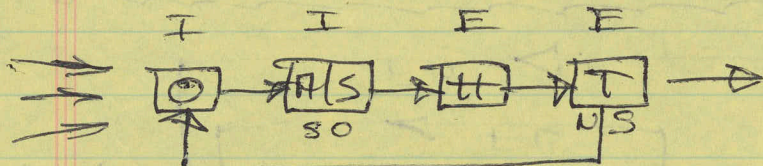
①



②

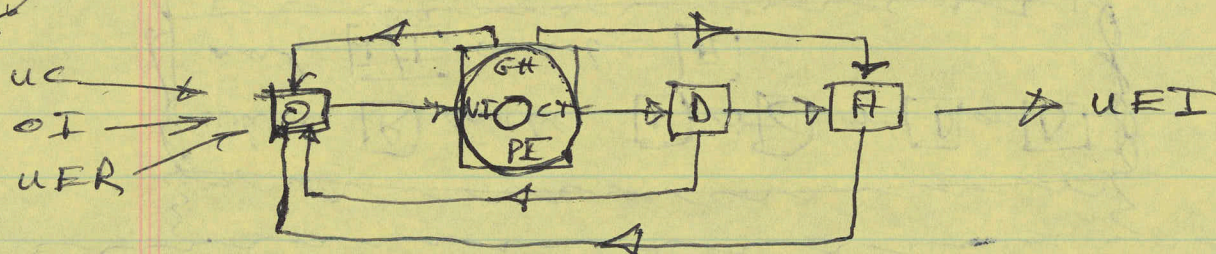


③

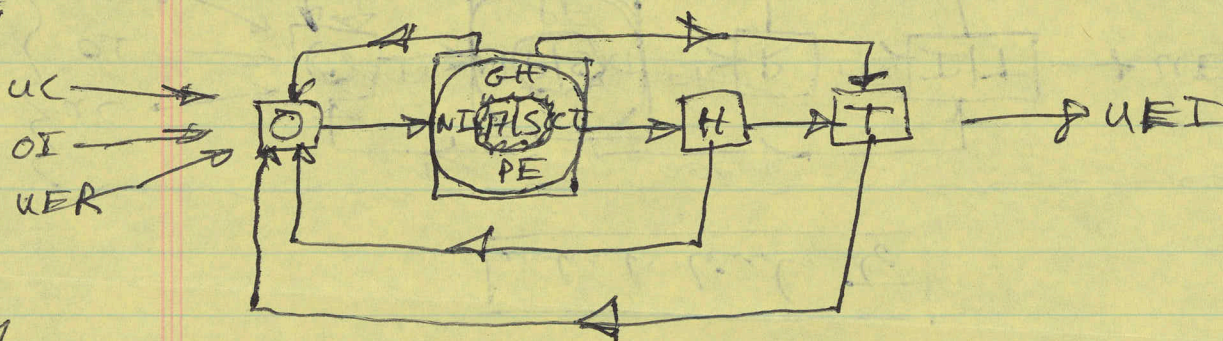


Maybe a bit more attention
in this regarding GH, CT, PE
~~then~~ ~~operation~~ ~~steps~~ the
way we O, D, A, H - have
always this way an interest
with the environment

which means we
can represent the
OODA loop!



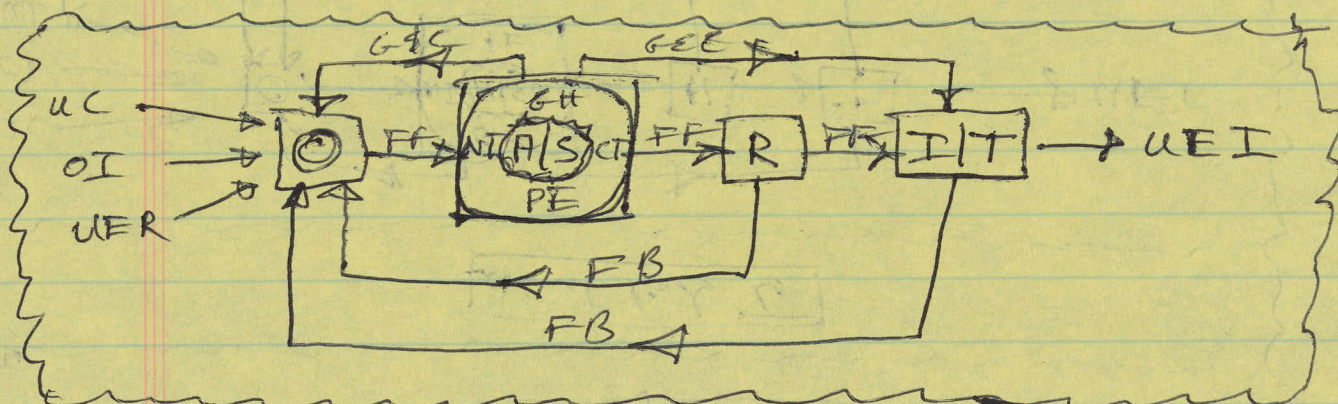
which leads to



(over)

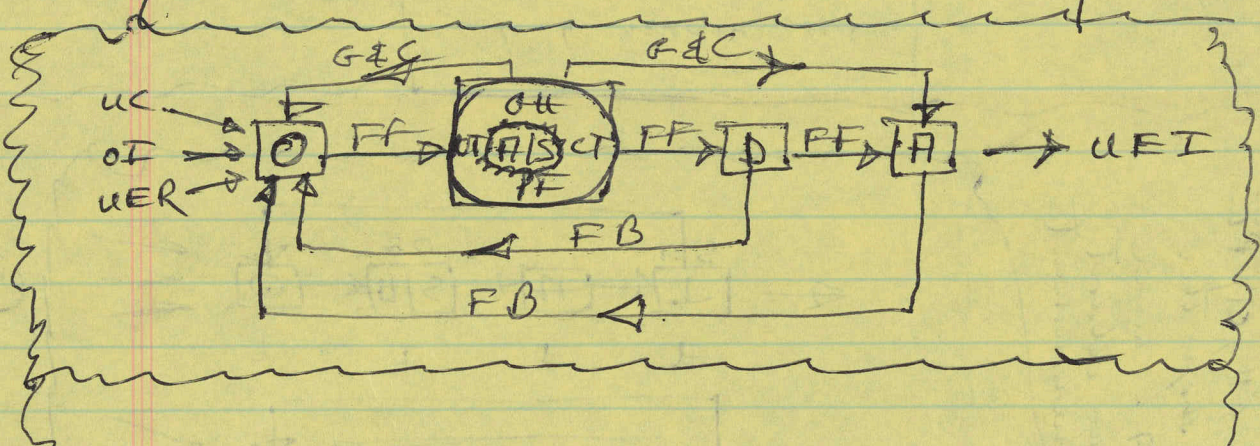
II

which leads to



where R can be H or C or D or D
and I/T can be A

which leads to



which produces

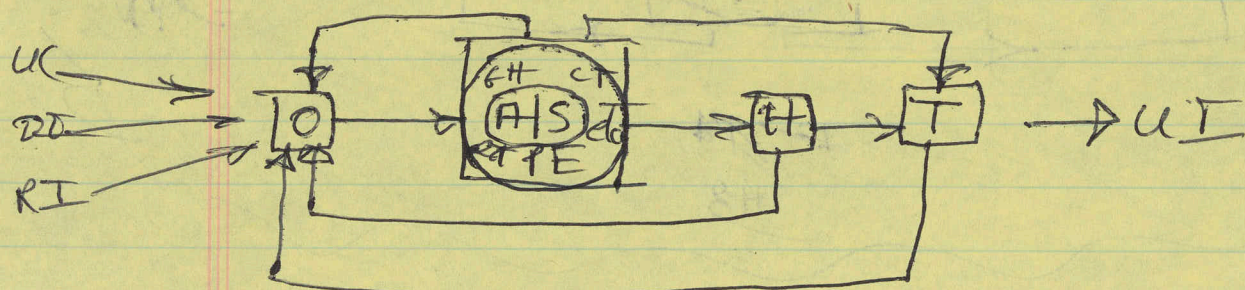
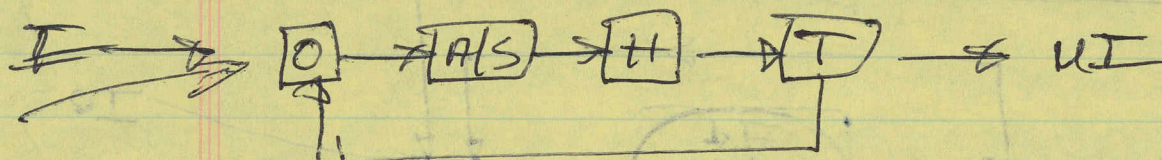
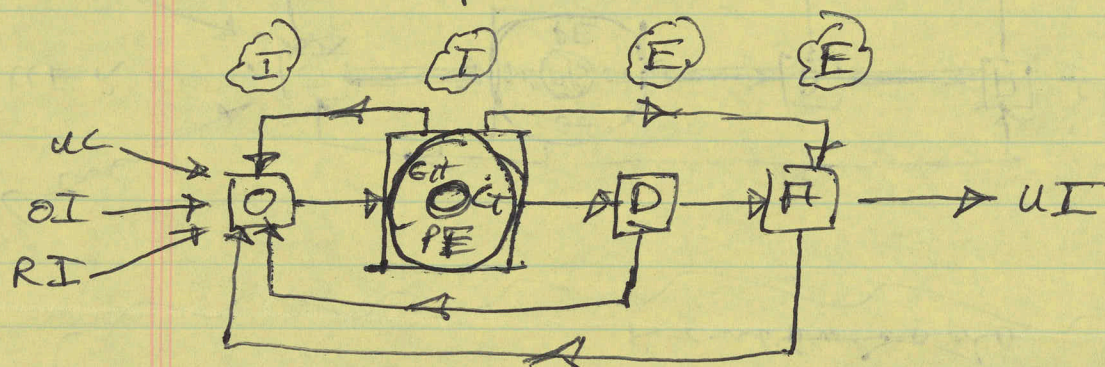
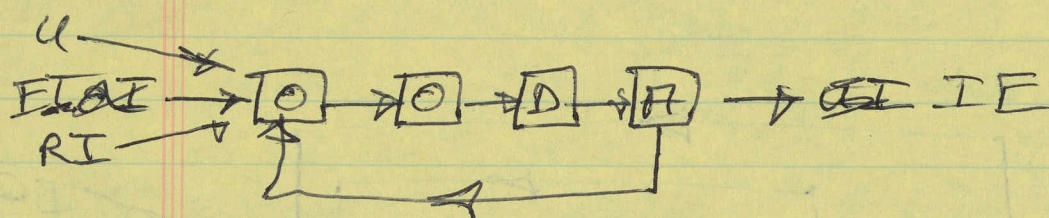
$O, M, A/S, R, M, A/S, \dots R, M, A/S, \dots$

which produces

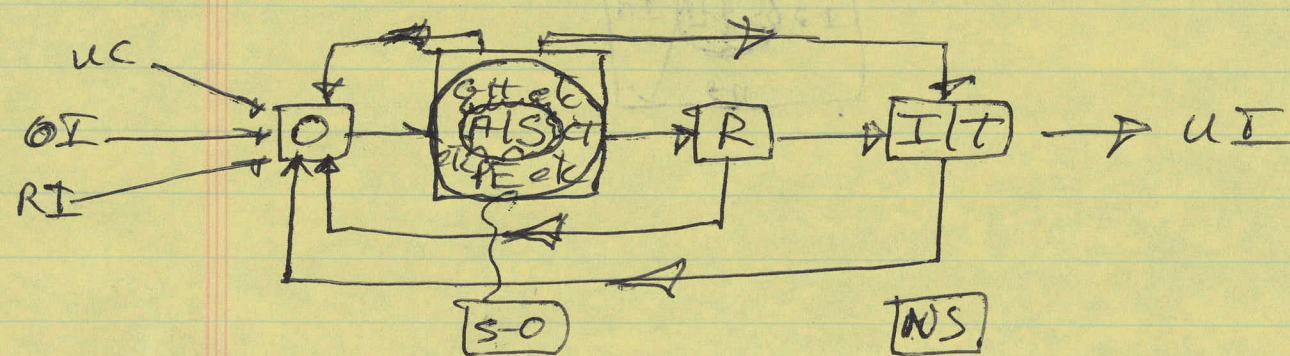
charging reality via novelty

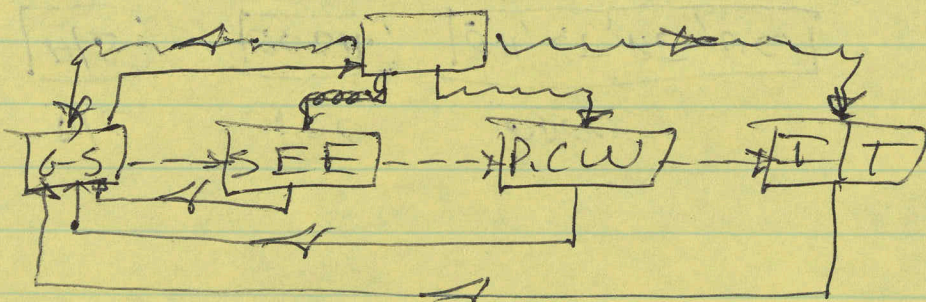
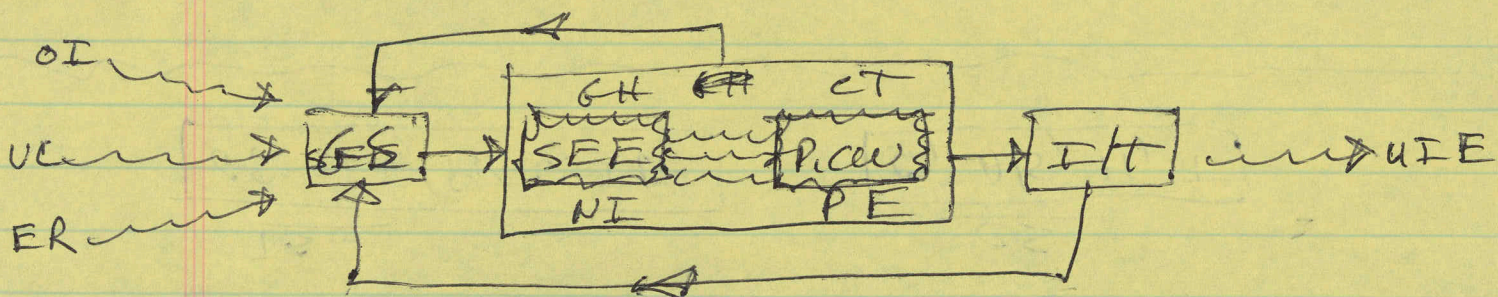
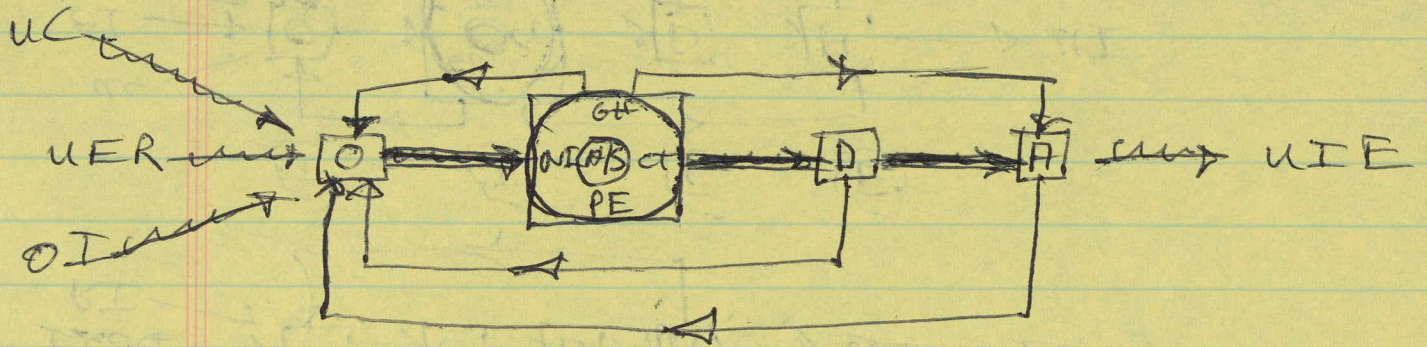
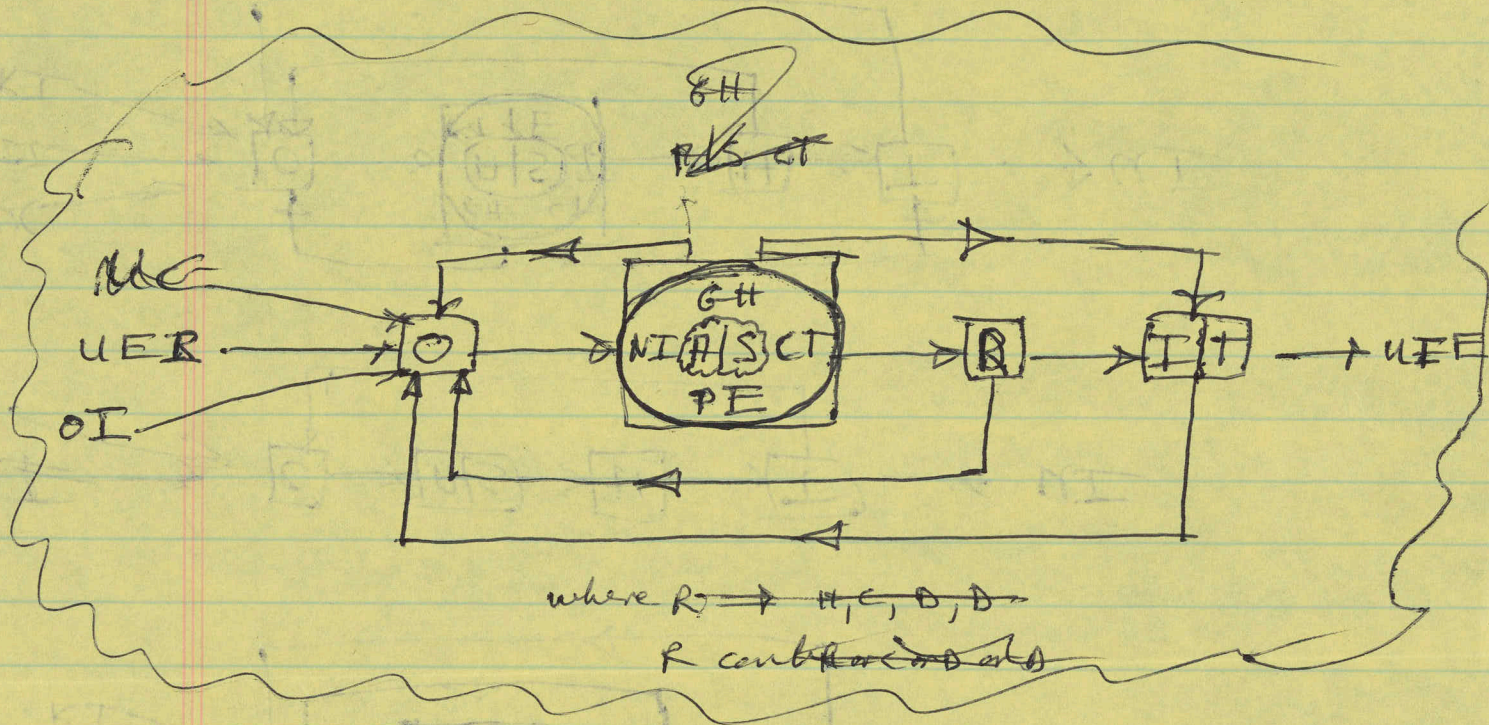
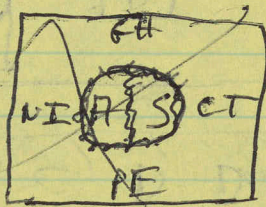
<u>P/C</u>	<u>P/C</u>	<u>ODCC</u>
<u>A/S</u>	<u>QODH</u>	<u>GH, CT, P.E, UC</u>

<u>TSG</u>	<u>CS</u>
<u>GS, SEE, PICW, IIT</u>	<u>O, A/S, H, T</u>



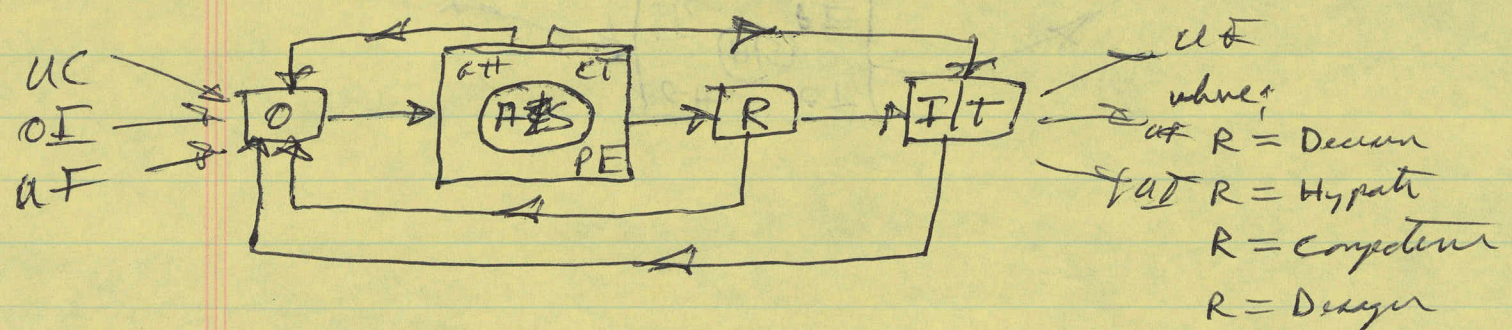
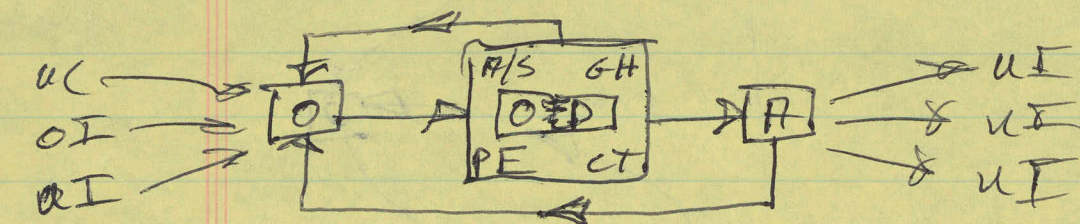
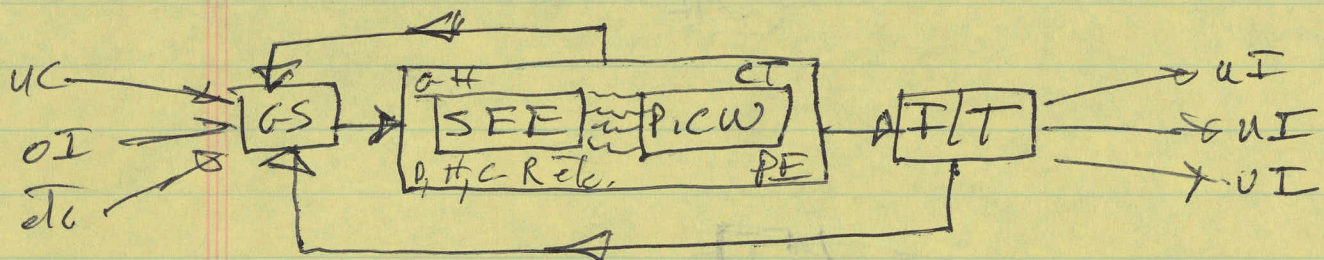
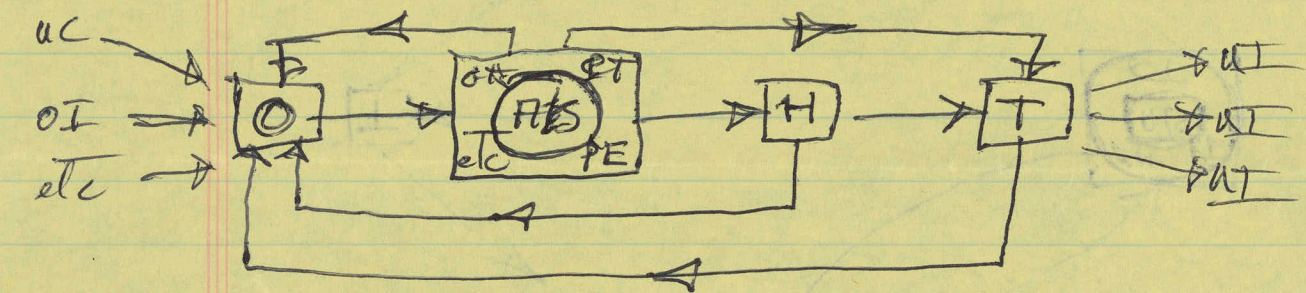
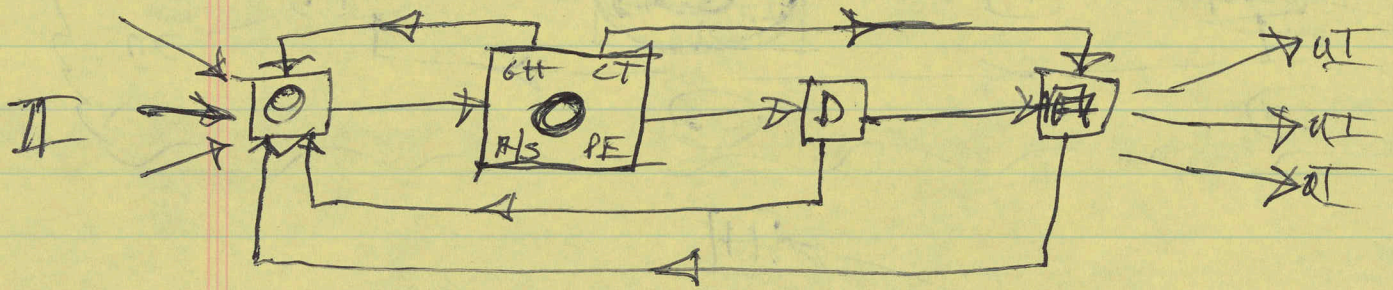
$R \Rightarrow H, C, D, \text{Denumer}$

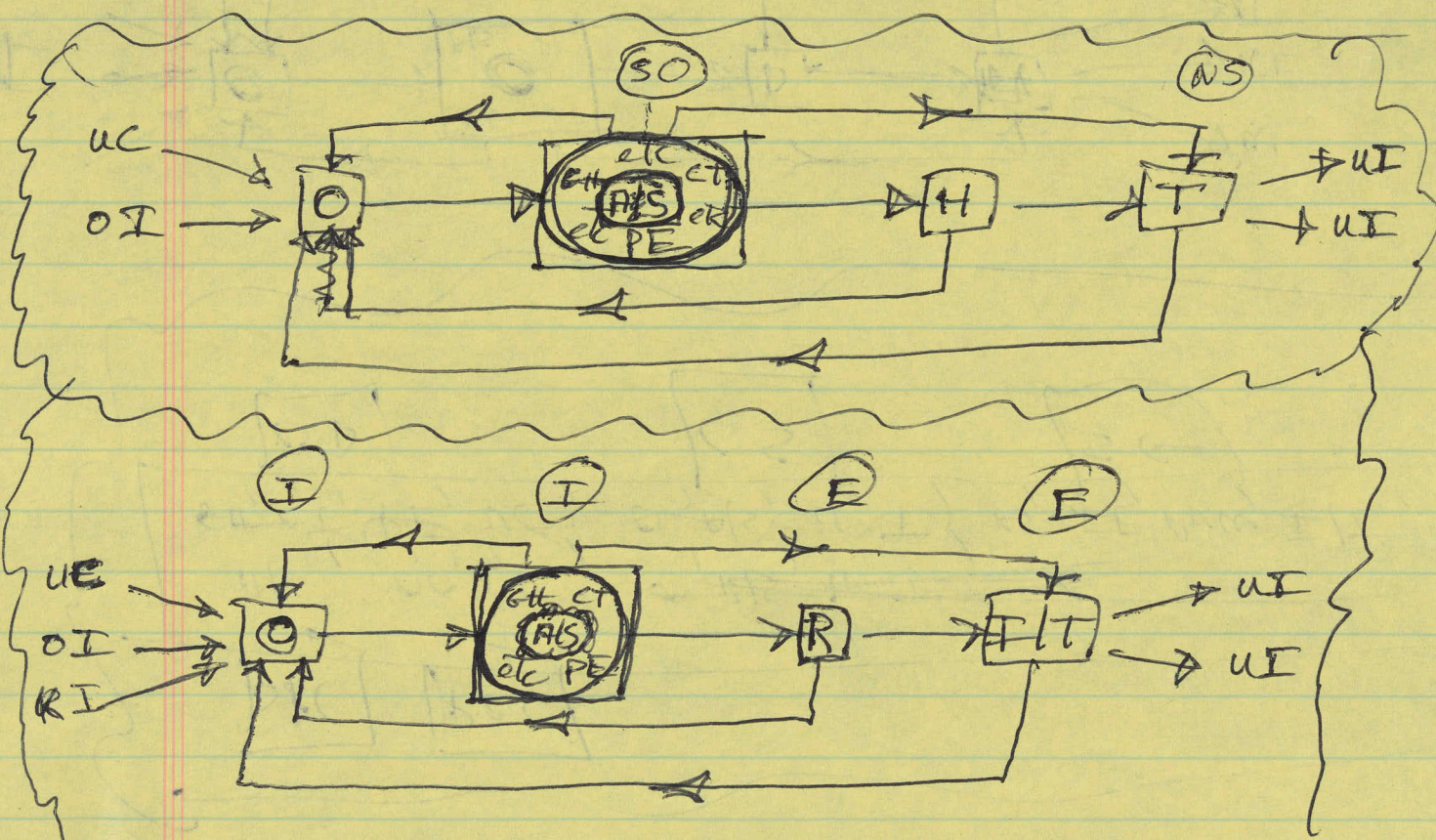
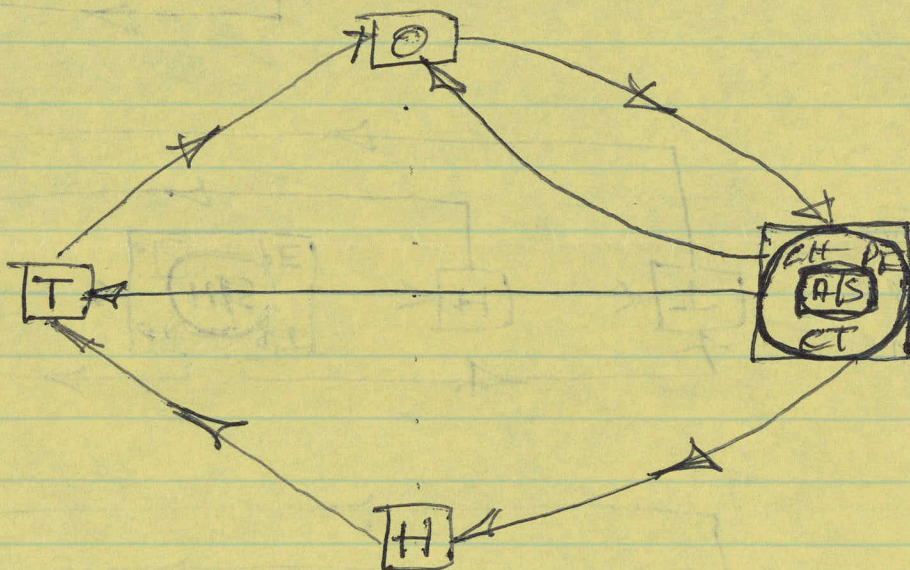
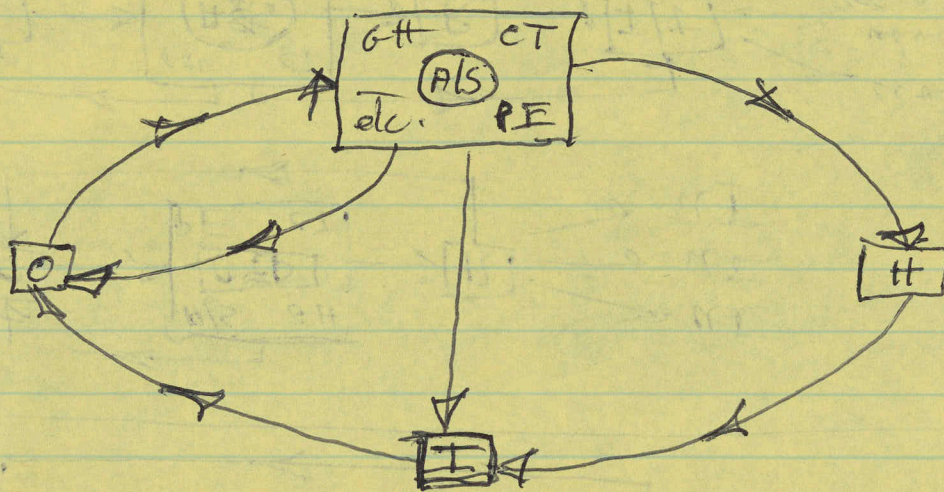




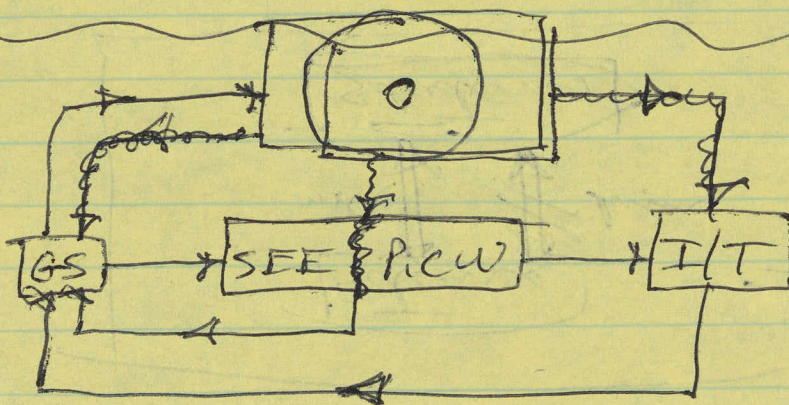
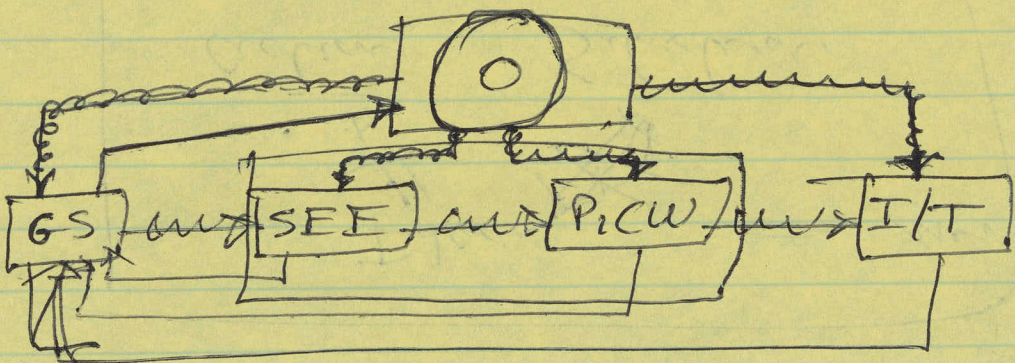
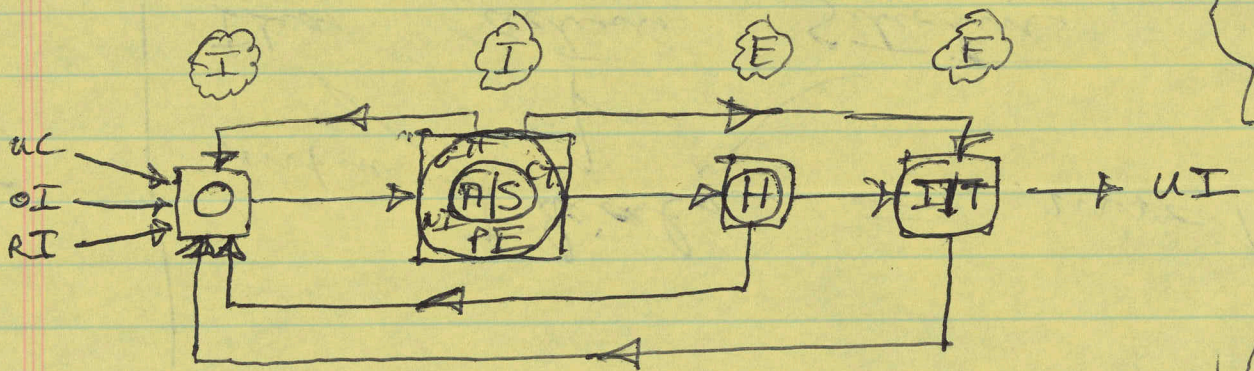
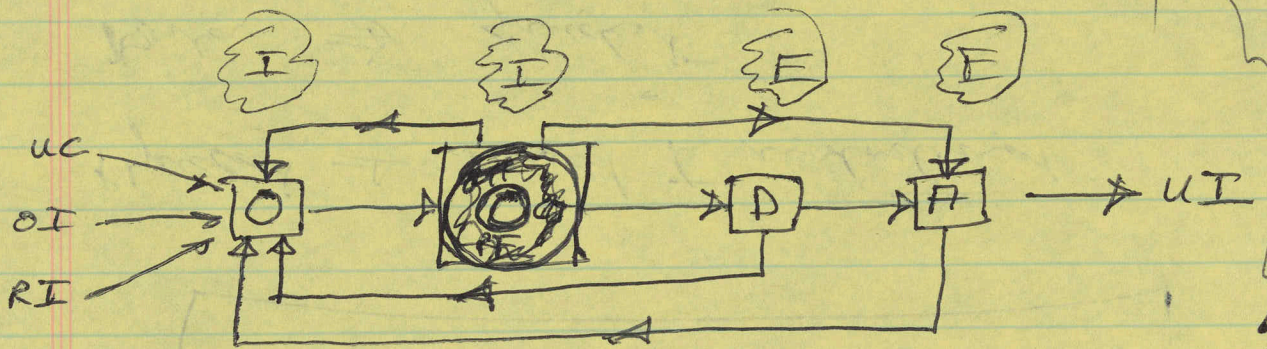
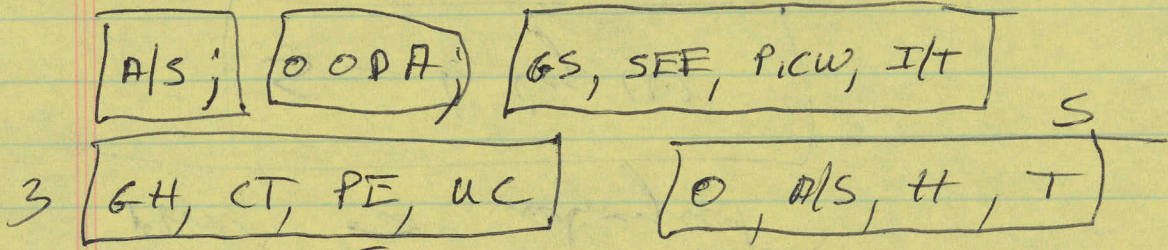
D&C POC

A/S, OOD, H; ~~O, R/S, H, T~~
 GH, CT, PE, UC; ~~O, A/S, H, T~~ GS, SEE, Picu, I/T,
 OD CS SG



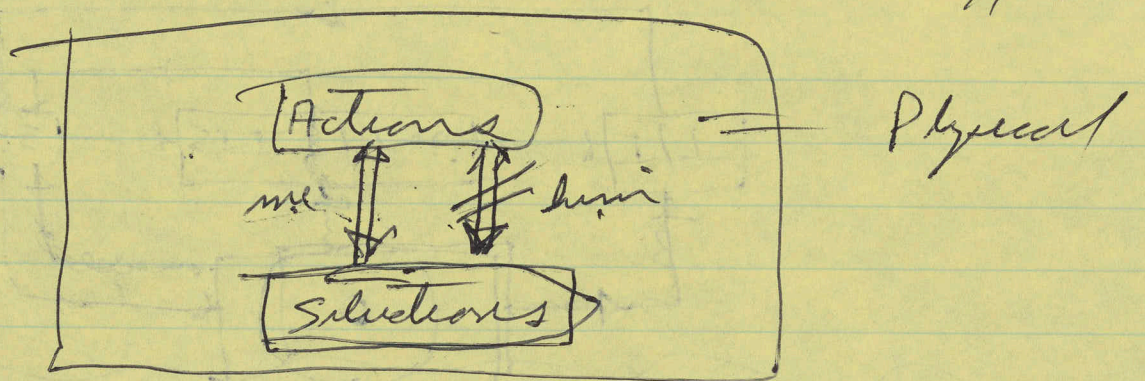


1 ✓ 2 ✓ 4

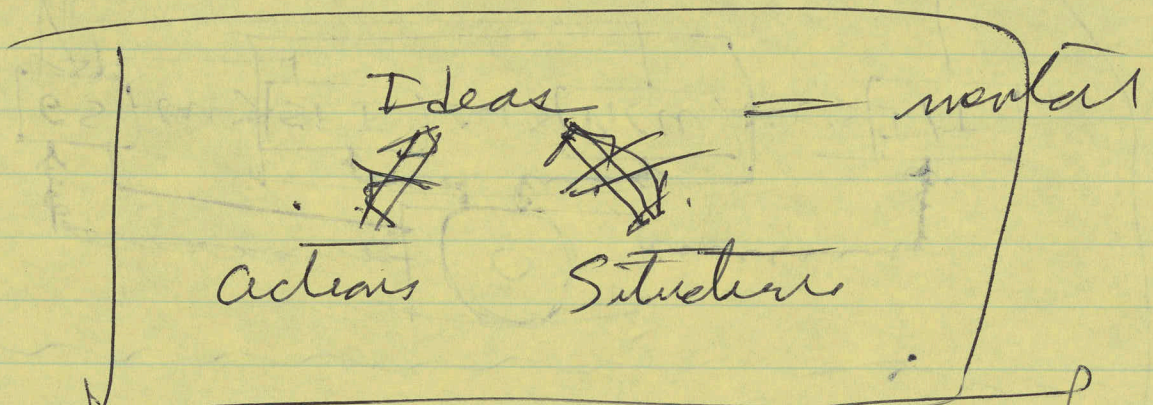


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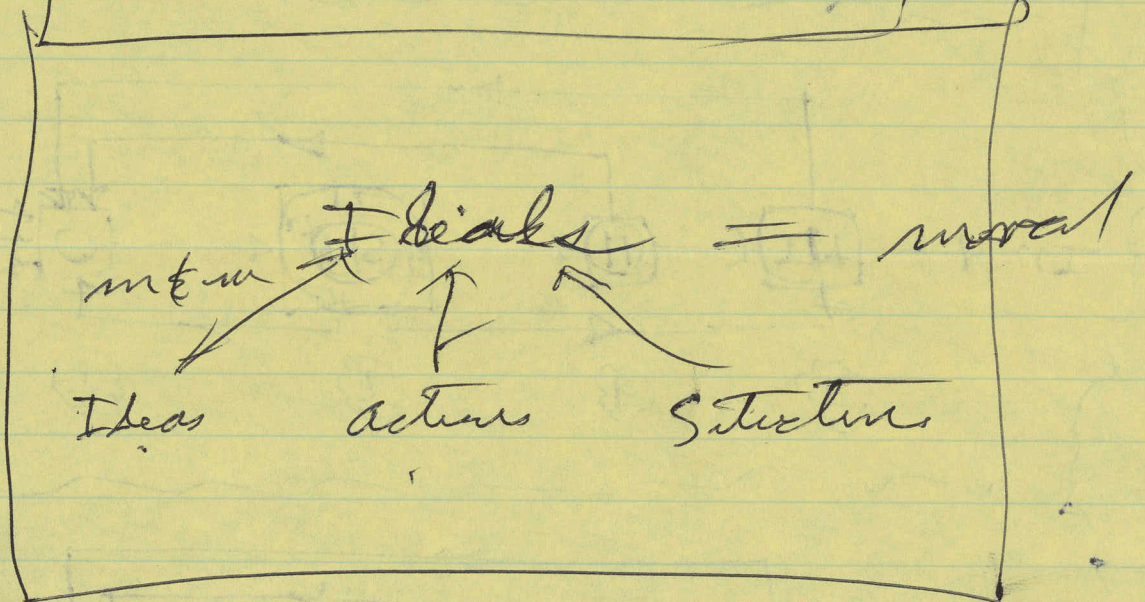
P.I



P.II



P.III

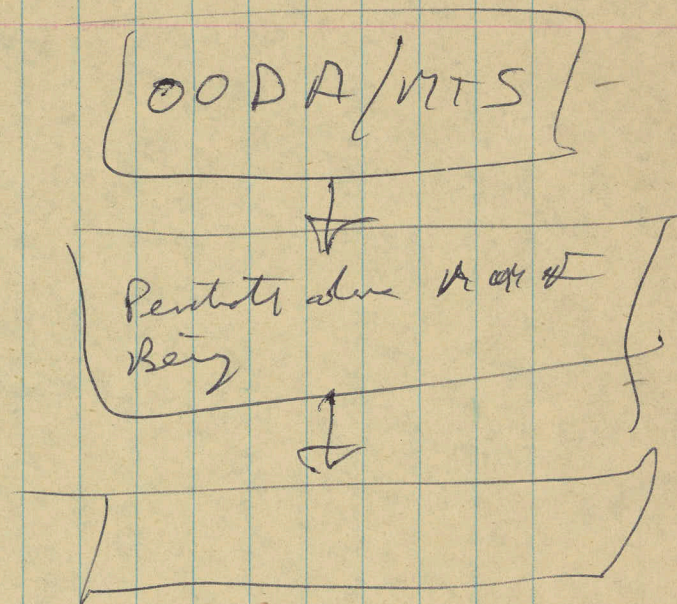
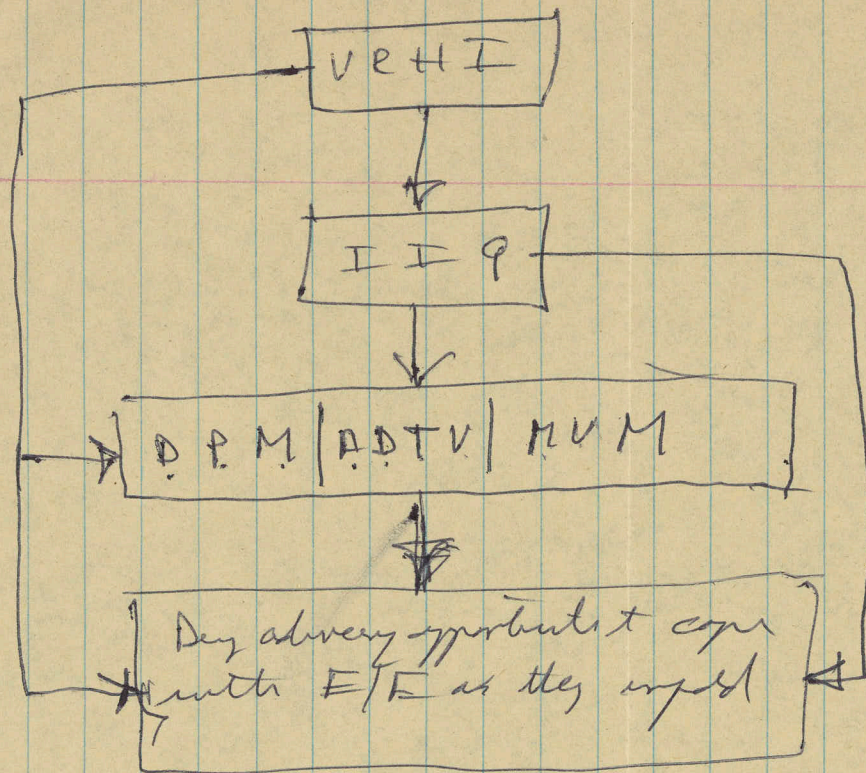


Physical $\Rightarrow$ caused to understand

Mental $\Rightarrow$ quickest

Moral $\Rightarrow$ straight

$$S = k \log W$$



$$V = \frac{ds}{dt}, \quad a = \frac{dv}{dt}, \quad v_r = \frac{a}{g}, \quad K = \frac{d\phi}{ds}, \quad \dot{\phi} = \frac{d\phi}{dt} \quad \text{then} \quad \boxed{\sin \lambda = k \sin \theta}$$

$$\star \dot{\phi}_A = \dot{t} - \dot{\lambda}, \quad \dot{\theta} = \dot{t} - \dot{\phi}_0$$

$$\dot{t} = \frac{V_D \sin \theta - V_A \sin \lambda}{S}, \quad \dot{\lambda} = \frac{\dot{\theta} k \cos \theta + k' \sin \theta}{\sqrt{1 - k'^2 \sin^2 \theta}}$$

$$\dot{\lambda} = \frac{(\dot{t} - \dot{\phi}_0) k \cos \theta + k' \sin \theta}{\sqrt{1 - k'^2 \sin^2 \theta}}$$

$$\star \dot{\phi}_A = \dot{t} - \frac{(\dot{t} - \dot{\phi}_0) k \cos \theta + k' \sin \theta}{\sqrt{1 - k'^2 \sin^2 \theta}}$$

$$\dot{\phi}_A = \dot{t} - \frac{\dot{t} k \cos \theta}{\sqrt{1 - k'^2 \sin^2 \theta}} + \frac{\dot{\phi}_0 k \cos \theta + k' \sin \theta}{\sqrt{1 - k'^2 \sin^2 \theta}}$$

$$\dot{\phi}_A = \dot{t} \left[1 - \frac{k \cos \theta}{\sqrt{1 - k'^2 \sin^2 \theta}} \right] + \frac{\dot{\phi}_0 k \cos \theta + k' \sin \theta}{\sqrt{1 - k'^2 \sin^2 \theta}}$$

Now if we have

$$\dot{t} = \frac{V_D \sin \theta - V_A \sin \lambda}{S}$$

$$\text{then } K = \frac{V_A}{V_D} \quad \text{where } V_D = \frac{V_D}{V_A}$$

$$\dot{\phi}_A = \left[\frac{V_D \sin \theta - V_A \sin \lambda}{S} \right] \left[1 - \frac{k \cos \theta}{\sqrt{1 - k'^2 \sin^2 \theta}} \right] + \frac{\dot{\phi}_0 k \cos \theta + k' \sin \theta}{\sqrt{1 - k'^2 \sin^2 \theta}}$$

$$\dot{S} = V_A \sqrt{1 - k'^2 \sin^2 \theta} - V_D \cos \theta$$

$$\dot{\phi}_A = \left[\frac{V_D \sin \theta}{S} \right] [1 - Kk] \left[1 - \frac{k \cos \theta}{\sqrt{1 - k'^2 \sin^2 \theta}} \right] + \frac{\dot{\phi}_0 k \cos \theta + k' \sin \theta}{\sqrt{1 - k'^2 \sin^2 \theta}}$$

①

②

$$\dot{S} = V_A \sqrt{1 - k^2 \sin^2 \theta} - V_D \cos \theta$$

pure curved
Expressions

$$\dot{\phi}_A = \left[\frac{V_D \sin \theta}{S} \right] [1 - k] \left[\frac{k \cos \theta}{\sqrt{1 - k^2 \sin^2 \theta}} \right] + \frac{\dot{\phi}_D k \cos \theta + \dot{k} \sin \theta}{\sqrt{1 - k^2 \sin^2 \theta}}$$

where: $\dot{S}$ = rate of decrease or ~~rate of~~ slant range rate of change

S = slant range

$\dot{\phi}_A$ = attacker turn rate

$\dot{\phi}_D$ = Defender turn rate

V_A = Attacker velocity

V_D = Defender velocity

θ = angle off Tail

$K = V_A/V_D$

$k = \sin \lambda / \sin \theta$

$\dot{k}$ = k rate of change

if $k < 0, \dot{k} < 0$ then: Expanding lag pursuit
 if $k < 0, \dot{k} = 0$ " " Lag pursuit
 if $k < 0, \dot{k} > 0$ " " Collapsing lag pursuit
 if $k = 0, \dot{k} < 0$ " " shifting from lead to lag
 if $k = 0, \dot{k} = 0$ " " pure pursuit
 if $k = 0, \dot{k} > 0$ " " shifting from lag to lead
 if $k > 0, \dot{k} < 0$ " " collapsing lead pursuit
 if $k > 0, \dot{k} = 0$ " " lead pursuit
 if $k > 0, \dot{k} > 0$ " " Expanding lead pursuit

if $k = 1$, then: collision course

$$\dot{\phi}_A = N \left[\frac{V_D \sin \theta - V_A \sin \lambda}{S} \right] = \frac{N}{S} [V_D \sin \theta - V_A \sin \lambda]$$

where N = navigation ratio

proportional
navigation
Equation

$$v = \frac{ds}{dt}, \quad a = \frac{dv}{dt}, \quad N_r = \frac{a}{v}, \quad K = \frac{d\phi}{ds}, \quad \dot{\phi} = \frac{d\phi}{dt},$$

$$K = \frac{d\phi}{ds} = \frac{\dot{\phi}}{v} = \frac{a}{v^2}$$

$$\dot{\phi} = \frac{d\phi}{dt} = Kv = \frac{a}{v}$$

$$a = \frac{dv}{dt} = \dot{\phi} v = Kv^2$$

$$K = \frac{\dot{\phi}}{v} = \frac{a}{v^2}$$

$$\dot{\phi} = Kv = \frac{a}{v}$$

$$a = \dot{\phi} v = Kv^2$$

W

A-T A Tactics

✓ AEW 1957

✓ Aerial Attack S 1960/1964

Erny Marenschke

✓ EMT 1965/66 ✓ EEM 1968

✓ MMC 1970-72

POC } 1976-1986

ODCC } 1982-1987

TSG } 1986-1987

CSA

✓ DEC 1976

✓ CS 1990-91

✓ Why 1991

1991 — Why

1957 — AEW

1960-68 — AAS

1964-65 — EM

1968 — EEM

1970-2 — MMC

1976 — D&C

1976-86 — POC

1982-87 — ODCC

1986-87 — TSG

1990-91 — CS

⇒

• A/T/D Tactics

• Erny Marenschke

• CCS

• CSA

2 str

Evolution

9 str

Tight	Two
Fluid	Separate
Double	Attach
Loose	Once
Coordinated	Pair
Fluid	Two

• Finger Four

• Fluid Four

The Commanders

Woodward

Ken Willingham
(407) 443 - 9299

call anytime after 9

EBERS

PISSRR

behendigheid
bewegelijkheid

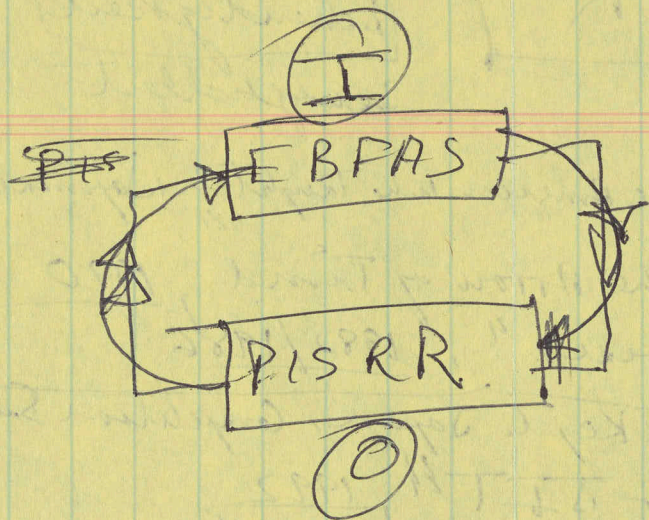
317
15
330 15/7/92

- ① Dznago, Rafael "Dr Deming - The American who taught the Japanese about Quality", 1990
- ② Covey, Peter & Highfield, Roger "The Arrow of Time", 1990
- ③ Deming, W. Edwards "Out of the Crisis", 1982/1986
- ④ Imai, Masaaki "Kaizen - The Key to Japan's Competitive Success", 1986
- ⑤ Majima, Ichiro "The Shift to JIT", 1992
- ⑥ Ohno, Taiichi "Toyota Production System", 1988
- ⑦ Ohno, Taiichi "Workplace Management", 1988
- ⑧ Ohno, Taiichi (with Hito, Setsuo) "Just-in-Time for Today and Tomorrow", 1988
- ⑨ Womack, J.P., Jones, D.T., & Ross, D. "The Machine that changed the World", 1990
- ⑩ Shingo, Shigeo (Robinson, Alan Editor-in-Chief) "Modern Approaches to Manufacturing Improvement", 1990
- ⑪ Shingo, Shigeo "The Shingo Production Management System", 1992
- ⑫ Stalk, George Jr. & Hout, Thomas H. "Competing against Time", 1990
- ⑬ Womack, J.P.; Jones, D.T.; Ross, D. "The Machine that changed the World", 1990
- ⑭ Cleary, Thomas "The Japanese Art of War", 1991
- ⑮ Giscard d'Estaing, Valerie-Anne "The World Almanac of Inventions", 1985
- ⑯ Ruelle, David "Chance and Chaos", 1991

Masaaki
Imai

N

HEL
 1.10
 82 COH



IOAHI
 IIII

VRHI

IAH
 IOAHI
 IOAHI

BU

IOAHI = BU

VRHI
 OODA
 M & M
 PISRR
 I & I

RED COH
 IOAHI
 OODA/IAS

TS

EFFRS/PISRR

GTB

EBFAS = TD

nen/I & I

SS

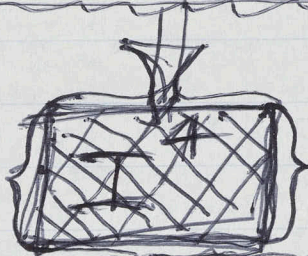
Thinking | Doing | achieving

Ideas | actions | realization

Theory | practical | reality
~~Concept~~ | ~~means~~ | ~~end~~

Intent | effort | outcome

Insight - Imagination - Intent - Initiative



Thema

Chaos/Unertainty

accomplish Polished Design

However Wegwe = a way of thinking



COG ~~was~~ represented by army
COG " " capital
COG " " public opinion pollman

Four/Director →

Intent / Effort / Fulfillment

XX

• Philosophy / procedure / practice / Execution

• Output / outcomes

• Situational Awareness

• Map Exercises (AES)

• Understand Operation
Provide Concept
Execute

50%

all
die

• Culminating point



Explain

with Note 1.

VIP

- ① " • Something is symmetrical when one or more aspects of it are independent to change. (Top-down)

which suggests that

- ③ • We can generate symmetry by uncovering and shaping one or more invariant mental features that are common with ~~many~~ ^{many} different and changing mental images that represent the transient world we must interact with to survive and grow. (bottom-up)
- Can better get

- ④ • We can generate symmetry by uncovering and shaping one or more invariant mental features that we can use to construct many different and changing mental images that represent the transient world that we must interact with to survive and grow. (bottom-up)

②

Symmetry is present when one or more aspects of something are ^{invariant} ~~different~~ to change & transformation

which implies that

④

We can generate symmetry by uncovering and shaping one or more invariant mental features that we can use to construct many different and changing mental images that represent the transient world that we must interact with to survive and grow.

III

Max symmetry equates to min entropy
Min symmetry equates to max entropy

III

Pure/perfect symmetry equates to zero entropy / max entropy
Zero symmetry equates to max ^{all encompassing} ~~unmanageable~~ entropy

I

The greater the symmetry the less the entropy
The less the symmetry the greater the entropy

Not always
must play
with it

Bumped into Dwyer on
8/14/91

Key

Shape our efforts so that we compel our adversaries to
adjust to an unfolding, everchanging array of circumstances
yet constrain them so that they are unable to do so



same as



Placing an adversary between a rock and a hard spot

or focus

Shape our efforts so that an adversary is compelled to adjust to unfolding circumstances yet ^{simultaneously} constrained from doing so by those very same efforts.

Shape or focus our efforts to compel an adversary to adjust to unfolding circumstances yet simultaneously constrain him from doing so.

Shape or focus our efforts so that our adversary is compelled to adjust to these unfolding efforts yet is simultaneously constrained from doing so.

Shape

Shape, focus and reflect our efforts in order to compel ~~an~~ adversary to adjust to them as they unfold yet simultaneously constrain him from doing so.

Shape our effort (Tactical, & Strategic)
so that we compel ~~our~~ ^{any} adversary to adjust to an unfolding everchanging
array of circumstances yet simultaneously constrain
them so that ~~they are~~ ^{they are} unable to do so

Shape our efforts (Tactical and tactical, Strategic)
so that we compel our adversary to adjust to an
unfolding everchanging array of circumstances yet
simultaneously constrain them so that they are
unable to do so.

Leverage - Asymmetry
Trap
dilemma

Agent of Influence / Part Choate

San Tzu
New Theme

- Harmony & Trust
- Justice & Well-being
- Inscrutability & Enigma
- Deception & Subversion
- Rapidity & Fluidity
- Dispersal & Concentration
- Surprise & Shock

⑦

Grand Message

In a mathematical/logical sense we can say:

- Taken Together the Theorem associated with Gödel, Löwenheim & Skolem, Tarski, Church, Turing, Chaitin, and others reveal that: Not only do the statements representing a theoretical system for explaining some aspect of reality explain that reality ~~completely~~ inadequately or incompletely but like it or not, such statements spill out beyond any one system and do so in unpredictable ways or conversely
- These Theorems reveal that: We can neither predict the future migration and evolution of these statements, nor just confine them to any one system, nor suggest that they fully embrace any such system.)

Now, if we extend these ideas and build upon them ~~if~~ in a scientific/engineering sense we can say:

• ——— } same as we have now
• ———
• ———
• ———

← which altogether imply that:
• ——— same as we have now

(1)

17001 ~~How~~ Retropections

- ~~How~~
- If we reverse direction and reexamine where we have been we can see that: Without the ^{explicit} ~~intuitive~~ interplay of analysis and synthesis we have no basic process for generating novelty; no basic process for addressing mismatches between our mental images/impressions and the reality it is supposed to represent; and no basic process for ~~changing~~ ^{reshaping} our orientation toward that reality as it undergoes change.

Put Simply

- Without the interplay of analysis and synthesis we have no basis for the practice of science/engineering and the pursuit of technology, since novelty, mismatches and reorientation as the lifeblood ingredients that naturally arise out of such practice and pursuit can no longer do so!

~~statement~~
~~two passages~~

Revisions Comment

- These ~~would~~ ^{passages} seem to suggest that the "Simple-Hooded Message" presented in the beginning whereby:

"Science can be viewed as a self-correcting process of observation, hypothesis, and test"

whereas

Engineering can be viewed as a self-correcting process of observation, design, and test

should be modified as follows:

Science can be viewed as a self-correcting process of observations, analyses/syntheses, hypotheses, and test subroutines

Engineering can be viewed as a self-correcting process of observations, analyses/syntheses, design, and test

3 - why - ?

Without the interplay of analyses ~~and~~ ^{design} synthesis, how ~~does~~ ^{can one} evaluate the hypothesis and follow-on test let alone the original "Simple - Handed Message" we portrayed at the beginning of this presentation.

Note

As will be shown this revised message of:
Observation, analyses/syntheses, hypotheses ^{design} ~~and~~ test
will fit in nicely with other activities and processes
that ~~will~~ ^{evolve} later on,
arise

* *

On last chart (central theme)
point out in a sense, we have
returned to the beginning -
(Sun Tzu) notion of harmony
before we can play the
conflict game successfully.

* ~~Ngaleu~~ $\Rightarrow$

~~6 Poor to~~ Good Strategy

6 Poor brand Strategy and

Tactics (tactics become
stereotypes or turn over
on)

POC

* Use MD for brand Strategy
-- the M and M Strategy --
after examining "Soviet Revolutionary
Strategy". Do so by Asking
Questions: ~~What~~
• what's going on here?
• In a presidential way
what are Lenin/Stalin
doing?

* Use Jomini charts and
~~his comments about physical~~
~~lines of communication~~ for connective
~~to support base~~ (base of operations)
his comments about importance
of a ^{support} base (base of operations)
and ~~maintaining~~ ^{physical} lines
of communications to that support
base. ~~to see in this sense~~
In this sense, show we also
~~connective to~~ need moral/mental
support bases and connections
thru to.

POC

x

- Use Zorn's lemma and his comments about the importance of a base of operations (support base) and the maintaining of physical lines of communication to that support base. In this sense show we also need moral/mental support bases and connections ~~thereto~~ thereto.
- Use MD for Brand Strategy - - re M and M strategy - - after examining Soviet Revolutionary Strategy.
Do so by raising questions:
 - What's going on here?
 - In a fundamental way, what are Lenin/Stalin doing?
- Use "Underlying Insight" and The Name-of-the-Game to raise the question: what are the ~~3~~ fundamental ways by which we can isolate our adversaries? How do we achieve this?

- On last chart (central theme) point out, in a sense, we have returned to the beginning (Sun Tzu) notion of harmony before we can play the conflict game successfully.
-

Napoleon

- Good Strategy
 - Poor Grand Strategy
 - Poor Tactics
-

Lawyer in Courtroom

- Prosecutor tries to show by facts broke societal rules
 - Cross-Examiner try to destroy credibility of witnesses by hard on strategy
-

- Use Goats - Guerrilla Chart to show M-M-P isolation measures

• Productivity is increasing.

• elite vs rank/file

• alternate production programs of peace should ~~break out~~
break-out

• M+1 more bills / BS

• ~~FIS~~ IAS / in Theory

• See Andrew Hamilton
about Levy Barton come
~~over~~ to Communism on
BVR minutes

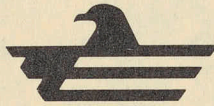
• Public vs private owned

John

Notes

- In 1978 the proposal was admired but not implemented! W.G. Wat?
- ~~People~~ Our people in the system did not want to make visible the trade off and ultimate decisions that came into being.

From the desk of:



WILLIAM S. LIND

Director

Date 2.4.90

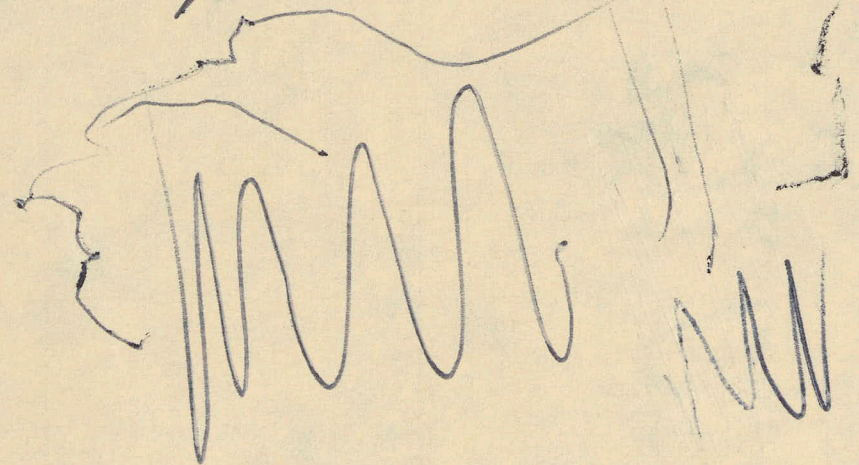
John -

This will give you
some idea of "Airland
Battle Future."

Bill

The Center for Cultural Conservatism
721 2nd Street, N.E. • Capitol Hill • Washington, D.C. 20002
(202) 546-3000

- Harmony & Trust
- Justice & ^{well-being} ~~Success~~
- Deception & subversion
- Enigma & ^{discrepancy} ~~obscurity~~
- Rapidity & Fluidity
- Disgrace & Concentration
- Surprise & Shock



- Harmony
- Deception
- Swiftness of action
- Fluidity of action
- Disgrace / Guilt
- Surprise
- Shock

32
 34
 34
 32
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 33

34
 34
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 32
 13

Unstated Message

derived from
Shewhart & Deming

~~study~~
~~study~~
5 May 92

- We can neither maintain nor reduce statistical variation of ^{physical} a process/system unless we reach out beyond that process/system.

or put another way

- We can neither maintain nor reduce statistical variation of ^{physical} a process/system from within that process/system.

I

TS 6

Elaborations

I

3 - Question -

- What have we looked into so far?

In General we surfaced

- The Situations we face
- the actions we undertake to deal with these situations.
- The ideas we come up with as a basis for the actions we undertake.
- The ideals or values we subscribe to, in order to hold a group together so we can give focus and vigor to our ideas and actions

We also emphasized

- The moral-mental-physical character of the world we live in.

In other words
we have

- Situations, actions, ideas, ideals, and
- Physical, mental, moral

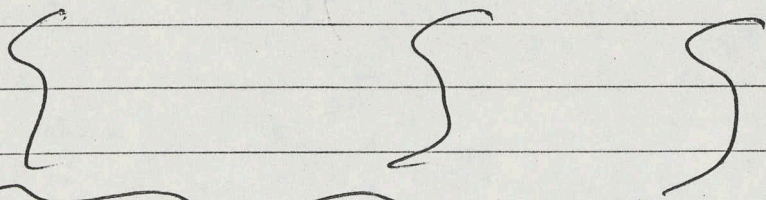
3 - Raises Questions -

- How do we relate these two perspectives with one another?
and
- What bearing does their relationship have on our previous discussions of strategy?

Illumination

- Staying within our theme we want our actions to be matched or related to the situations we have to face; for our adversaries we want just the opposite: mismatches
- Likewise our ideas must be related to or matched with the actions we undertake as well as with the situations we encounter; for our adversaries we want mismatches, hence negative relation.
- Going one ~~step~~ more step we can say that our ideas must be in harmony or matched with our ideas, our actions, and the situations we encounter. Obviously, we want disharmony and mismatches for our adversaries.

In Graphic Form



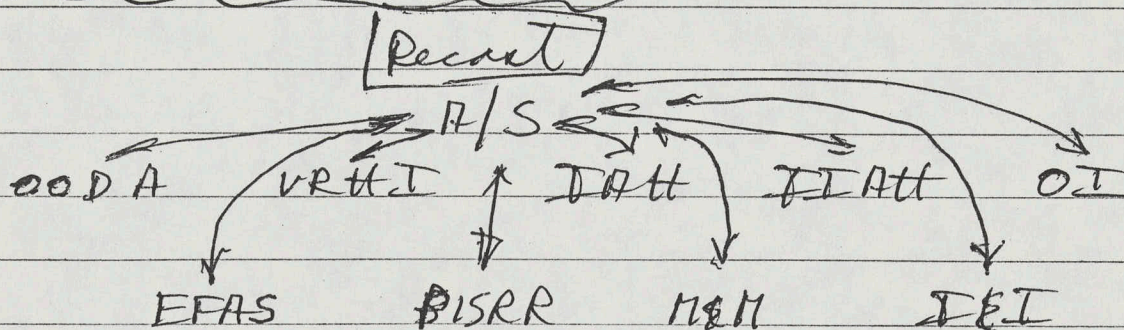
- Entropy $\Rightarrow$ variety without connection or harmony
- Complexity $\Rightarrow$ variety without harmony
- mismatch $\Rightarrow$ inability to find connections between entities or happenings
- mismatches $\Rightarrow$ inability to find connections among a variety of phenomena

Briefed Capt Hammond on 5 April 83, He audiotaped it

I Cascading Interdependencies I

Some Key Ideas

- OODA, VRHI, IAH, IIAH, OI
- EFAS, PISRR, H&M's, I&I



Recast

Actions
Qualities

OODA $\Rightarrow$ H&M $\Rightarrow$ PISRR $\Rightarrow$ I&I

VRHI IAH IIAH OI EFAS

* IO, H&I * see it

- Without A/S or IOH&I
- without IOH&I & A/S, no rapid OODA loops
- without OODA, IOH&I, & A/S, no H&M
- without H&M, OODA, IOH&I, & A/S, no PISRR
- without PISRR, H&M, OODA, IOH&I & A/S, no I&I
- without I&I and preceding, no organic success

? — Paradox Question — ?

What do we mean by organic success?

Message:

Organic success: the ability to thrive and grow by being able to comprehend, shape, and cope with an everchanging and unpredictable world we are a part of, live in, and feed upon.

Empey Grant Hammons 5 April 93 & was undeveloped

Key Psychosomatic Qualities for Organic Success

* IOAH-I *

- Insight $\Rightarrow$ the ability to peer into and discern the inner nature or workings of things
- Orientation $\Rightarrow$ a many-sided implicit cross-referencing process that evolves mental images & impressions of the phenomena we ~~work with~~ interact and deal with.
- Harmony $\Rightarrow$ a web of interconnecting feelings, thought, values, actions among, otherwise, differently oriented individuals that permit them to operate in a cooperative or focused way.
- Agility $\Rightarrow$ the ability to shift from one unfolding OOH-loop pattern to another by being able to transition from one orientation to another.
- Initiative $\Rightarrow$ internal drive to think and take action without being urged.

}- Question -?

What do we mean by organic success?

Message

Organic Success: the ability to thrive and grow by being able ^{to} comprehend, shape, and cope with an everchanging and unpredictable world that we are part of, live in, and feed upon.

When we think about moral authority, legal authority, policy, doctrine: What are we driving at? What are we emphasizing? -- {Focus and Direction} via constraints & control (Top down)

Raise Question: How do we change these constraints and controls? In other words how do we change the character of these entities?

In our constitution we have provisions for change. Where do these emanate from? -- bottom-up

In this sense, from a [means/ends] perspective, means determine ends achievable.

With these thoughts in mind, how does all this play-out in terms of "Winning and Losing"

-- VRHI $\Rightarrow$ IIQ $\Rightarrow$ OODA $\Rightarrow$ H&M $\Rightarrow$
PISR $\Rightarrow$ I&I -- [bottom-up]

-- Resources $\Rightarrow$ Tactics $\Rightarrow$ Grand Tactics $\Rightarrow$
Strategy $\Rightarrow$ AIMS $\Rightarrow$ Grand Strategy $\Rightarrow$ National Goal

Now the Question: When we are speaking of strategic scheme or design what are we talking about? What are the pieces that make-up the scheme or design -- [intentions]

Buddy on the we have: Tasks $\Rightarrow$ mission $\Rightarrow$ intent $\Rightarrow$ motive which is nothing more than cascading interdependencies hence a cascade of [means/ends] or [whats/whys]

Bottom line: What does all this suggest? Our [orientation] should emphasize [bottom-up and -up] otherwise we cannot easily cope with uncertainty and unpredictable change.

\$ audited 5 April 93

see flow

Breepel Grant Hammer

II

~~IX~~

~~IX~~

Strategy

? - What is it - ?

A mental tapestry of changing intentions
for
harmonizing and focusing our efforts as a
basis for realizing some aim or purpose
in an unfolding and often unforeseen world
of many bewildering events and many contending interests

Revised Great Harmonious & Antithetical 5 April 2013

3 July 89
4 July 89

• Schwerpunkt:

- a dynamic shaping agent that harmonizes actions with intentions and focuses those actions to realize a desired aim.
- a dynamic shaping agent that harmonizes (a variety of) changing tactical actions with changing strategic intentions and focuses those actions to realize a desired strategic aim.

In this sense
Schwerpunkt is ^a ~~the~~ medium that connects actions with intentions, ~~and also connects~~ ^{or} tactics with strategy.

• Grand Tactics or Operations

The art of connecting and harmonizing tactics with strategy by conceiving, focusing and exploiting a variety of changing tactical actions ^{present} that implement changing strategic intentions to realize a desired strategic aim.

Briefed Bruce Gudmundson on 5 July 89
also briefd PM Spay and Mike Burns on
4 July 89 on all the above; also John
Schmitt on 5 July 89; Briefed B Watts on
10 July 89. Also Chuck Sperry on 11 July 89.

also GAO on 11 July 89, Ray Raeburn on 14 July 89.

Grand Hammer
acknowledged 5 April 88

• Schwerpunkt can be conceived as

- a dynamic shaping agent that harmonizes actions with intentions and focuses those actions to realize a desired aim.
- a dynamic shaping agent that harmonizes (a variety of) changing tactical actions with changing strategic intentions and focuses those actions to realize a desired strategic aim.

• Focus of Effort(s)

- a dynamic shaping agent that harmonizes (a variety of) changing actions with changing intentions and focuses those actions to realize a desired aim
- a dynamic o.o.o. (as stated above by second statement under Schwerpunkt)

In this sense

Focus of Effort(s) is the medium that connects action, with intentions or tactics with strategy

hence

expanding on this idea we can evolve!

Grand Tactics or Operational Art

The art of connecting and harmonizing tactics with strategy: by conceiving, focusing and exploiting a variety of changing tactical actions that implement changing strategic intentions to realize a ~~desired~~ desired strategic aim.

Techniques

~~techniques~~Techniques $\Rightarrow$ Tactics $\Rightarrow$ grand tactics $\Rightarrow$ strategy

11/1/89

• Technique $\Rightarrow$ a habitual or polished way of doing something.

11/1/89

• Tactics $\Rightarrow$ a variety of techniques that interconnect & flow into one another that produce, hence represent, actions to realize some ^{operational} end.

3/7/89

• Grand Tactics $\Rightarrow$ The art of connecting and harmonizing tactics with strategy by conceiving, focusing, and exploiting a variety of changing tactical actions that implement changing strategic intentions to realize a desired strategic aim.

7/6/89

• Strategy $\Rightarrow$ a mental tapestry of changing intentions for harmonizing and focusing our efforts as a basis for realizing some aim or purpose in an unfolding and often unforeseen world of many bewildering events and many contending interests.

Tactics ^{represent} implications

• Tactics (are a) ^{represent} syntheses of techniques

• Grand tactics (are a) ^{represent} syntheses of tactics & techniques

• Strategy (is a) ^{represent} syntheses of grand tactics, tactics, and techniques

Grand Message

- Any coherent intellectual systems we evolve to represent large portions of reality, will at best represent that reality incompletely.
- Furthermore, we cannot determine or discern the character/nature of such systems within themselves.
- Going even further, we neither have nor can we create beforehand a supersystem that can forecast or predict the consequences that flow from whatever other systems we create later-on.

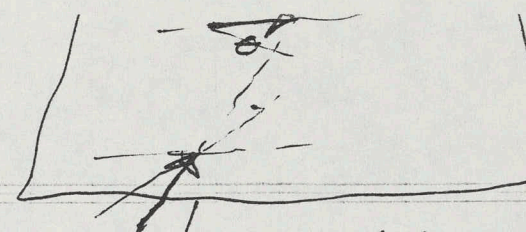
which implies that

- people using theories or systems evolved from a variety of information will find it increasingly difficult, and ultimately impossible, to interact with and comprehend phenomena or systems that move increasingly beyond and away from that variety -- that is, they will become more and more isolated from that which they are trying to observe or deal with unless they exploit the new variety to modify their theories/systems or create new theories/systems.

which further implies that

- a person who is able to make more cross-references or more cross-connections than someone else and use them as a basis to operate inside that someone else's ~~OODA~~ loops will be able to fold him back inside himself -- by isolating him from that which he is trying to observe or deal with, as stated above.

$$K = \frac{d\phi}{ds}, \quad \phi = \frac{d\phi}{dt}, \quad N_r = \frac{ur}{r}, \quad a = \frac{dv}{dt}, \quad V = \frac{dz}{dt}$$



$$\dot{\phi}_A = \dot{\phi} \mp K \quad \dot{\phi} = \frac{V_D \sin \theta \mp V_A \sin \alpha}{S}$$

Now we let $\sin \alpha = k \cos \theta$ $\sin \alpha = k \sin \theta$

then $\dot{\phi} \cos \alpha = \dot{\phi} k \cos \theta$ which becomes $\dot{\phi} = \frac{\dot{\phi} k \cos \theta}{\cos \alpha} = \frac{\dot{\phi} k \cos \theta}{\sqrt{1 - k^2 \sin^2 \theta}}$ since $\cos \alpha = \sqrt{1 - \sin^2 \alpha}$

Now since $\dot{\phi} = \dot{\phi} - \dot{\phi}_D$ if we let $\phi = \dot{\phi} - \dot{\phi}_D$ then:

$$\dot{\phi} = \frac{(\dot{\phi} - \dot{\phi}_D) k \cos \theta}{\sqrt{1 - k^2 \sin^2 \theta}}$$

or if we let k vary then we have $\dot{\phi} = \frac{\dot{\phi} k \cos \theta + \dot{\phi}_D \sin \theta}{\sqrt{1 - k^2 \sin^2 \theta}}$ hence

$$\dot{\phi} = \frac{(\dot{\phi} - \dot{\phi}_D) k \cos \theta}{\sqrt{1 - k^2 \sin^2 \theta}} + \frac{\dot{\phi}_D \sin \theta}{\sqrt{1 - k^2 \sin^2 \theta}}$$

Therefore: $\dot{\phi}_A = \dot{\phi} \mp \frac{\dot{\phi} k \cos \theta}{\sqrt{1 - k^2 \sin^2 \theta}} \mp \frac{\dot{\phi}_D k \cos \theta}{\sqrt{1 - k^2 \sin^2 \theta}} \mp \frac{\dot{\phi}_D \sin \theta}{\sqrt{1 - k^2 \sin^2 \theta}}$

$$\dot{\phi}_A = \dot{\phi} \left[1 \mp \frac{k \cos \theta}{\sqrt{1 - k^2 \sin^2 \theta}} \right] + \frac{\dot{\phi}_D k \cos \theta \mp \dot{\phi}_D \sin \theta}{\sqrt{1 - k^2 \sin^2 \theta}}$$

$$\dot{\phi}_A = \left[\frac{V_D \sin \theta - V_A \sin \alpha}{S} \right] \left[1 - \frac{k \cos \theta}{\sqrt{1 - k^2 \sin^2 \theta}} \right] + \frac{\dot{\phi}_D k \cos \theta - \dot{\phi}_D \sin \theta}{\sqrt{1 - k^2 \sin^2 \theta}}$$

hence

$$\dot{\phi}_A = \left[\frac{V_D \sin \theta}{S} \right] \left[1 - \frac{V_A \sin \alpha}{V_D \sin \theta} \right] \left[1 - \frac{k \cos \theta}{\sqrt{1 - k^2 \sin^2 \theta}} \right] + \frac{\dot{\phi}_D k \cos \theta - \dot{\phi}_D \sin \theta}{\sqrt{1 - k^2 \sin^2 \theta}}$$

now let $\frac{V_A}{V_D} = k$
~~then~~ $\frac{\sin \alpha}{\sin \theta} = k$ Then we have

$$\dot{\phi}_A = \left[\frac{V_D \sin \theta}{S} \right] \left[1 - k k \right] \left[1 - \frac{k \cos \theta}{\sqrt{1 - k^2 \sin^2 \theta}} \right] + \frac{\dot{\phi}_D k \cos \theta - \dot{\phi}_D \sin \theta}{\sqrt{1 - k^2 \sin^2 \theta}}$$

if $k=0$ then PP
 if $k=1$ then CC
 and $k = \frac{V_D}{V_A}$

I

- Mr Grode, colleagues, students & distinguished visitors
- Thank you for inviting me to a graduation that I missed some 47 years ago in June 1945.
Let me explain o o o
- During those intervening years I've had the opportunity to interact with many different people and cope with many different kinds of situations
- What have I found out?
- Learning does not end with a diploma or a graduation exercise.
- Our reality unfolds in a variety of ways -- that are essentially uncertain, everchanging, unpredictable
- To thrive and grow in such a world we must learn & adapt until the day we die.
- Listening to a bunch of analysts, experts, or analytical experts or reading their reductionist literature won't get ^{us} ~~you~~ there.
- Why do I say this?

II

- Analysts surface & examine the features that make up a (~~comprehensive~~) whole -- and as I shall point out, such a person is really a half-wit.
- What about being an expert?
- Not so good: an expert has all the answers. He's worked his domain or realm so often and so completely, he's a closed system unable to comprehend & cope with new ideas & actions that lie beyond his turf of expertise.
- Worst of all is an analytical expert -- a half-wit who thinks he has it all figured out but doesn't know what to do.
- We see these people being paraded in the media -- on nightly news programs, seminars, etc. They give us nice rhetorical descriptions & explanations of what has happened but are unable to come forward with any comprehensive/creative proposals as to what we should be doing.
- Why is this so?
- Let me illustrate via a thought exercise!

- Snowmobile example
- As you can see highlighting a feature from each domain is related to analysis, while connecting up each of these features is synthesis
- Point: Building or creating a snowmobile is an analytic/synthetic effort — not just an ^{deduction} ~~analysis~~ performed by some analytical expert.
- You can now see why I call analysts ~~since~~ half-wits since they overemphasize the analytical/logical aspect of their brains yet virtually ignore their synthetic/creative side.
- And you can also see why experts, who are locked up in one domain, cannot cope with ideas & actions that lie beyond their domain of expertise — — —

~~Which gives substance~~

- Which suggests the following Metaphorical Message as I my final comments,

Metaphorical Message

- o Stagnation & Decay set in when someone (individual or group) cannot build snowmobiles when facing uncertainty & unpredictable change

whereas

- o Vitality & Growth become possible when someone (individual or group) can build snowmobiles, and employ them in appropriate fashion, when facing uncertainty & unpredictable change

In other words

Le.

Reading Outside

- Lowenheim & Skolem (1915-1933)
- W Heisenberg & N. Bohr (1927)
- Hawthorne Study (1927)
- Godel, Gentzen, Tarski, et al (1931-1936)
- W Shewhart & W E Deming (1930s & 000)
- Jay Forrester (1958)
- E.T. Hall (1970's)
- Tadaki Ohno & Shigeo Shingo (1978-1992)
- MIT Team of Womack, Jones, Roos (1990)
- G. Stalk & T. Hout (1990)

Many-sided implicit cross-referencing process of
000

I

No Way Out

6 Nov 91

John R Byrd

I

? — why — ?

John Bayard
6 Nov 91

II

? - Natural Question - ?

Why does our world continue to unfold in an irregular, disorderly, unpredictable manner even though some of our best minds try to represent it as being more regular, orderly, & predictable?

I

Now
Upon Reflection

5 Oct 91

6 Nov 91

8 Jan 92

- why

- Folded for

- AS is.

John Boyd

W

Penetrate adversary's moral-mental-physical being to subvert, seize, shatter, or otherwise subdue those moral-mental-physical bastions, connections, or activities that he depends upon, ^{as bases} ~~in order to~~ to dissolve his moral fibre, disorient his mental image, disrupt his operations, overload his system thereby destroying internal harmony, produce paralysis, and collapse adversary's will to resist.

I

? — WHY
Can't We Do Better — ?

II

In Other Words

~~Or~~
~~Put another Way~~
Put another Way

? We Have A Puzzle ?

Why does our world continue to unfold in an irregular, disorderly, unpredictable manner, even though some of our best minds try to represent it as being more regular, orderly, & predictable?

III

More Pointedly

With so much effort over such a long period by so many people to comprehend, shape, & adapt to a world that we depend upon for vitality and growth: Why does such a world, although richer and more robust, continue to remain uncertain, everchanging, & unpredictable?

IV

Response

Very simply, review of "Destruction & Creation", "Conceptual Spiral", and our own experiences reveal that the various theories, systems, processes, etc. that we employ to make sense of that world contain features that generate mismatches that, in turn, keep such a world uncertain, everchanging, & unpredictable.

V

These Features are:

- Uncertainty associated with the unconfinement, undecidability, incompleteness theorems of mathematics & logic.
- Numerical imprecision associated with using the rational & irrational numbers in the calculation & measurement processes.
- Quantum uncertainty associated with Planck's constant and Heisenberg's Uncertainty Principle.
- Entropy increase associated with the Second Law of Thermodynamics.
- Irregular or erratic behavior associated with far-from-equilibrium, open, nonlinear processes or systems with feedbacks.
- Mutations associated with environmental pressure, replication errors, or unknown influences in molecular & evolutionary biology.
- Incomprehensibility associated with inability to completely screen, filter, or otherwise consider spaghetti-like influences from a plethora of everchanging, erratic, or unknown outside events.
- Ambiguity associated with natural languages as they are used and interact with one another.
- Novelty generated by the thinking & actions of unique individuals and their many-sided interactions with each other.

VI

Underlying Message

There is no way out, unless we can eliminate the features just cited. Since we don't know how to do this: We must continue the whirl of reorientation, mismatches, analyses/synthesis over and over again ad infinitum as a basis to comprehend, shape, & adapt to an unfolding, evolving reality that remains uncertain, everchanging, unpredictable

? — [why — why — why] — ?

Specifically

- Why does the world (or universe) appear to be the way it is?
- Why do events & happenings appear to unfold or manifest themselves in the ways they do?
- Why do we become confused and bewildered in trying to ascertain what's going on?

III

More Pointedly

with so much effort over such a long period by so many people to comprehend, shape, & adapt to a world that we depend upon for vitality and growth: Why does such a world, although richer and more robust, continue to remain uncertain, everchanging, and unpredictable?

Response

Very simply, review of "Destruction & Creation" "Conceptual Spiral" and our own experiences reveal that the various theories, systems, processes, etc. that we employ to make sense of that world contain features that generate mismatches that, in turn, keep such a world uncertain, everchanging, and unpredictable.

These Features Include:

- Uncertainty associated with the unconfinement, undecidability, incompleteness theorems of mathematics and logic.
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- Quantum uncertainty associated with Planck's constant and Heisenberg's Uncertainty Principle.
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Underlying Message

There is no way out, unless we can eliminate the features just cited. Since we don't know how to do this, we must continue the wheel of reorientation, mismatches, analyses/syntheses over and over again ad infinitum as a basis to comprehend, shape, and adapt to an unfolding, evolving reality that remains uncertain, everchanging, unpredictable.

IV

Revisited note 16 Oct 91
@ Harvard / OAB 142 K
Pure Science or Strategy?

? — [why = why — why] — ?

? — WHY — ?

5 Oct 91

John R. Bogle

H

II

specifically

? — Some Questions — ?

- Why does the world appear to be the way it is?
- Why do events & happenings appear to unfold or manifest themselves ⁱⁿ the way they do?
- Why do we become confused and bewildered in trying to ascertain what's going on?

III

Focus

To make evident why our world continues to unfold
in an irregular, disorderly, unpredictable manner
even though ^{some of} our best minds try to represent it as
being more regular, orderly, & predictable.

~~IV~~ m ~~III~~
More Pointedly

? — Fundamental Question — ?

with so much effort over such ~~such~~ a long period
by so many people to comprehend, shape, & adapt
to a world that we depend upon for vitality and
growth: Why does such a world, although richer
and more robust, continue to remain uncertain,
everchanging, & unpredictable?

~~IV~~ V

(31) ~~(30)~~

~~IV~~

Response

Very simply, review of "Destruction & Creation", "~~this particular~~ Conceptual Spiral" and our own experiences reveal that the various theories, systems, processes etc. that we employ to make sense of that world contain features that generate mismatches that, in turn, keep such a world uncertain, everchanging, & unpredictable

These features are:

~~VI~~ unity generated by thinking & action of unique individuals and their many-sided interactions with each other,

These Features are:

(32)

- Uncertainty associated with the unconfinement, undecidability, incompleteness theorems of mathematics & logic.
- Numerical imprecision associated with using the rational & irrational numbers in the calculation & measurement processes.
- Quantum uncertainty associated with Planck's constant and Heisenberg's Uncertainty Principle.
- Entropy increase associated with the Second law of ~~thermodynamics~~ Thermodynamics.
- Irregular, or erratic, behavior associated with far-from-equilibrium, open, nonlinear processes or systems with feedback.
- Mutations associated with environmental pressure, replication errors, or unknown influences in ~~evolutionary~~ molecular & evolutionary biology.
- Incomprehensibility associated with inability to completely screen, filter or otherwise consider spaghetti-like influences from a plethora of everchanging, erratic, or unknown outside events.
- Ambiguity associated with natural languages as they are used and interact with one another.

~~VI~~ VII

K1

Underlying Message

There is no way out, unless we can eliminate the features just cited. Since we don't know how to do this:
we must continue the whirl of reorientation, mismatches, analyses/synthesis over and over again ad infinitum as a basis to comprehend, shape, & adapt to an unfolding, evolving ~~existing~~ reality that remains uncertain, everchanging, unpredictable