

# COG401

①

## Seminar on Consciousness

- 20% { Oct 15 - ext. topic p.  
750 words synopsis  
250 words a
- 20% { presentation 5/10 biblio
- 30% { essay - 3000 words
- 30% { final exam

WATCH { RR cog sci  
wisdom  
UTISM

→ Setup a proposal that's reputation would be informative

cogito: to be deceived, one must exist ⇒ a thought must be produced by an existing entity

Descartes' Dualism is really hard (to refute w.r.t. world view)

not decisive argument

bc good reasons to doubt list of essential feat. is exhaustive

↳ inference to the best explanation  
↳ historical: collapse of Aristotelian world view  
↳ rise of scientific world view

MIND ↔ MATTER  
 • qualia                      • mass  
 • nonreductivity            • inertial motion

↳ conformity theory: understand concept

doesn't account for gestalt

grasp form

↳ structural organization of elements is causal ontology

**Contract epistemology**

can furnish of mapping causal meaning  $\varphi \rightarrow \varphi$

map reshapes mind and world

Cartesian severance

SU's story -> check medium for distortion, check organs for malfunctions

Aristotelian world view

appearance - reality divide

Copernican revolution: math is better w/ sun in middle

forced transp- of shift logic

i.e. experience is not clear hence looking at experience itself.

illusion: properties of medium become that of message

Galileo: neoplatonic revival (reality is intelligible vs perception)

math is the language of the world (abstract, symbolic)

phenomenological experience is irrelevant

computational

inertial motion **VS** purposeful motion (=> same as humans) natural

Descartes: solves this issue

since mind / ~~matter~~ world veil

mind <-> matter is appealing

Aristotle: fly can receive aidos much better than racoons.

wood -> potential form for actuality

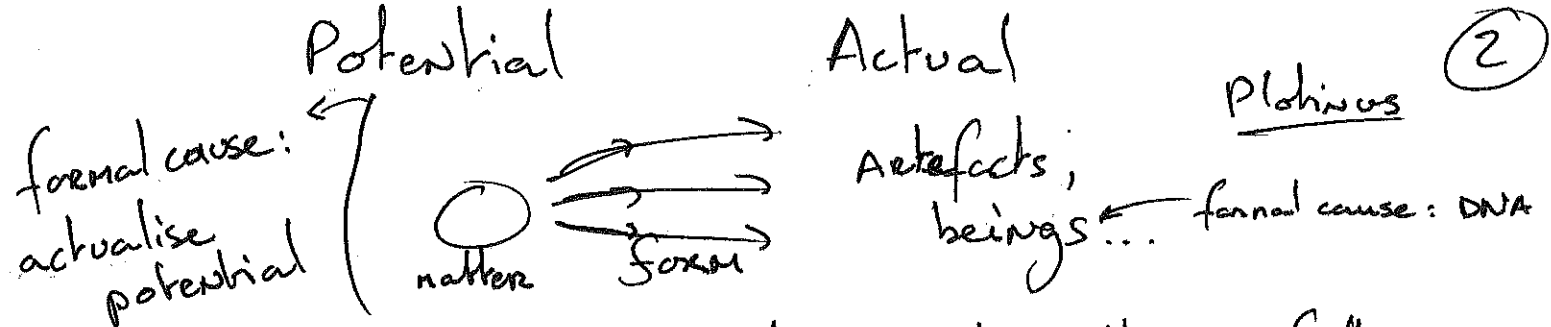
=> matter = potential

but only correct for living beings + artefacts



Mind == structural org. for actualising

Plotinus



evil is a hole in existence where things fall -

Aristotle: potential vs actual is useful for potential equations

pure matter = pure evil

Mind is the form that actualises

No mind/body pb

hylomorphism → mind brings form

biological, rational drive

theoria = seeing deeply into reality

Mind is not only connecting to world, → actualising potential to self saving through formal space

Descartes II

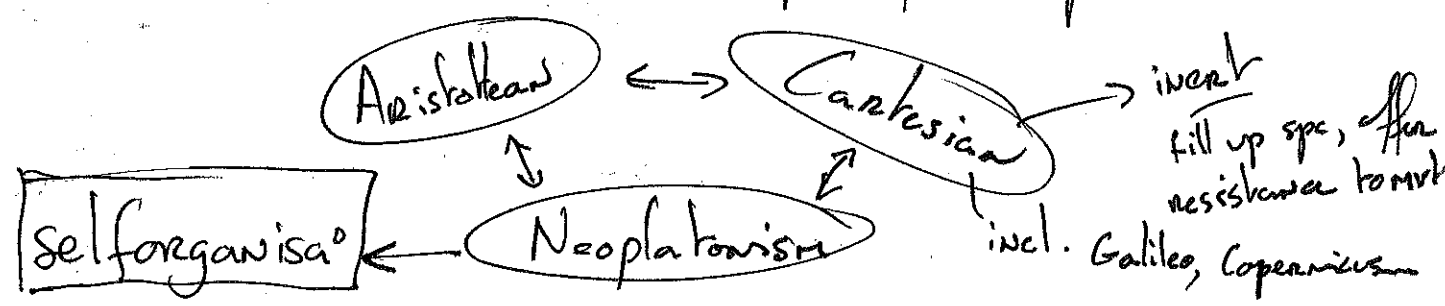
potential vs possibility

Descartes: substantial matter ⇒ mind loses its developmental role (on body & formal space)

mind exists in its own world

inherently epistemic engine

only free: create, manipulate repr. for computational



# Cartesian/Neoplatonism

Neoplatonism  $\rightarrow$  extended mind  
 thinking happens outside

$\hookrightarrow$  actions at a distance:  
 $\varphi$  forces  $\Rightarrow$  structural patterns of reality having causal power  $\sim$  real relations

Romantics = Kant + Neoplatonists

Cartesian Mind: link natural to supernatural

$\rightarrow$  Descartes saw god

Donald Davidson:  $\varphi$  - nomological  
 $\varphi$  - not nomological } no mapping

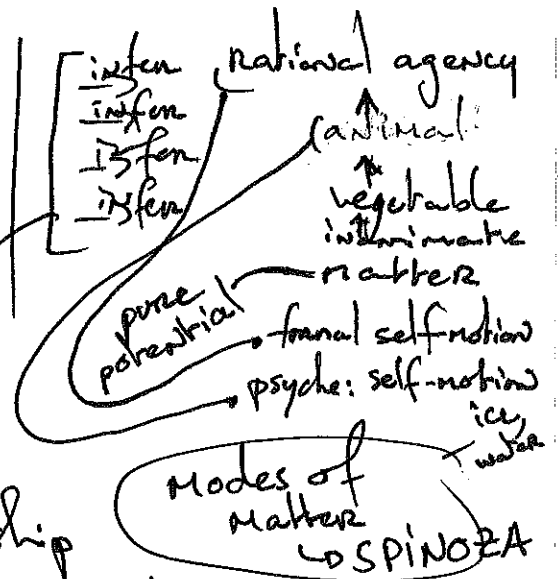
Mental states being correlated to brain states is not proper to  $\varphi \leftrightarrow \varphi$  but to everything's existence

Aristotle: contact epistemology  $\rightarrow$  Descartes: mind touches itself  
 ( $\varphi \leftrightarrow \varphi$ ) (inwards) ( $\varphi \leftrightarrow \varphi$ )

Back to hylomorphism

potential  $\Rightarrow$  diff.  
 hyle

Mind (for Aristotle)



$\rightarrow$  process by which

$\hookrightarrow$  conformity relationship

Matter == sub-stance (under-standing, that which affords)

~~Intentional~~ <sup>agency</sup> ~~Schedulability~~ ↑

By breaking matter, New mind loses its causal, developmental role - → Descartes' duality

⇒ mind becomes solely an epistemic engine.

→ place for subjectivity, illusion, whereas reality → matter → mathematics

Descartes I

Comparative realism: mind represents body.

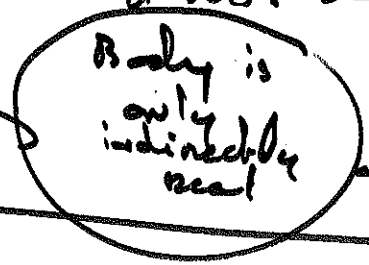
→ can only make sense of things by its intelligibility to itself.

Cogito ergo sum: mind is directly intelligible by itself

→ good representations

→ rationality is the only path to realism

NO: subprop. & procedural -



2 realities

primary props: real → objective  
secondary — : unreal → subjective

from an epistemic standpoint, Descartes derives ontological Solipsistic

→ unstable framework for realism -

# Descartes III

(Hobbes's = failed mathematician) => Descartes: Hobbes's failed scientist

Bill  
Sieger

- o cognition is computational (computational materialism)
- o some notion is representational in nature

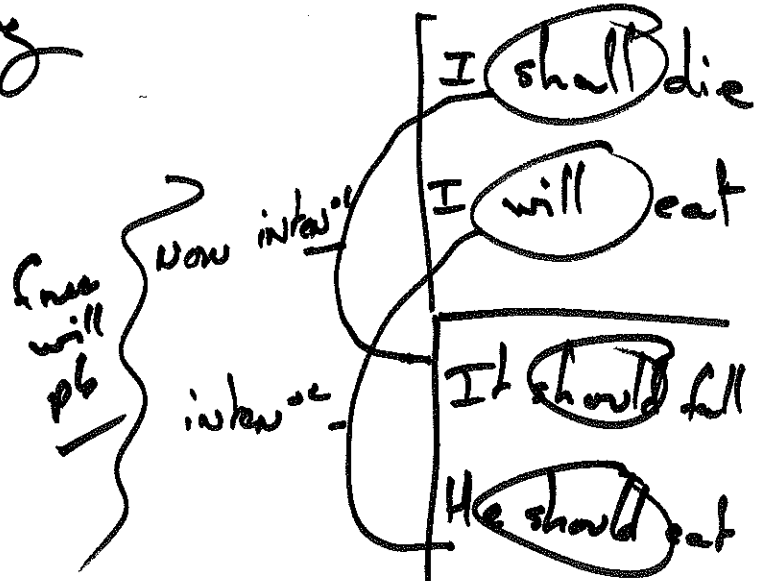
Descartes' answer: paradox of mechanical reason.  
=> original meaning pb.

Knowledge is not only of meaning but normativity? — Hume/Land

mind is the only link between repr. and reality

Meaning — only place for meaning

Normativity  
o same arg: how does  
Moral normativity lead to



Back to Hobbes

Dase —> animals are mechanical reason. (if repr. in brain)  
Hob —> material states co-varies coherently with the world

it is not clear if language is an example or implementation

that's also how he explains memory as memories aren't in the mind

reflective awareness (=consciousness)

intelligent beh ~ animal instinct  
↓  
rational beh ~ human agency

Justification for intuitive gestalt (flash of insight):  
only in that form (moment) it is purely rational.

Wonder - primary way by which we maintain pure rationality  
- pure ~~mental~~ agency

Cartesian rationality sits above Hobbesian machinery  
→ pericial gland?

Binding pts (structure ↔ function) by Descartes



Cog Sci: design source

∴ this is integrated way

with Descartes  
these quests have to  
be answered together

Descartes' 3<sup>rd</sup> arg stems from discussion w/ Hobbes ⑥

→ comput<sup>ic</sup> materialism doesn't have meaning because it is not reasonable

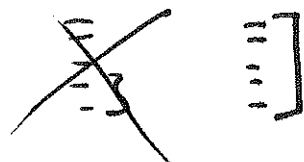
Animal intelligence → lack of language → no mind ← lacking mind substance  
 [Cartesian Mind = epistemic engine of rationality]

Memory → not in conscious awareness

Zombie intelligence → non-conscious human behaviour

brain as material computer

~~is it~~ wonder is seeking insight: must grasp all in flash



### Aspectuality

aspectuality { nature pb → generation pb ( $\psi$  gen.  $\psi$ )  
 function pb → binding pb

consciousness: judgement through a repr.

SV: RR

→ selecting info and binding it

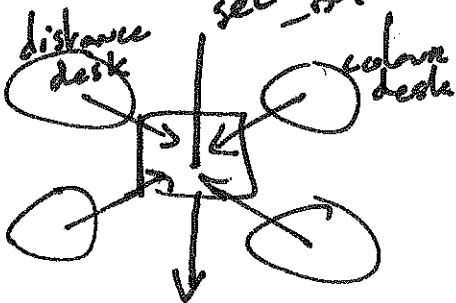
→ creating aspectualized context for repr.

selecting a coherent subset.

⇒ restless mind: constant shift in aspectuality  
 'inst' insight drives complexification.

• Brain states → potential states of consciousness

↳ hindered at ~~percept~~ gland:



Gibson: affordances as what

like a flash of insight

Descartes' doesn't account for

~~potential: info~~



# Polanyian attention

integration  
→ encoding

7

Awareness

Subsidiary

Attention :

subs ———

subs ———



Cope: category mistake when considering attention as primary  
 attention as a function of subsidiary processes  
 2nd order process for cognitive integration

~~indirect awareness~~

using

but can't  
still indirectly  
aware of:

transparent sense: feeling desk  
 but fusing multiple senses thoughts to  
 → integration see through  
 them

↳ indirect awareness of stuff in env.

pure consciousness event: removing all for inner gaze field

side note: there's always a sight that can't be seen → fundamental frame

Ethics - spinoza → read it

focal insight

relevance is a normative bean

fundamental  
sense of self

Polanyian ~~attention~~ <sup>integration machine</sup> → encoding, compressing for interpola°,  
 extrapolat°.

# Rosenthal HOT <sub>agent</sub> <sub>mental state</sub>

(8)

- 1) X is in a <sub>belief</sub>
- 2) X is in T(a)
- 3) X is in a  $\Rightarrow$  X is in T(a)
- 4) \* inference on sensory info is not responsible for

Dretske: imagine being in anger without being aware of it

①  $\hookrightarrow$  his args Rosenthal:  $T(a) \Rightarrow T(T(a))$

Seager's response: that's not what Rosenthal was saying, he's saying that

this ~~leads~~ <sub>uncon</sub>  $\rightarrow$   $T(a)$  leads to conscious

1st order thought

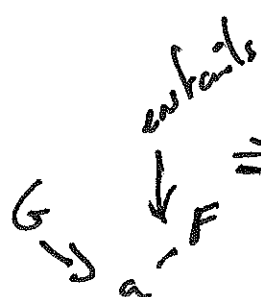
We become consciously angry when we form an 'unconscious belief' about our mental state

this leads to be <sup>in a</sup> conscious state / not to have a conscious thought (2nd order thought)  
introspection  $\neq$  consciousness

②  $\hookrightarrow$  HOT  $\Rightarrow$  a is being aspecialized under T.  
cog. repr.  $\hookrightarrow$  cognitively not consciously  
a is specialized as.

$\Rightarrow$  But So can be conscious about a from a G aspect and not from an ent

there is inappropriateness of  $\mathbb{E}$  s.t. being consc. of a we must be  $\rightarrow$  the salience of a is not dep. on consc. of F.



arg: MODUS TOLENS

modal fallacy: just bc it is possible for any F to be absent from consc. doesn't mean an F is not required

HOT → aspectualised  
aspectualisa° doesn't require specific F.  
conscious without any aspect

side note: actualised belief → actant? but actually it is dispositional - doesn't account for occurrence of consciousness



they can be, but not self-actualising  
belief is not responsible for self-origination of consc., no actual -

to change belief: externaliza° on world to reintegrate

~~HOT~~ → HOP → HOD → HPM

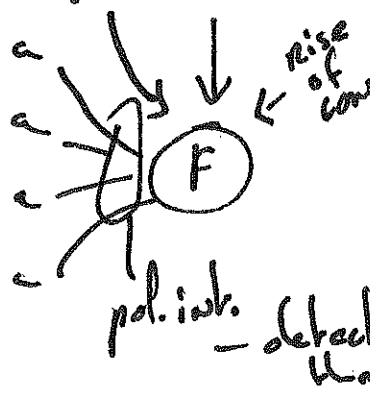
- introspection is the primary way we use to access our consc. - doesn't mean it is an essential feature -

SU: don't confuse properties of the signifier & signified

experiment

blind sight individual is given a white spot to spot. He unconsc. detects it, then we tell him that his blind sight is reliable.

RR is the mechanics aspect/salience consc.



Hence: (1) consc. belief, which (1) unconsc. detecting through (1) belief (detected) is dispositional (2) instance of evidence (1) dispositional

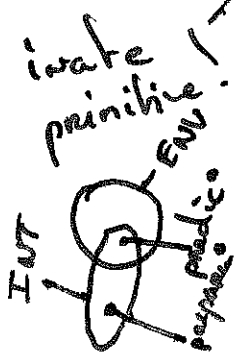
polishian integration: changes f° that detects to f° that detects through  
D affords { aspect & salience

# Signal Detection Theory

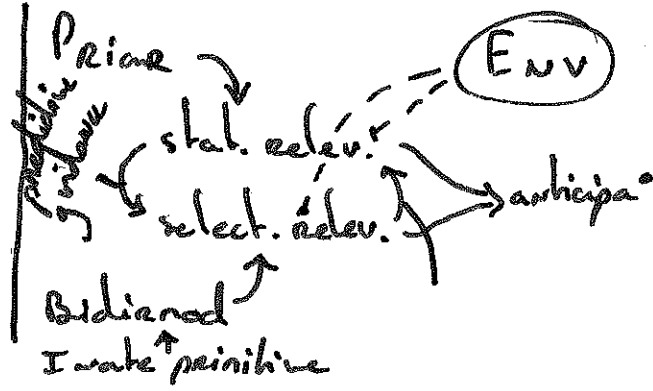
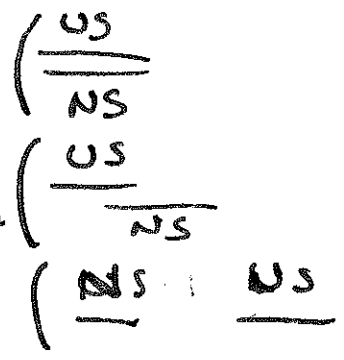
signal {
 

- > statistical relevance
- > selectional relevance

 }
   
 $p(A|B) > p(A)$ 
  
 -> bidiremod
   
 -> affords preparation
   
 -> affords predic°
   
 -> disporitival
   
 -> affords predic°



arg: pavlovian/operant conditioning

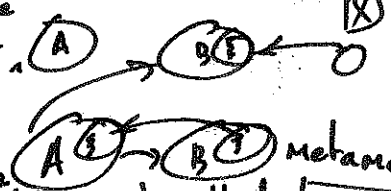
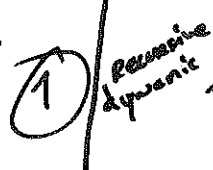


paradox

-> if you don't have P in your KB, how can you recognize P.

Model: signal detection + unsupervised learning

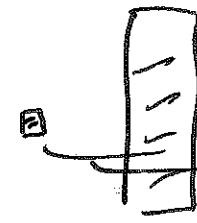
1. conflation pb - clarity - learning to learn
2. projection pb
3. coordination pb
4. optimization pb



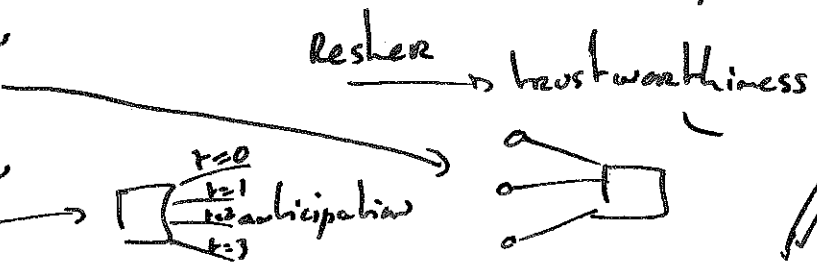
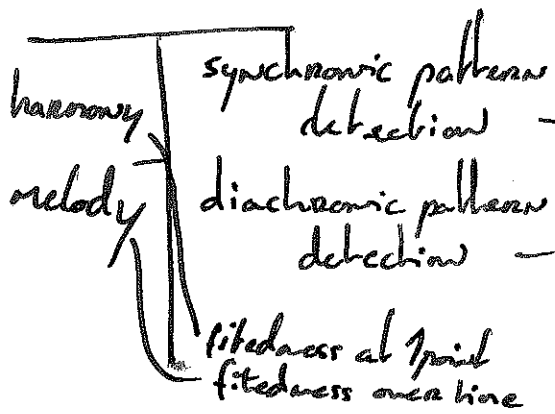
model	usage
X stands for Y so that information carried by X through X	X stands for Y by sharing same identity of content
continuity of content	

insight: bias is a misused heuristic that clears away

- ②
- Lin - Poverty of stimulus
  - HPS - Underdetermina. pb
  - STA - Sample Bias

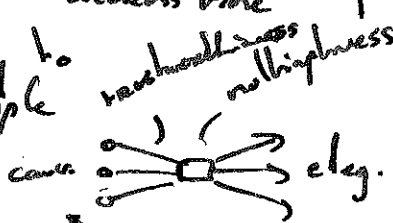


- pick up on its own spontaneous firing  
are patterns of activity representative of the world since input/sample is so poor



reshere → trustworthiness  
rebuilding  
(plausibility is not just high probability)  
metaphor: San is a pig

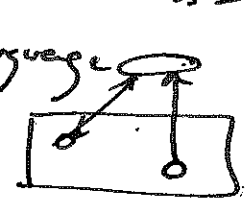
→ nullity: increasing capacity to re-build (pick up on multiple lines of affordances)



systematicity: high level integrated  
local → encoded aptness: floor is walkable → aptness → interacting with the floor in many nullity ways

projection pb: plausibility-dynamical pattern detection - realism -  
beyond language: use of examples in language

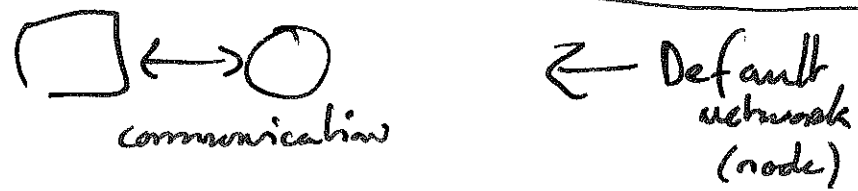
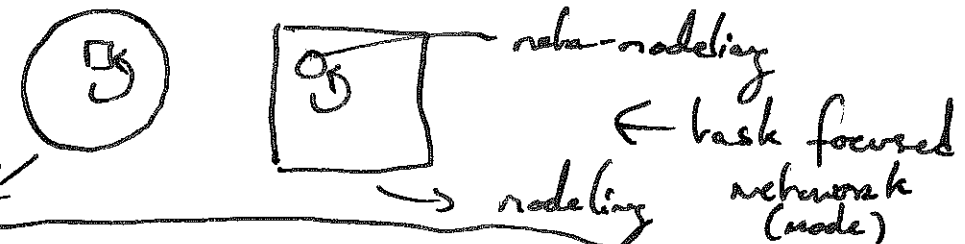
not to be confused with psychotech vs braintech



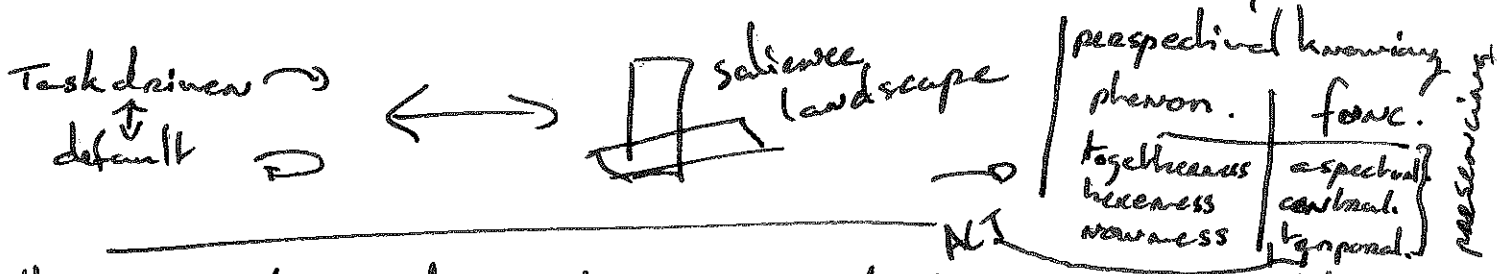
cerebellum  
→ cortex  
insula  
→ prefrontal cortex

③ Mutual modeling:

increase communication → efficiency  
↓  
decrease communication →

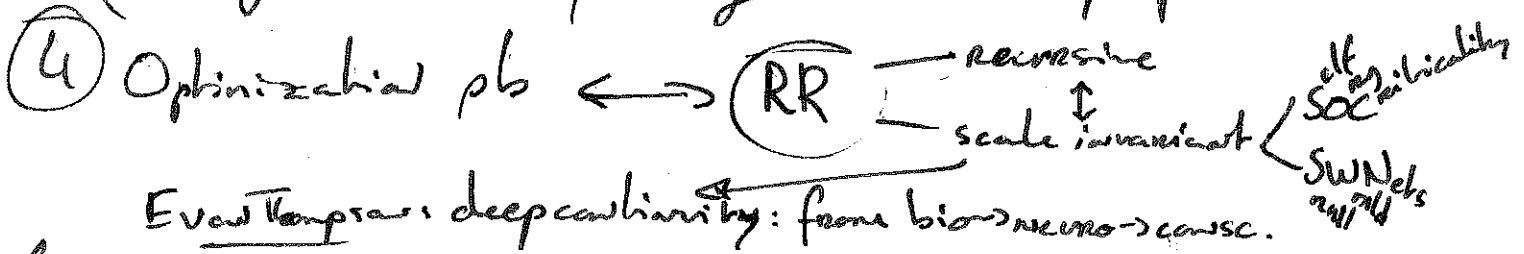


Default  $\leftrightarrow$  Task driven: deeply integrated with experience  
 (lying on salience landscape). imagine the experience  
 of picking up a water bottle when thirsty -



this goes beyond zonic brain bidirectional modeling  
 because of integration with (meta-nod.  $\leftrightarrow$  nodal-nod.), higher  
 level (self-awareness)  $\rightarrow$  self-detection affords consciousness -

(design stance: explaining nature and purpose simultaneously)



(Horror: sudden 3 gaps, despair: gradually drain of meaning)

autopoiesis: self org sys that is providing / predisposing itself  
 for optimizing its ability to self organize -

- how to make good what to model
1. conf. func.
  2. project
  3. coordina.
  4. optimize

P - P  
 N - N  
 A - O