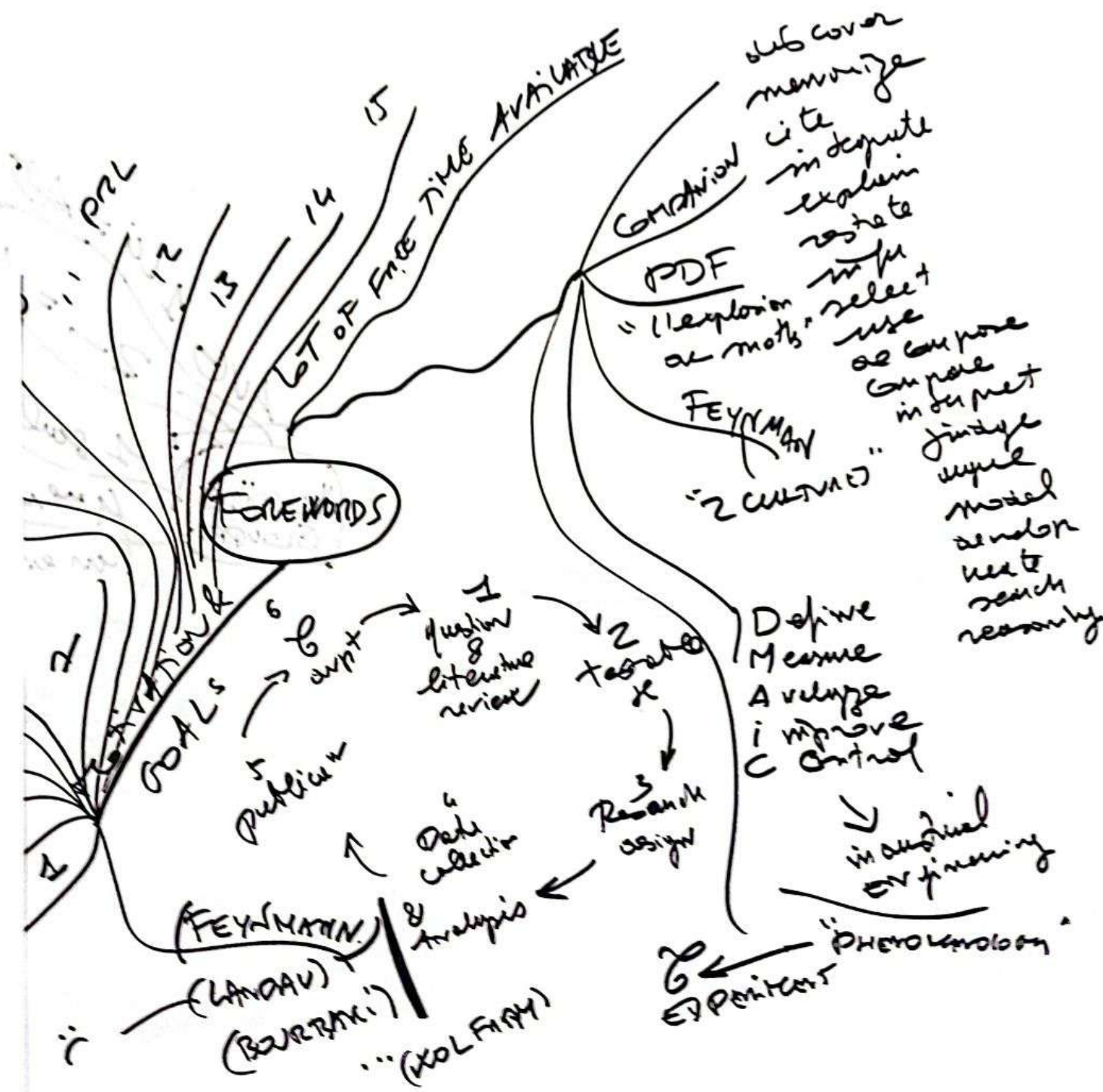
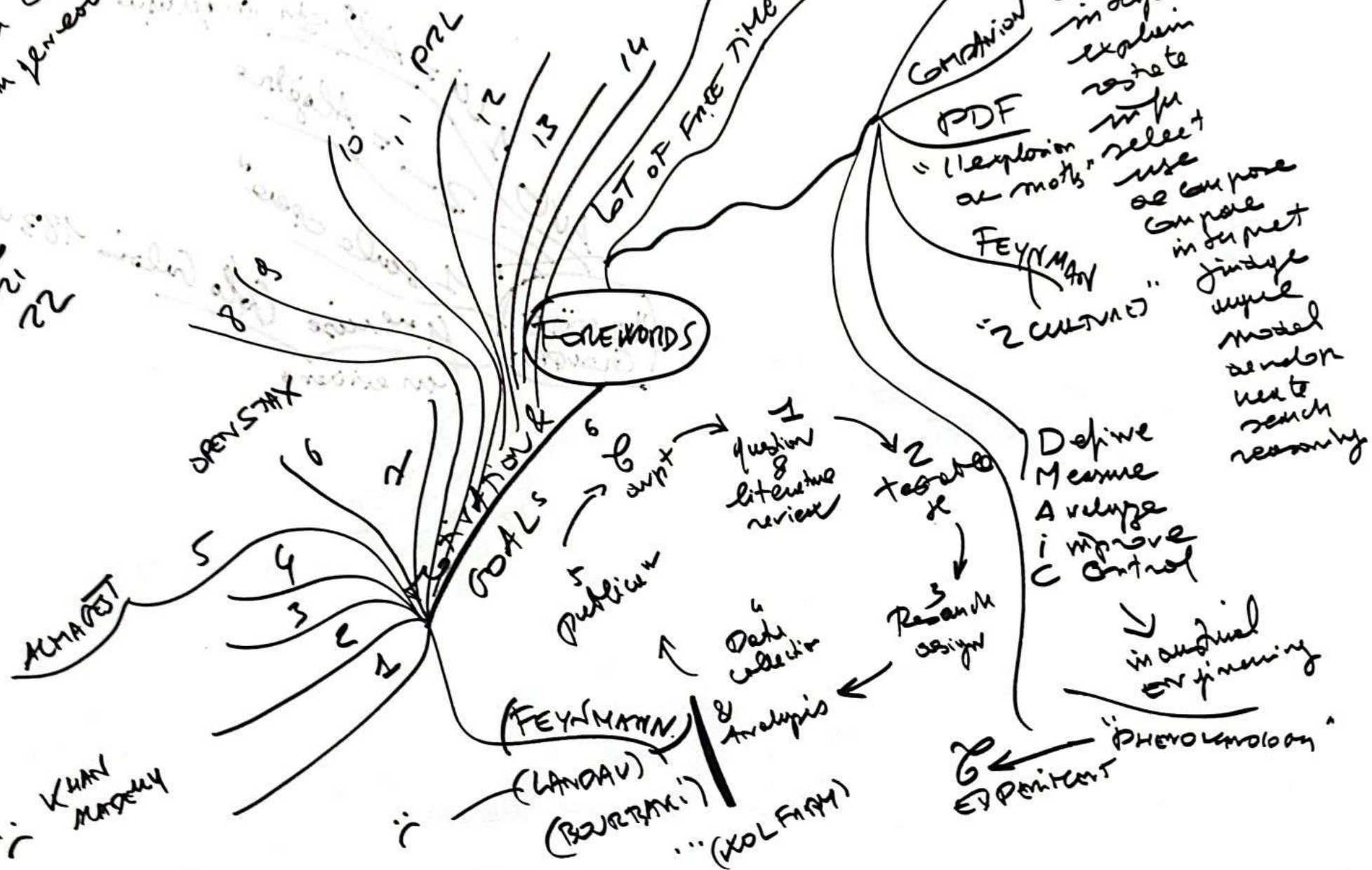


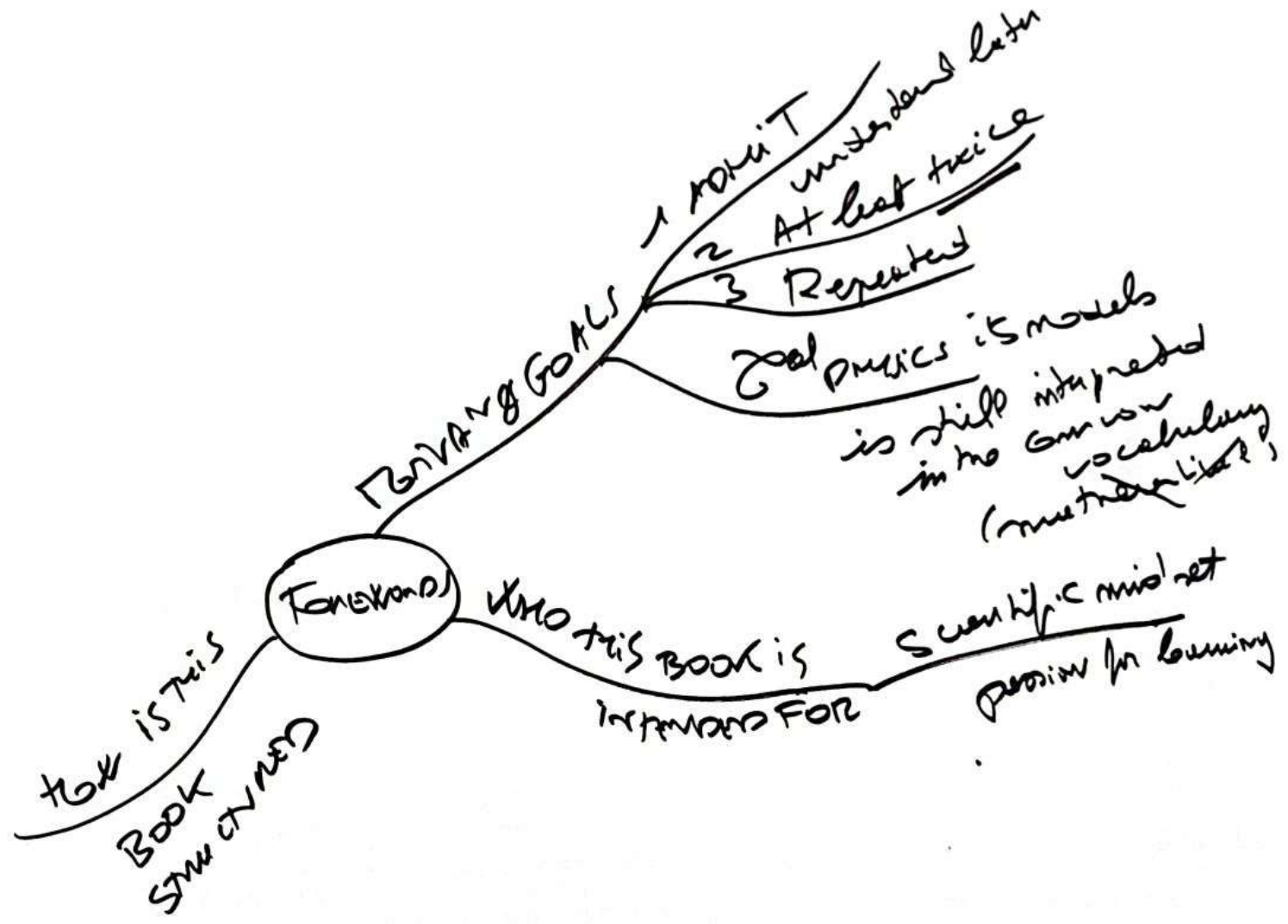
1. Chem Campbell Guide
in Yencours



④ INTRODUCTION

16 Chem Gurdett Guide
 17 Tom Peters
 18
 19
 20
 21
 22





Feynman's

How is this book structured

Who this book is intended for

Learning Goals

- 1 Don't understand later
- 2 At least twice
- 3 Repeated

Goal physics is models is still interpreted in the common vocabulary (metric tensor)

Scientific mind set
preparation for learning

1. Expose formally σ_2 in G_m lang
 "hyp" "conj" "property" to move
 $H_1 H_2 \quad C \quad P$ axioms

2. D axioms A (\rightarrow demonstrable, indep & \neg contradictory)
 will give starting pts & establish restrictions on axpts
 in same vein, & spec^d voc related to operators D

3. Once A_s laid, pull directly "lemmas" on " P " whose validity follows directly & prepare axpt of T supposed to validate axioms H or C

4. Once T_s proved conclude on GNS C_3 level P_3

5. Test strength robustness, useful \rightarrow C on H_s by proving roc of T n by exp with all EX well known \rightarrow check str

6. " " " " " "

1. — concretely —
 all details of "DBS" to solve
 & def roc & not P rigorously

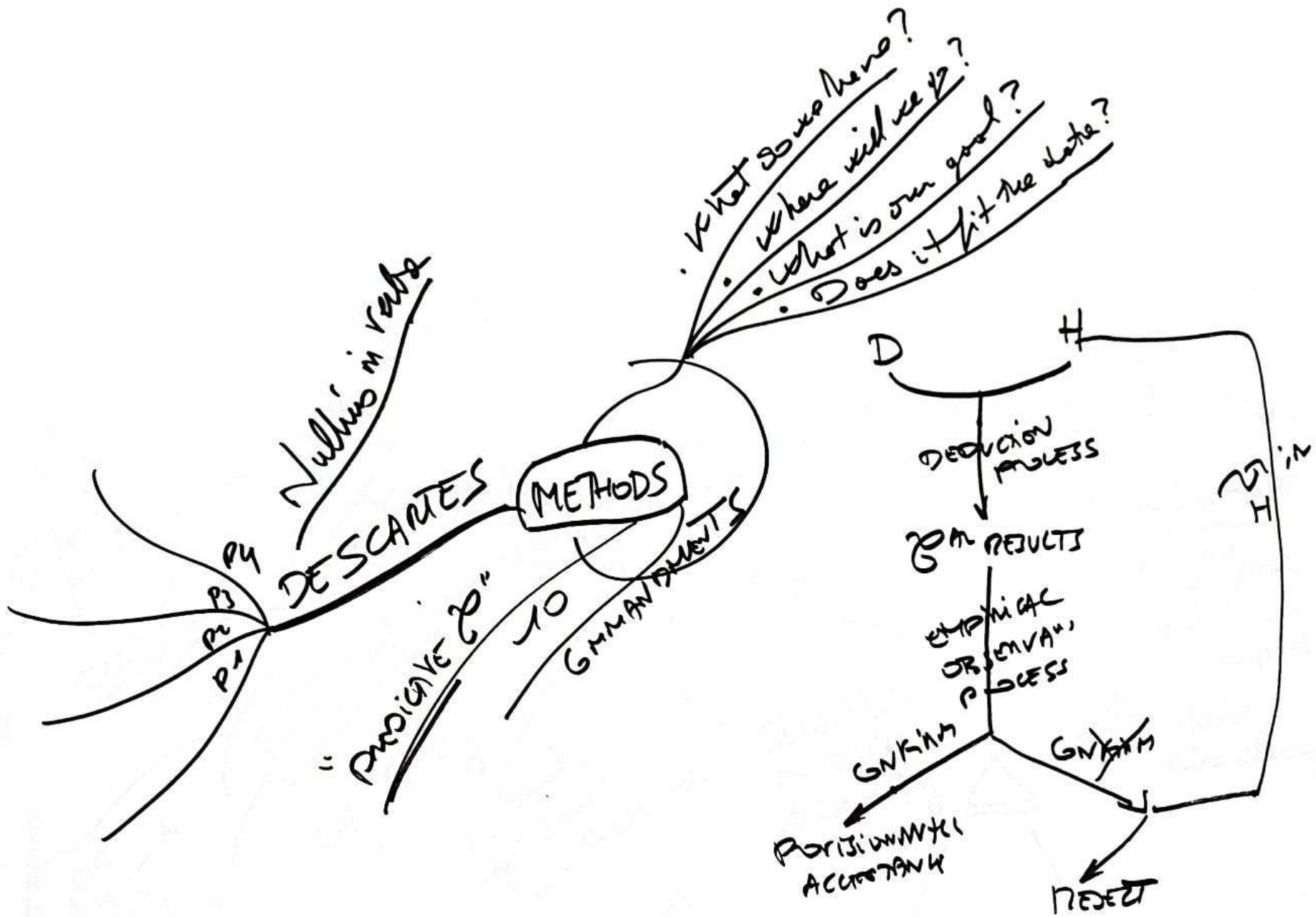
2. D (or state) "postulates" or "principles" or the "hypothesis" & "assumptions" (supposedly improvable but supported by data!)
 \rightarrow give starting point & establish restrictions on axpts (typically trying to errid notation)

3. Once T_s proved check Eq units for possible errors in axpt
 \rightarrow comparison between postulates & axioms

4. Search for borderline cases (including singularities) of mod to verify its validity/behavior individually

5. Exp^y test G mod submit \rightarrow to compare with oth terms. Next mod should \rightarrow exp^d results & Next never observed one (prediction to verify!). if valid beyond res doubt then " G "

6. Possible REM may be shown in a hierarchical str out R



- Frisking truth
- 1 A story is not a fact
 - 2 A fact is not a story
 - 3 Data is not evidence
 - 4 Evidence is not a fact
- it may not be true
it may be a mistake
it may not be accurate
it may not be sufficient
it may not be universal

BLIND STUDIES

RETROSPECTIVE
PROSPECTIVE

RANDOMISED PLACEBO CONTROLLED TRIAL

R
C
D
B
T
M
A
L

PHYSICISTS TOO!
 *
 *
 it's like small adjustments

High Boom
 Great wave
 LIGO

adjustments

to find mod
 will describe
 exp data

REX

Scientific
 evidence
 hierarchy

!
 prior
 knowledge



EL
 DATA → Evidence

I II III
 10 20 30

HI
 IF

LE history
 ≠ scale
 of sources
 in Sciences

Meta Analysis

"Black Box"
 *

"Salting"

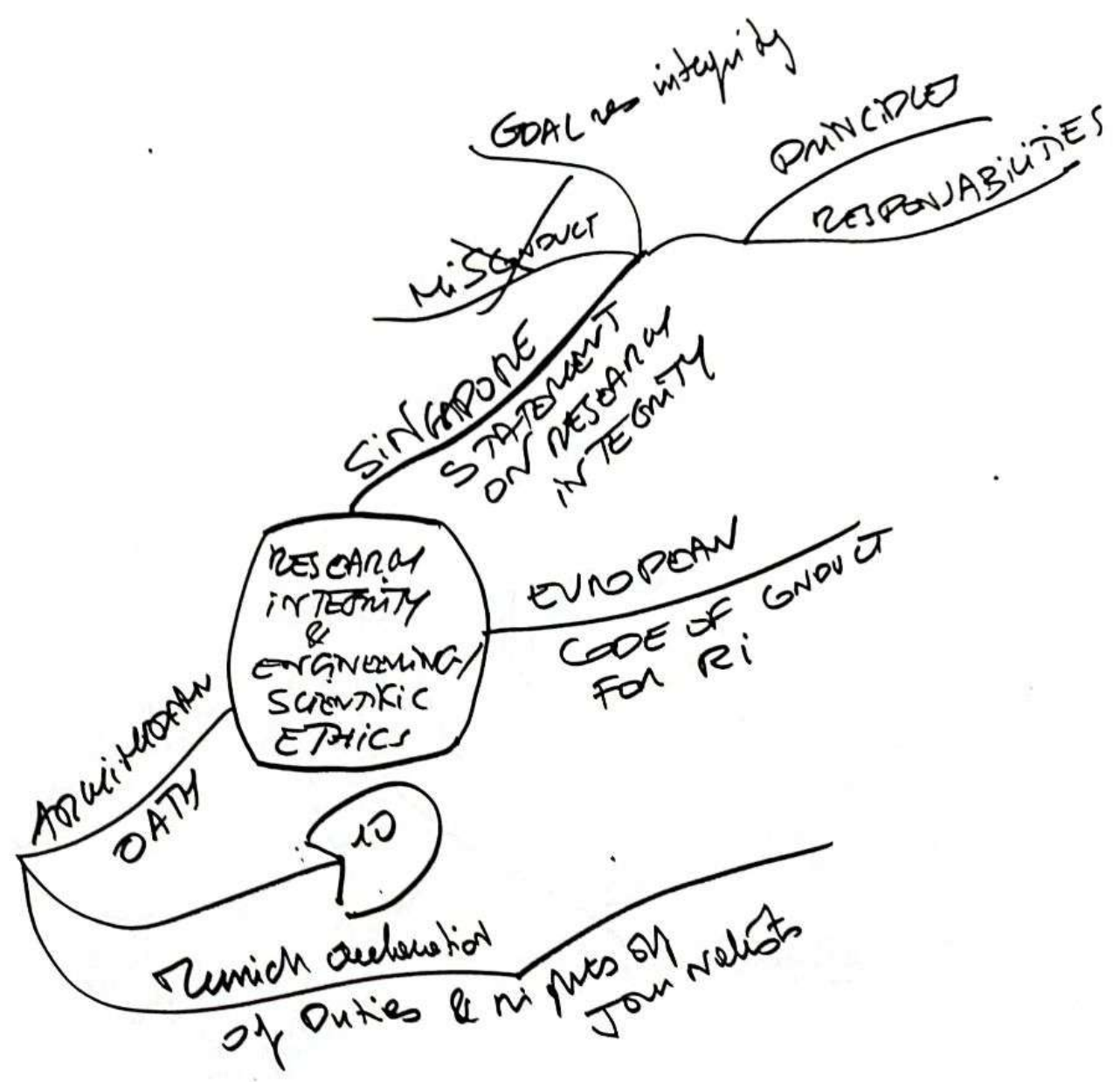
Ug
 X
 end

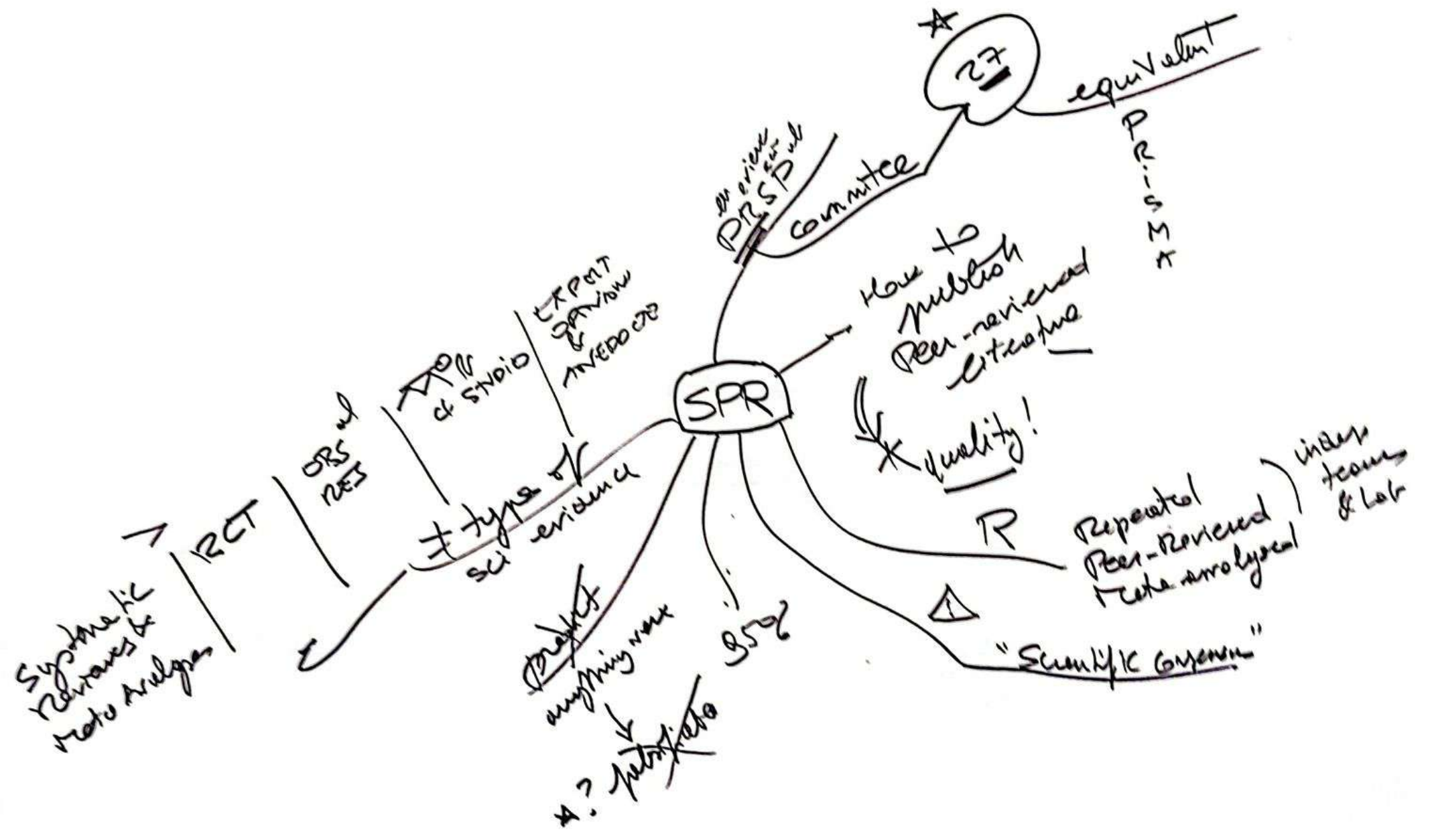
LIGO

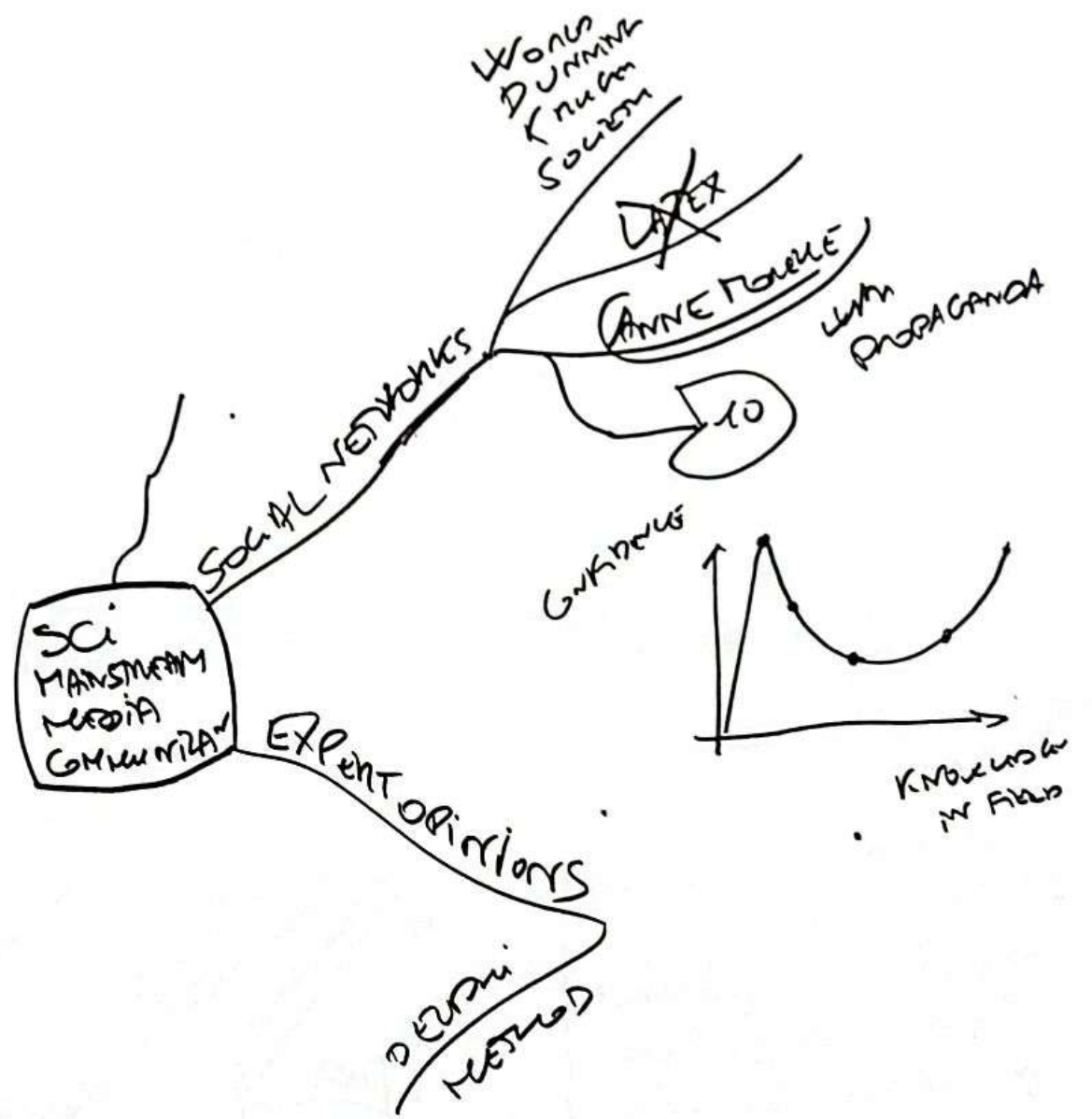
Golden rule

Evidence
 Based
 Science

ON
 1 RCT
 *
 Tools
 → Best results







+ verbal
 mistry /
 best
 obs
 mha
 Reasonably
 well used
 Model
 Math
 constant
 + will never
 be contradicted

Proof of evidence
 EXPLAIN
 interpret

MATH
 Sci MET

DATA
 +
 MATH
 MOD

Analysis
 Moralle
 math mod
 extra analysis
 accepts
 method
 results
 Not prove them!

VOC
 ON SCIENCES
 QED
 ... it is sufficient that...
 ... if and only if
 ... nec or suf...
 ... mens...
 ... prove it...

~~self~~ self coaching
 predict measurable
 & reproducible
 results
 that can be analyzed
 statistically.

NO sci p is proven
 or provable
 simply not falsified
 as long as an exp
 has not come to any
 otherwise!!

"Medicine"

Comparative study
Dang

Strip
Create
- hypothesis
- evaluate
- base
- experiment
"Science"

"on proving"
"opinion" D4

D5

VOC

ON SCIENCE DEFINITIONS

D1 "PURE SCI"

D2 "EXOD SCI"

Digressive reasoning
valid whatever
(arbitrary) elementary
factor selected
MATYS

NO supernatural cause
"observe"
transcribed
symbolic form

had empirical
evidence based

Can be reproduced
reputed

= falsifiable
= reputable

= subjected to exper tests
or ds on experiment

knowing
may be
submerged

"Rational" D3

"Deductive" New Evidence
Not by
order logical arguments

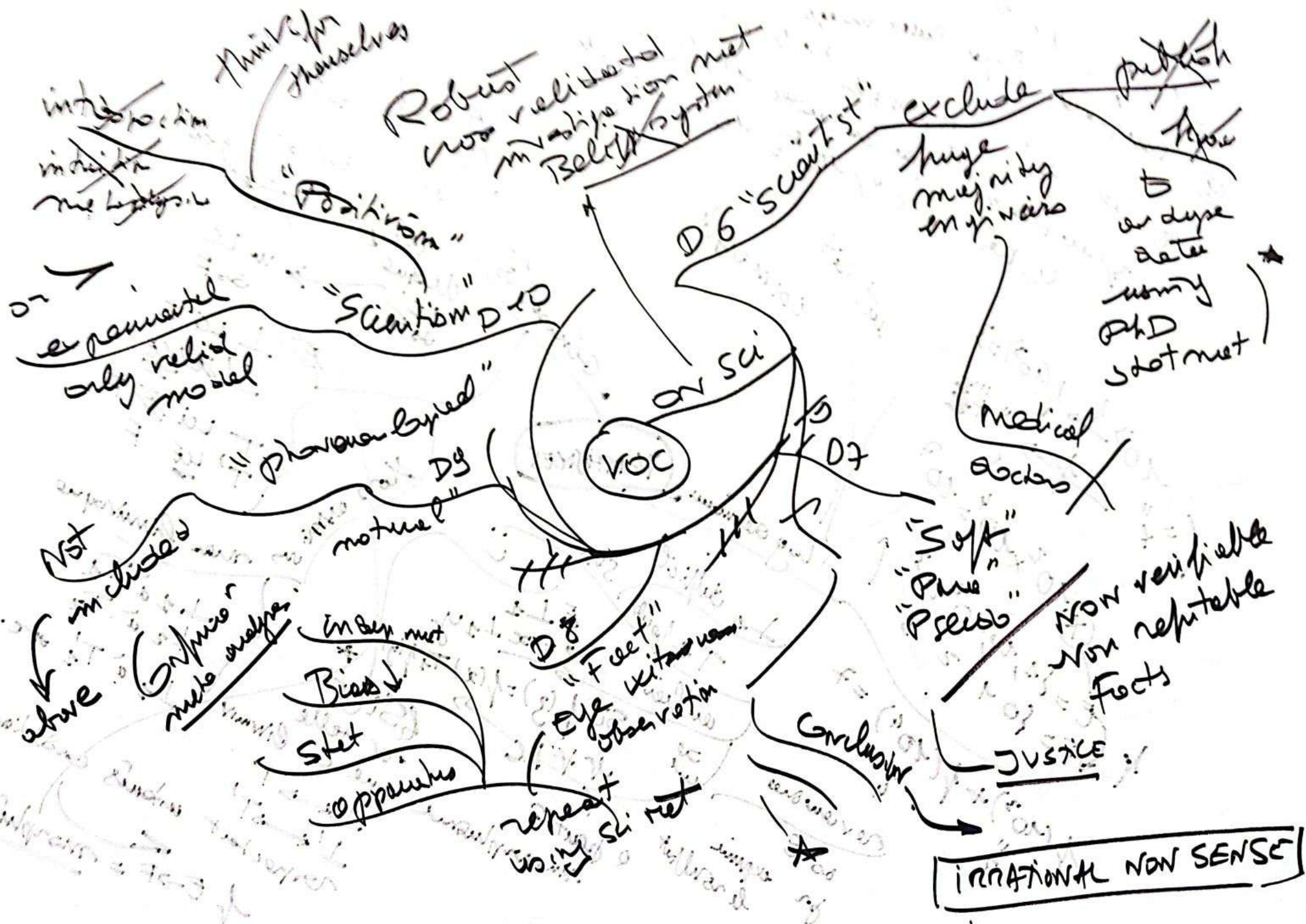
claims - ref. evidence
claims

(deductive
phenomenological
or
logically
consistent
fit useless models

without
"falsification"

resistant
to falsification

testable
predictions
why
how



VOC

ON Sci

Scientists

believe in ~~their~~ their
actual models & the
things they based
their observation on

WRONG!

to good
calibrated
measurement tools

Build & new models
because they are
paid for! *

~~Believe~~

TERMINOLOGY

"Covolley"
↑
proposal
truth already accumulated
obvious & necessary
GNS of ~~start~~ or postulate to plug

"Assumption"
1st STEP
Formulate

D1 "PB"

D2 "H"
Context of δ
supposition
Gymetric
(relation)

can explain group of facts or predict current new facts

D3 "POSTULATE"
"ASSUMPTION"
Principle
which admission is required to establish a proof → provide proposition

"AXIOM"
math equiv

D4S "PRINCIPLE" DU

proposal accepted as a basis for reasoning

GNS

AXIOM D5

R1
R2
AXIOMS

* Consistent
→ **Introduction**
independent
not be able to be proved from the other

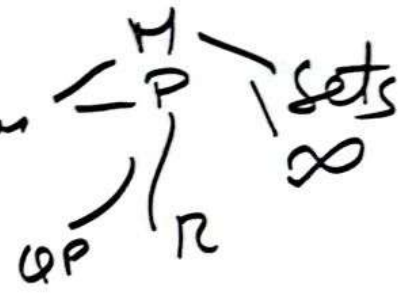
which is self-evident
no necessary self-evident proof
proposal accepted as a basis for reasoning

unintentionally
→ NOW exist in phys

TERMINO

Paradigmas

Revolutions



[Faint handwritten notes, possibly related to 'Paradigmas' and 'Revolutions']

[Faint handwritten notes, possibly related to 'TERMINO' and 'Paradigmas']

[Faint handwritten notes, possibly related to 'TERMINO' and 'Paradigmas']

Facts → Scepticism

Popers describe OBSERVATION!

Reputable

Falsifiability

Sci & FAITH

experimental reproducible evidence

Science adjusts view based on what's observed or what's denied or "observed" or so that belief "measures up"

Not Data Driven

either with no valid arguments

* "Prop + beliefs"

only to ensure link of bnd

equations constant repository (principles & postulates)

illusion

incomplete ~~describable~~ ~~predict~~

What we don't know
* (excepted from GR) QP

~~reproducible~~

Astro physics
cosmology
Pop dynamics
Decision & game theory

Some oth

Comments

given Data
PTZ pub

"Realism"

* describe in IS

"Instrumentalism"

only observable components
TOOLS

"Fictionalism"

* predict obs NOT

BAGNEY DETECTION KIT

CARL SAGAN (MILWAUKEE)

SUMMER) SCIENTIFIC MAGAZINE
BORDERLANDS OF SCIENCE

SEI Null H)

is the claimant providing an explanation for the object or merely describing the object? then

Is the claimant applying the accepted rules of research?

Does the preponderance of evidence point to the claimant's conclusion or to another?

"Confirmation Bias" Has anyone gone out of the way to disprove the claim, or has only supportive evidence been sought

1) How reliable is the source of the claim?

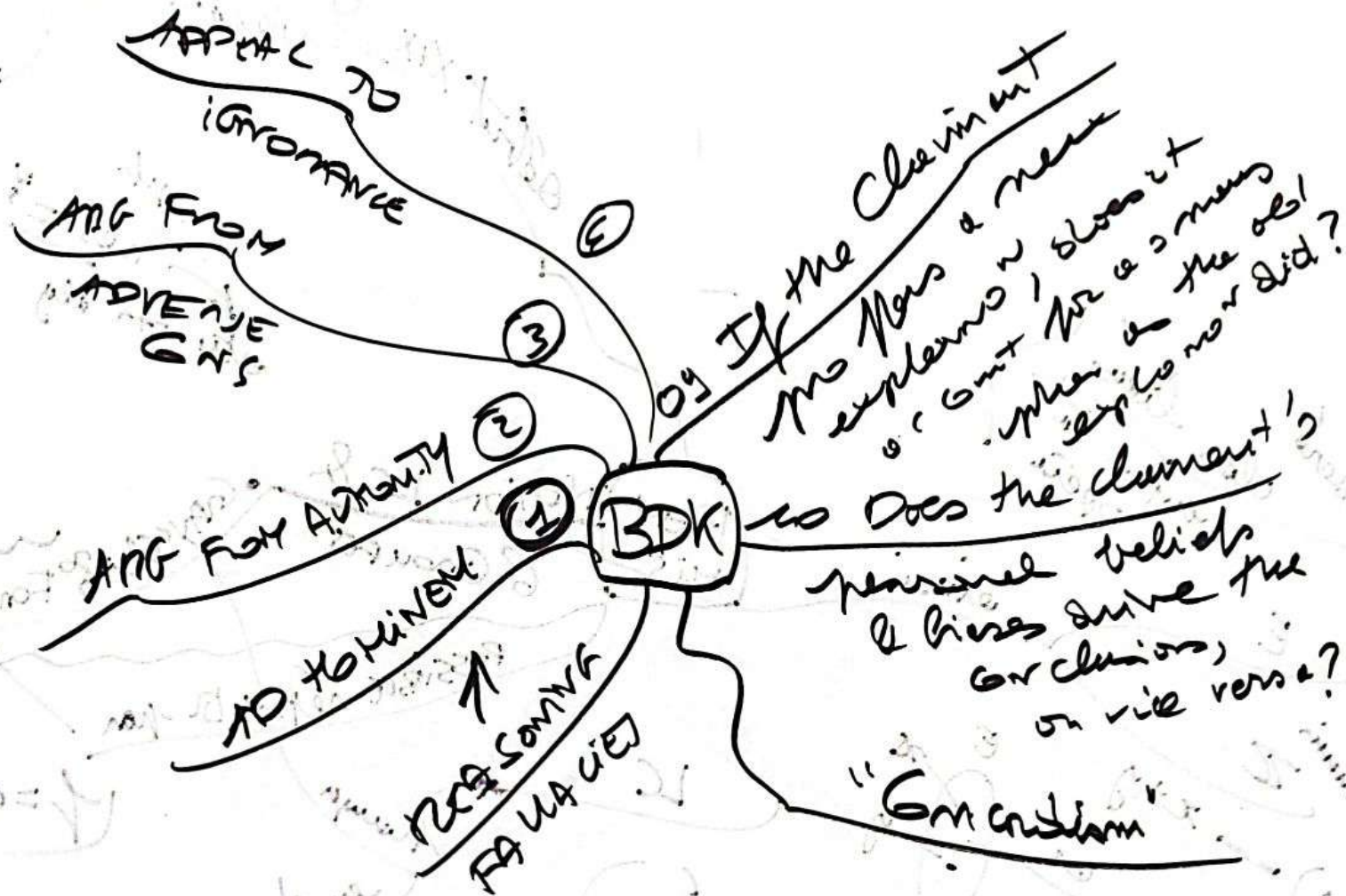
2) Does this source often make similar claims? (Thomas Gold)

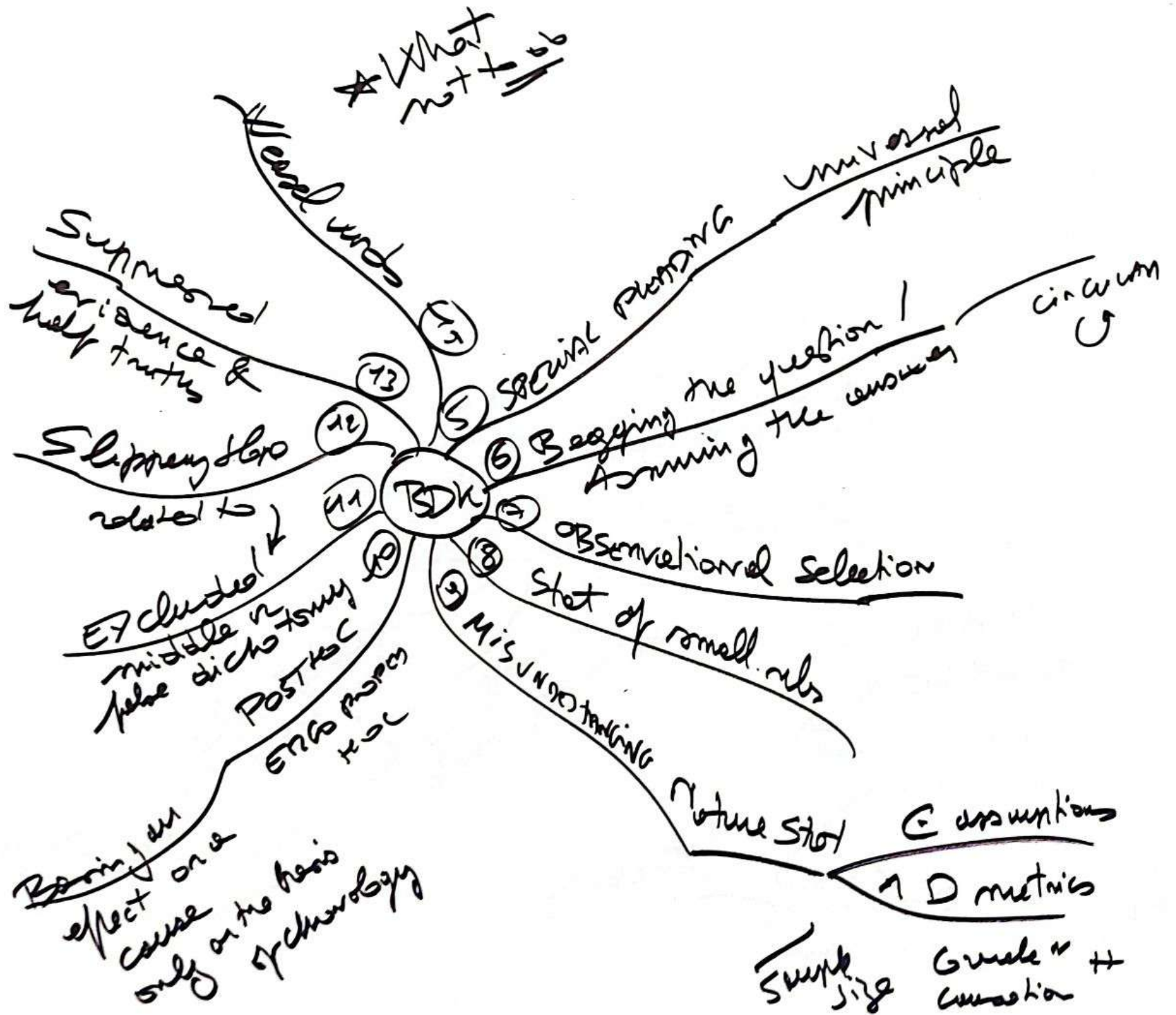
3) Have the claims been verified by another source? (Cold fusion)

4) How does the claim fit with what we know about the world, works?

artifacts
claims probably et most experts!

the occurrence of these subjects has been in various parts of the world leading to the general conclusion?





SCIENTIFIC COMMUNICATION BACKFIRE

- * explain sci ~~to~~ fix & avoid bias!
- * ~~no~~ evidence
- ① Don't want to listen about summit → ii
- ② Full of Bias → ~~reliable~~
- ③ personal exper robust

Learn to communicate sci strategically

Identify (i) your goal

→ sci literacy above → ~~winning~~

(Tim Reynolds)
 Deficit model
 = sci knowledge
 (Dan Kahan)
 Wrong

→ Polarization

→ Sci literacy
 → small negative effect !!

