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INFRA-[QUANTUM MECHANICS] (IMQ) :

AN ATTEMPT AT EXPLICATING HOW THE QUANTUM MECHANICAL MATHEMATICAL ALGORITHMS CARRY *" SIGNIFICANCE "*.

A SEARCH FOR THE *SEMANTIC* BENEATH THE MATHEMATICAL FORMALISM

2

TABULA RASA.

CONSTRUCTION UNDER THE CONSTRAINTS – EXCLUSIVELY –

FROM

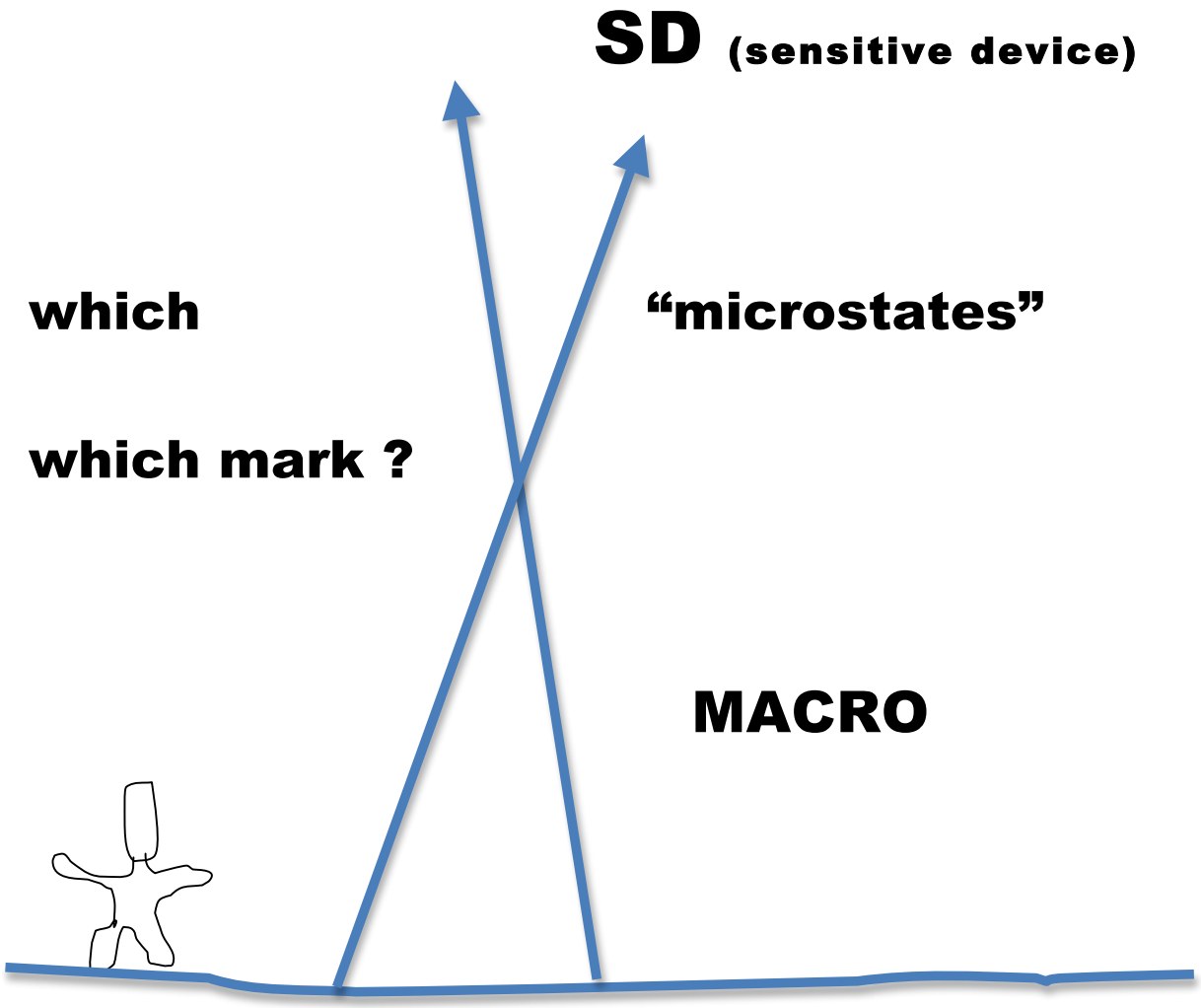
THE COGNITIVE SITUATION,

THE PHYSICAL-OPERATIONAL POSSIBILITIES,

THE REQUIREMENTS OF HUMAN PROCESSES OF CONCEPTUALISATION

3

HOW CAN A “MICROSTATE” BE *DESCRIBED* ?



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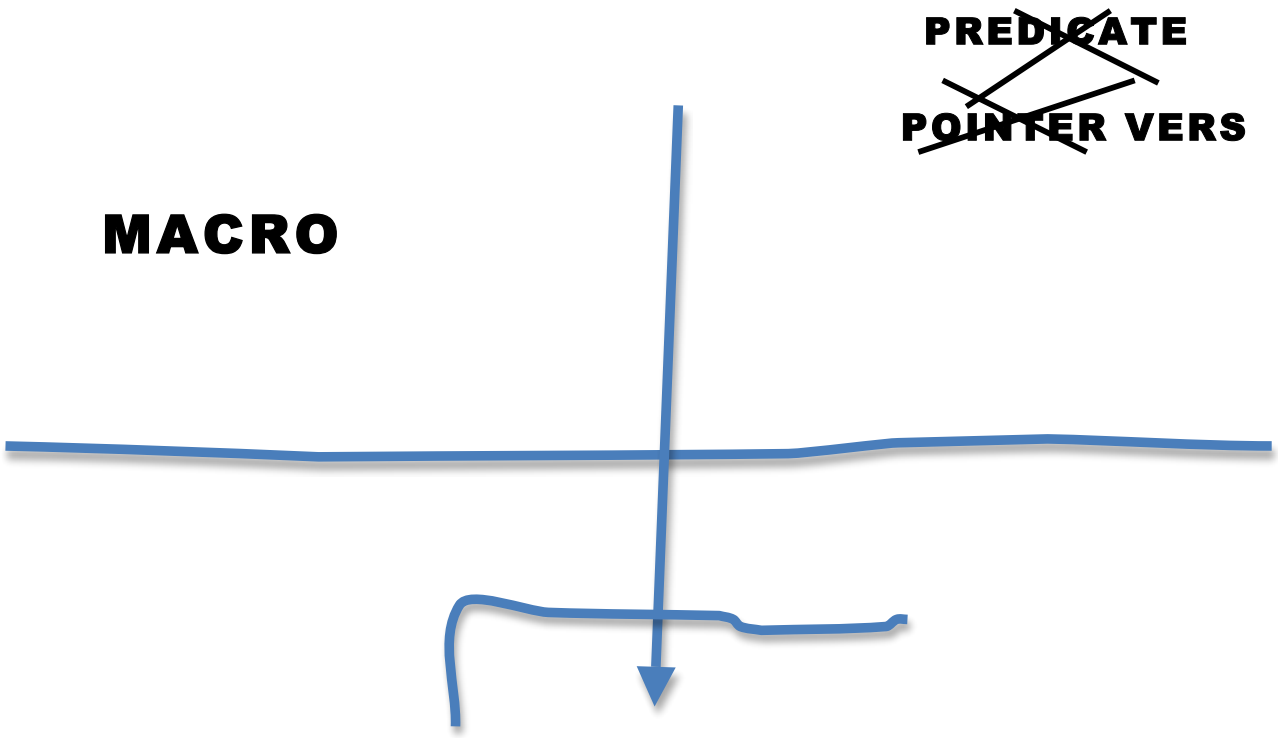
ONE MUST *CREATE* A “GIVEN MICROSTATE“ :

AG



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IF ONE *LABELS* THE *UNKNOWN* RESULT BY "G": ms_G

THEN

THERE IS A ONE-ONE RELATION

G ⟷ "the" ms_G

METHODOLOGICAL DECISION:

"SAME" ms_G *MEANS* SAME G, BY POSTULATION OF LANGUAGE AND THOUGHT

The absence of PREDICATE is *circumvented* :

an a-conceptual definition
independent of any qualification

THIS IS THE "INITIAL CONDITION" SINE QUA NON

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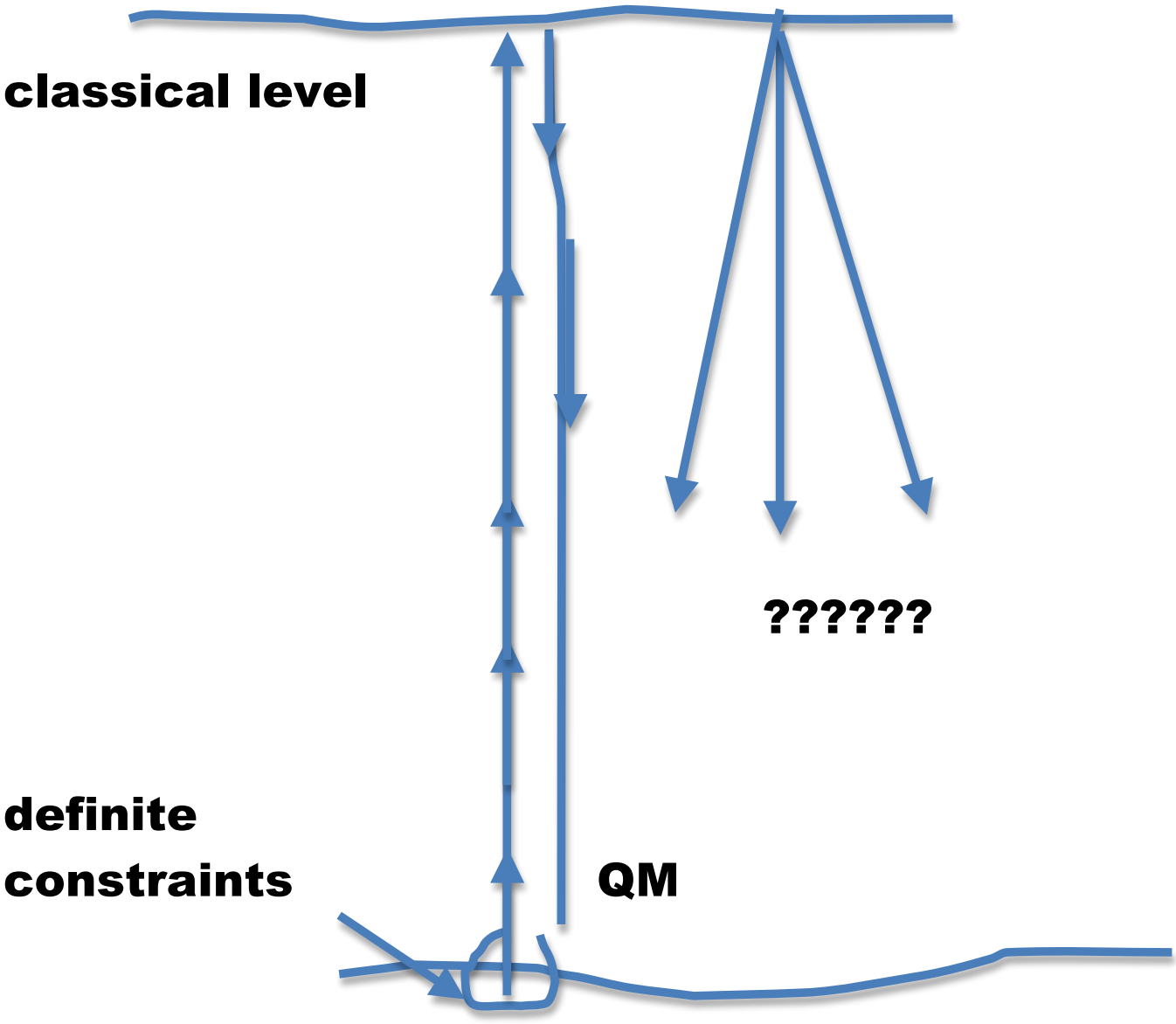
STRANGE !! UNINTELLIGIBLE !!

WHY ????



??????????????????????

Zero of conceptualization

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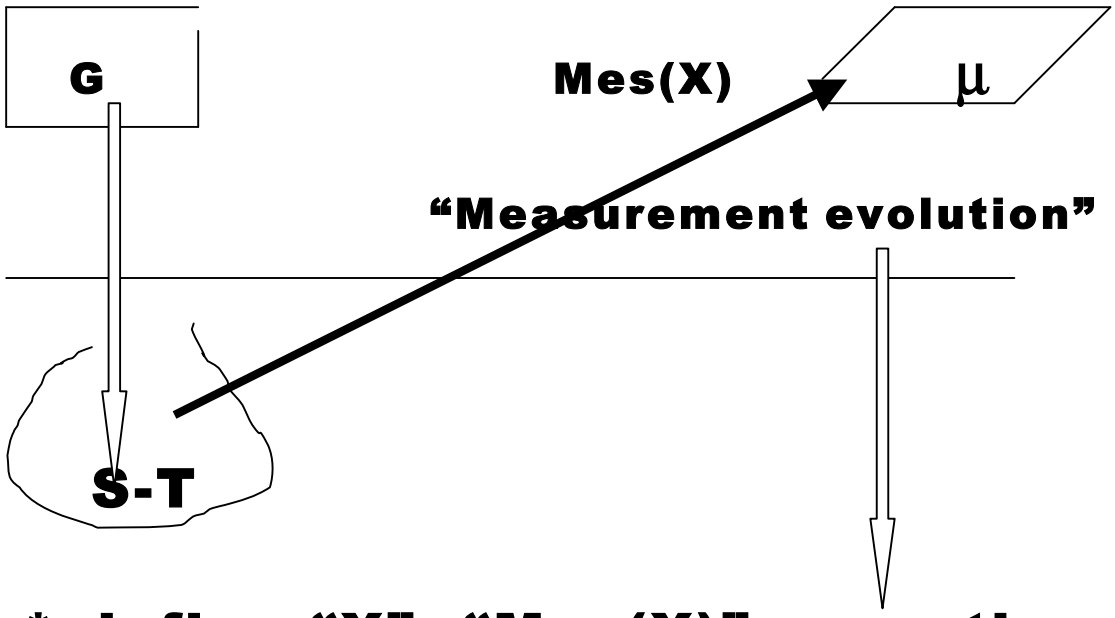
HOW QUALIFY A MICROSTATE ms_G ?



*** define "X", "Mes(X)" operationally**

*** define a *coding law* μ ↔ Xj**

NEW AND EXPLICITLY SPECIFIED CONSTRAINTS COME IN

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ONE HAS TO
CREATE
OPERATIONALLY,
CONCEPTUALLY,
AND SOMETIMES ALSO
REPRESENTATIONALLY

*** THE ENTITY-TO-BE-STUDIED ms_G**

*** THE WAY OF QUALIFYING ms_G:**

"X", THE "MEASUREMENT OF X", AN Xj-CODING OF THE RSULTING MARKS.

ALL HAS TO BE CREATED:
NO PASSIVE "OBSERVATION"

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THE PROCESS OF QUALIFICATION

[G.MES(X)] → μ(Xj)

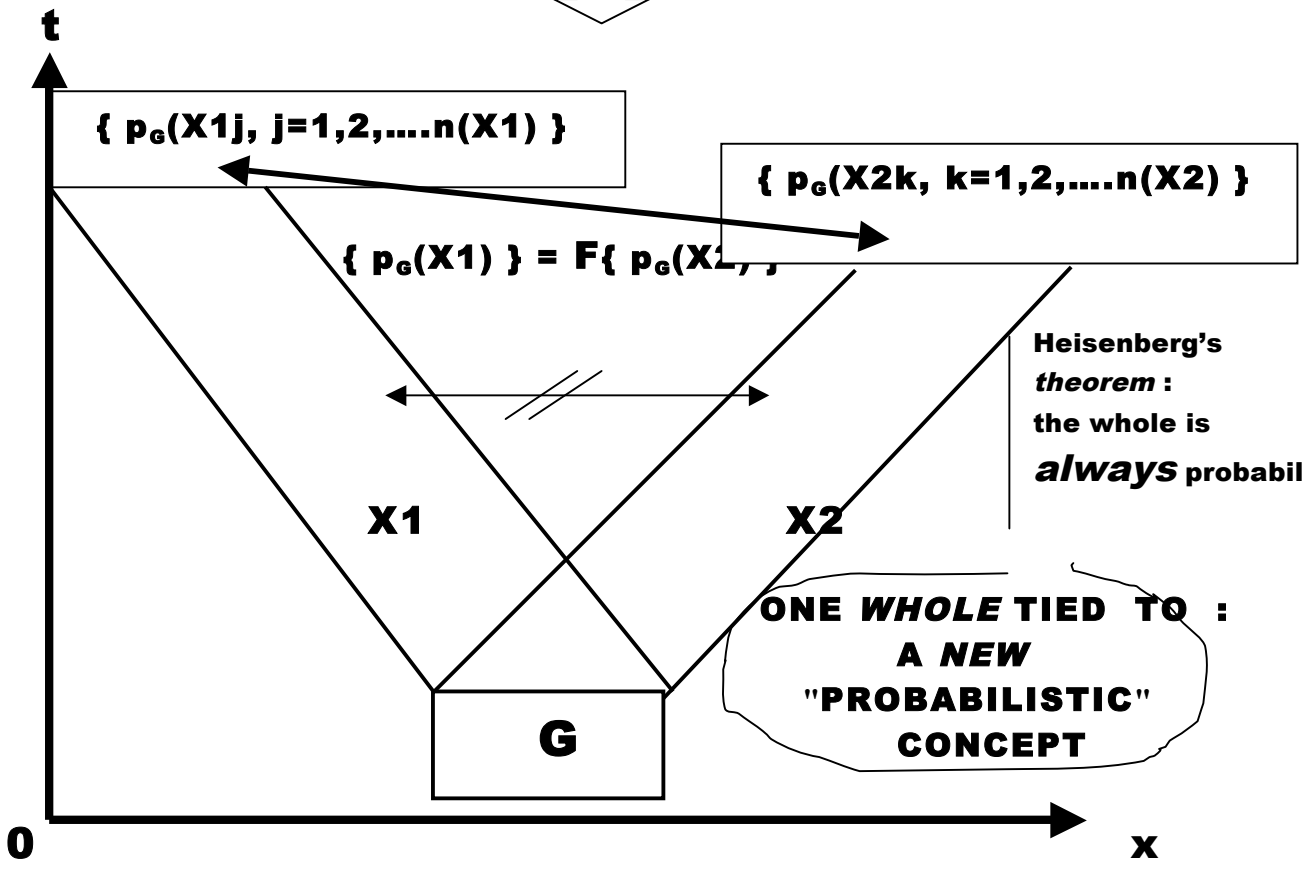
?

[G.M(X)], *N times* : REPETITION

Xj, Xj, Xj,……..
Individual description ?

X4, X13, X1,……..
statistical description ? NO YES

PROBABILISTIC DESCRIPTION $\{p_G(Xj, j=1,2...n(X)\}$?????



(QM: { $\{p_G(Xj, j=1,2...n(X)\}$ } → ψ_G)

"ESSENTIAL PROBABILITIES"

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THE DESCRIPTIONS ON THE TOP OF A TREE

D/G, ms_G ,V(X)/ ≡ {p_G(Xj), j=1,2,…n(X)}
for any defined X

ESSENTIALLY *RELATIVE* TO :
(G, ms_G, V(X))

where :

*** G captures a fragment of *a-conceptual* physical reality,**

*** G and V(X) are *independent* of one another,**

*** each element is CREATED *ex nihilo*,**

*** exclusively marks on registration devices of macroscopic apparatuses are observed – discontinuously in space and in time – and *then* coded in "understandable" and communicable terms.**

"*TRANSFERRED* DESCRIPTIONS"
OR
" *BASIC* DESCRIPTIONS ": D^o

D^o /G, ms_G ,V/

TRANSFERRED DESCRIPTIONS

IMQ

UNIVERSALITY

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THERE EXISTS A PREVIOUSLY IGNORED VERY FIRST DESCRIPTIONAL LEVEL:

"BENEATH": NO *CONCEPTUAL PLACE* FOR A DETERMINISTIC CONCEPTUALISATION

"ABOVE": MODELS M(D^o),YES, BUT NOT "BENEATH".

AND THIS LEVEL IS:

ALWAYS GLOBALLY STATISTIC:

IT IS PRIMORDIALLY STATISTIC

STATISTICITY IS BASIC, IT IS *PRIMORDIAL*

CAUSALITY AND DETERMINISM ARE *MODELIZATIONS*

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RELATIVISATION IS NOT RELATIV*ISM*,

RELATIVISATION INDUCES SECURITY, PRECISION

TRANSFERRED DESCRIPTIONS ARE A BASIS FOR *GUIDED* MODELIZATION

NAIVE REALISM CAN BE *PROVED* TO BE ILLUSORY (KANT)

⇓

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MRC

A *GENERAL* METHOD OF RELATIVISED CONCEPTUALIZATIONTION, FINITE, EFFECTIVE, FOUNDED ON BASIC TRANSFERRED DESCRIPTIONS.

TWO DESCRIPTIONAL STRATA :

D^o : A basic level of primordially statistical transfer into first observability, pulverised in space and in time: CLASSICALLY IGNORED

$M(D^o, V_i)$, V_i : A classical level of "objects", *models* $M(D^o,V_i)$, laid on an illusory *general* deterministic model of the physical processes.

UP TO NOW WE HAVE WORKED *ONLY* WITH MODELS, *DIRECTLY*

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ATTEMPT AT A COMPUTATIONAL REPRESENTATION OF MRC

WITH

THE *TWO* DESCRIPTIONAL STRATA D^o, $M(D^o,V_i)$

AND

THE "LEGAL" TRANSITION FROM D^o *TO* $M(D^o,V_i)$ *VIA* V_i *AS A "MODELLING PRINCIPLE"*

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IDEOGRAPHIC SYMBOLIZATION OF MRC

Consciousness functioning CF: $\mathcal{C}$

Reality : R

A generator G of object-entity : Δ

The "place" from R where Δ works: R_Δ

The object-entity-to-be-qualified: $œ_\Delta$

The process of delimitation of $œ_\Delta$ by Δ:

$$\Delta.R_\Delta \Rightarrow œ_\Delta \quad \text{or} \quad œ_\Delta \Rightarrow \Delta.R_\Delta$$

Comment on expressivity :

*** $\Delta.R_\Delta \Rightarrow œ_\Delta$: a process, that mentions its beginning and its result;**

*** $œ_\Delta \Leftarrow \Delta.R_\Delta$: an explicit specification of an object-entity via the process that produced it (which permits to specify an unobservable object-entity, by the way of producing it).**

An aspect-view : V_g

The operation of examination of $œ_\Delta$ by V_g :

$$V_g.œ_\Delta$$

Comment on expressivity :

* the epistemic operator V_g (in the sense of usual language, not of mathematics)

* the operation of examination $V_g œ_\Delta$

A view : V.

The operation of examination of $œ_\Delta$, by V : $Vœ_\Delta$

An epistemic referential : (Δ,V).

The representation of an observer-conceptor : [♂, (Δ,V)].

(Δ, $œ_\Delta$, V): RÔLES

The mutual *in*-existence :

$∄ œ_\Delta/V$ or $∄ V/œ_\Delta$

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The mutual existence :

$\exists œ_{\Delta}/V$ or $\exists V/œ_{\Delta}$

A space-time view : V_{ET}.

The frame-principle :

$[\exists œ_{\Delta}/ V_g] \rightarrow [\exists V_{ET}: \exists œ_{\Delta}/ (V_{ET} \cup V_g)]$

$\forall V_{ET}, \forall œ [\not\exists œ/ V_{ET}]$

Relative description: $D/\Delta, œ_{\Delta}, V/$,

Basic transferred relative description: $D^{(o)}/\Delta^{(o)}, œ^{\Delta(o)}, V^{(o)}/$

Relative metadescription of order n, n=0,1,2,....: $D^{(n)}/\Delta^{(n)}$, $œ^{\Delta(n)}$, $V^{(n)}/$

The global ideographic representation of MRC:

$\{\bigcirc, \Delta, œ_{\Delta}, V, (D^{(n)}, n=0,1,... \}$

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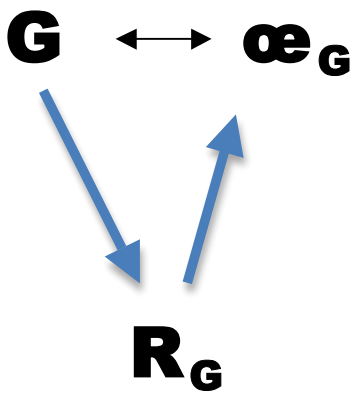
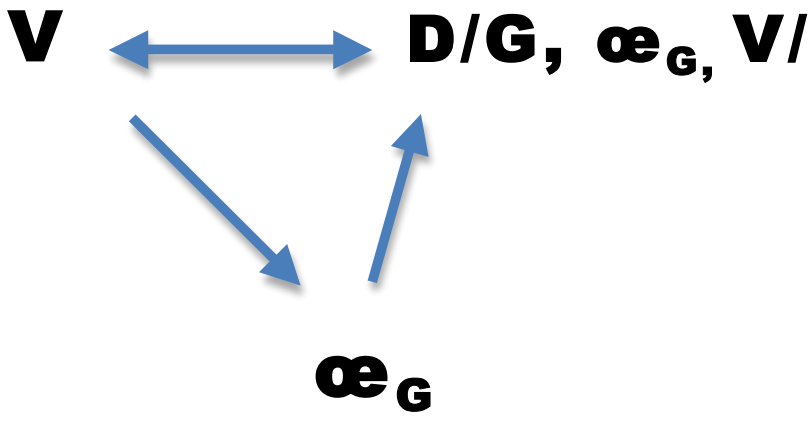
? MRC ??? RISKS ?

THE NEGATION PROBLEM

AN EXPLICIT SPECIFICATION OF (G,V)



THE "GENERATIVE TRIANGLE"



THE "QUALIFYING TRIANGLE"

RELATIVIZED ROOTING

AND ALL THE REST OF MRC

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? CINDYNICS ?

LET US PROCEED *UPWARDS*.

THEN CONFRONTATION,
LIKE IN THE CASE OF IMQ↔QM

IN THIS WAY WE SHALL

FOUND

CINDYNICS.

CERTAINLY ALL THE BASIC
INTUITIONS
OF
GEORGES-YVES KERVERN
WILL BE CONFIRMED