

# **INTRODUCTION À UNE MÉTHODE DE CONCEPTUALISATION RELATIVISÉE *VERSUS* SYSTÉMIQUE**

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## **PLAN:**

**1. Introduction**

**2. Conceptualisation classique**

**3. Conceptualisation "primordiale": l'Infra-  
(Mécanique Quantique)**

***versus***

**la Mécanique Quantique**

**4. La Méthode de Conceptualisation  
Relativisée**

**5. Relativités descriptionnelles et Systémique**

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<sup>1</sup> \* M. Mugur-Schächter, "Quantum Mechanics and a Method of Relativised Conceptualisation", in *Quantum Mechanics, Mathematics, Cognition and Action*, Kluwer Academic Publishers, Mugur-Schächter & van der Mewe eds., 2002.

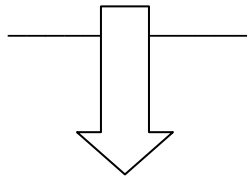
\* M. Mugur-Schächter, *Sur le tissage des connaissances*, Hermes-Lavoisier, 2006.

\* Les travaux no : [arXiv:0901.2301](http://arXiv.org/abs/0901.2301), [arXiv:0801.1893v1](http://arXiv.org/abs/0801.1893v1), [arXiv:0801.2654v1](http://arXiv.org/abs/0801.2654v1)

\* <http://www.mugur-schachter.net/>

# **CLASSICAL REPRESENTATIONS :**

**THE CHARACTERISTICS:  
DETERMINISTIC CHARACTER,  
CONTINUITY,  
GEOMETRIC SPACE-TIME ORDER.**



**I SHALL NOW TRY TO INDICATE  
HOW THESE CHARACTERS *CHANGE*  
WHEN MODERN MICROPHYSICS IS EXAMINED  
AS WELL AS  
SOME *CONSEQUENCES* OF THE CHANGE**

**ORIGIN OF THE ATTEMPT:  
"INFRA-[QUANTUM MECHANICS]"**

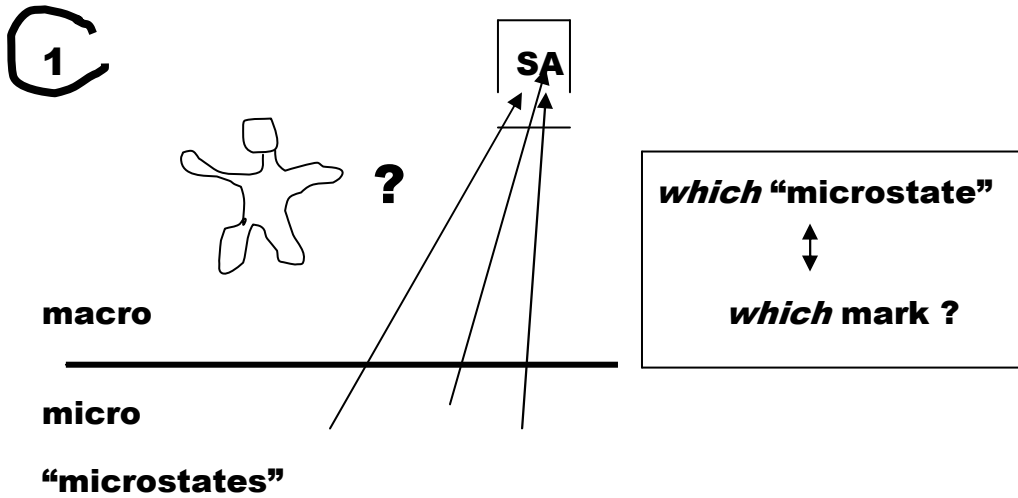
**AN ATTEMPT AT EXPLICATING  
*HOW*  
*THE QUANTUM MECHANICAL ALGORITHMS*  
*CARRY " SIGNIFICANCE "*.**

**A SEARCH FOR THE *SEMANTIC*  
CORRESPONDING TO THE FORMALISM**

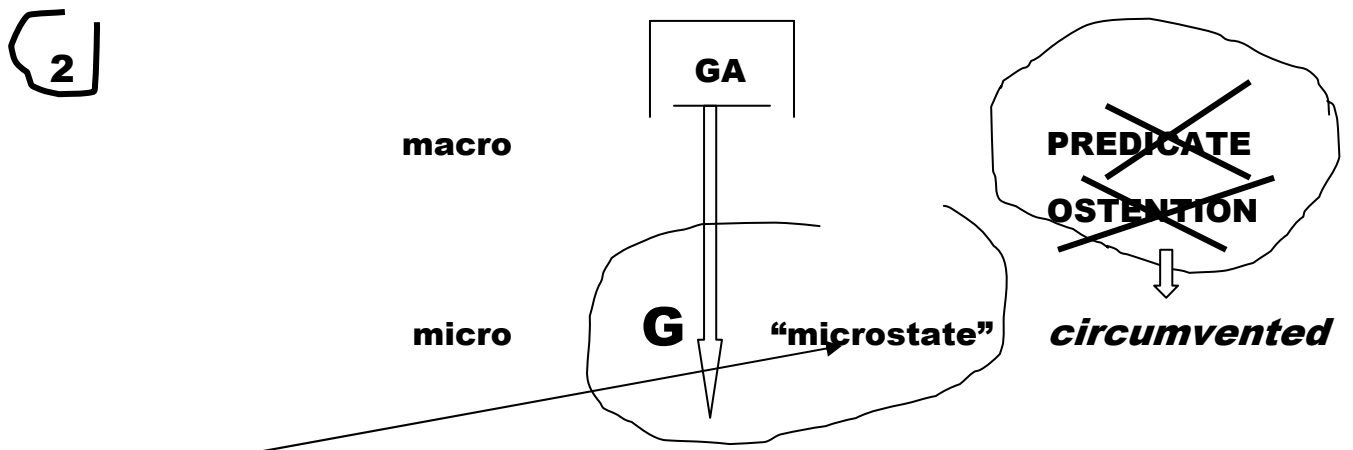
**TABULA RASA.  
CONSTRUCTION UNDER THE CONSTRAINTS  
– EXCLUSIVELY –  
FROM**

***THE COGNITIVE SITUATION***  
**AND**  
**THE GENERAL REQUIREMENTS OF  
HUMAN CONCEPTUALISATION**

# HOW CAN A "MICROSTATE" BE "DESCRIBED" ?



## ONE MUST *CREATE* A "GIVEN" MICROSTATE: **G**



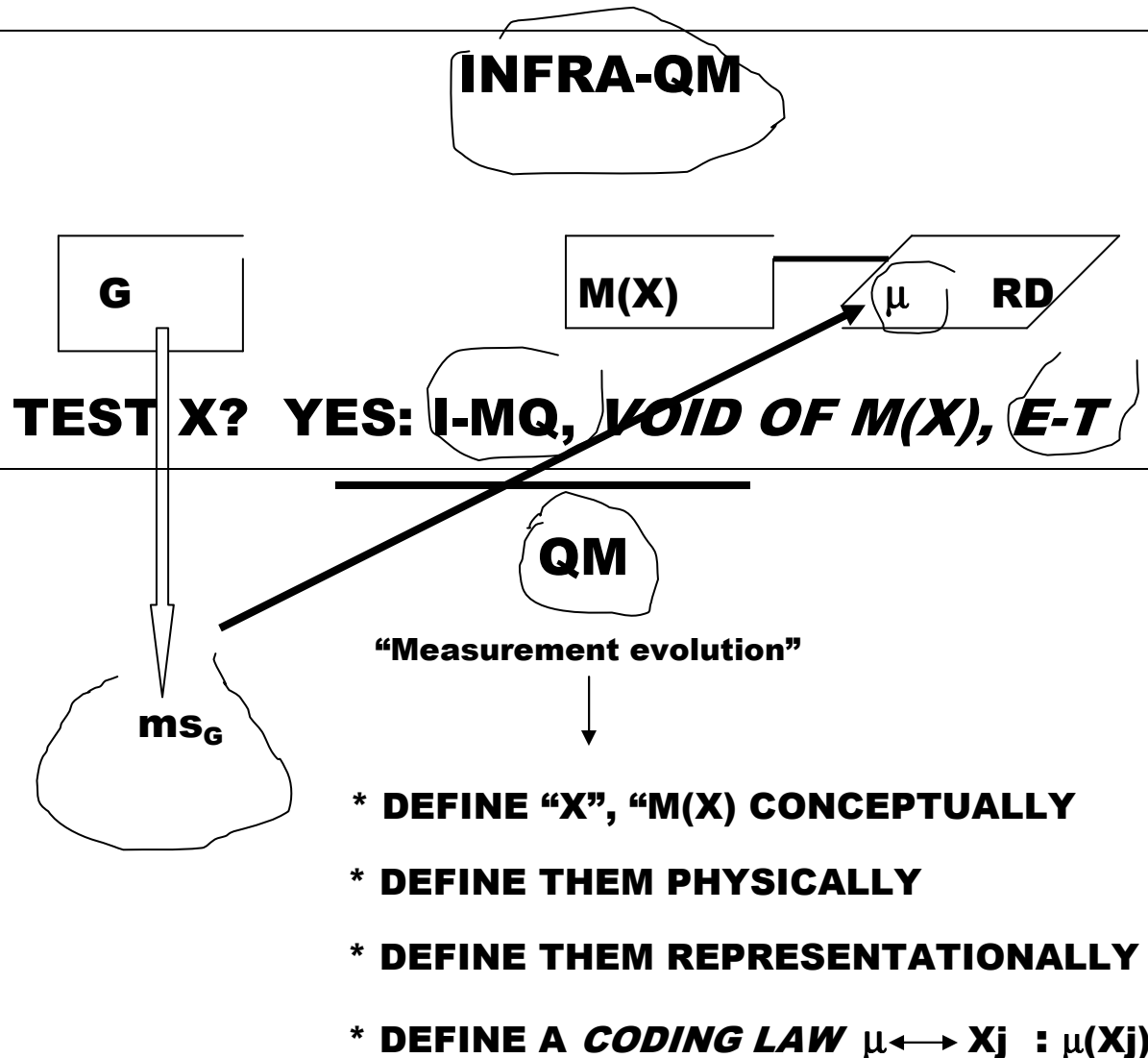
**? AN A-CONCEPTUAL, INDEPENDENT "DEFINITION",**

**IF ONE LABELS THE UNKNOWN RESULT BY "G" : ms<sub>G</sub>**

**G ↔ "the" ms<sub>G</sub>**

**METHODOLOGICAL DECISION : "SAME" ms<sub>G</sub> ?**  
**THIS IS THE INITIAL CONDITION, SINE QUA NON**

# HOW "QUALIFY" A MICROSTATE $ms_G$ ?



**ONE HAS TO *CREATE***  
**THE WAY OF QUALIFYING  $ms_G$ ,**  
**TESTS, "MEASUREMENT OF X",**  
**CONCEPTUALLY, PHYSICALLY,**  
**REPRESENTATIONALLY.**

# THE PROCESS OF "QUALIFICATION" IN QM

$$[G.M(X)] \longrightarrow \mu(X_j)$$

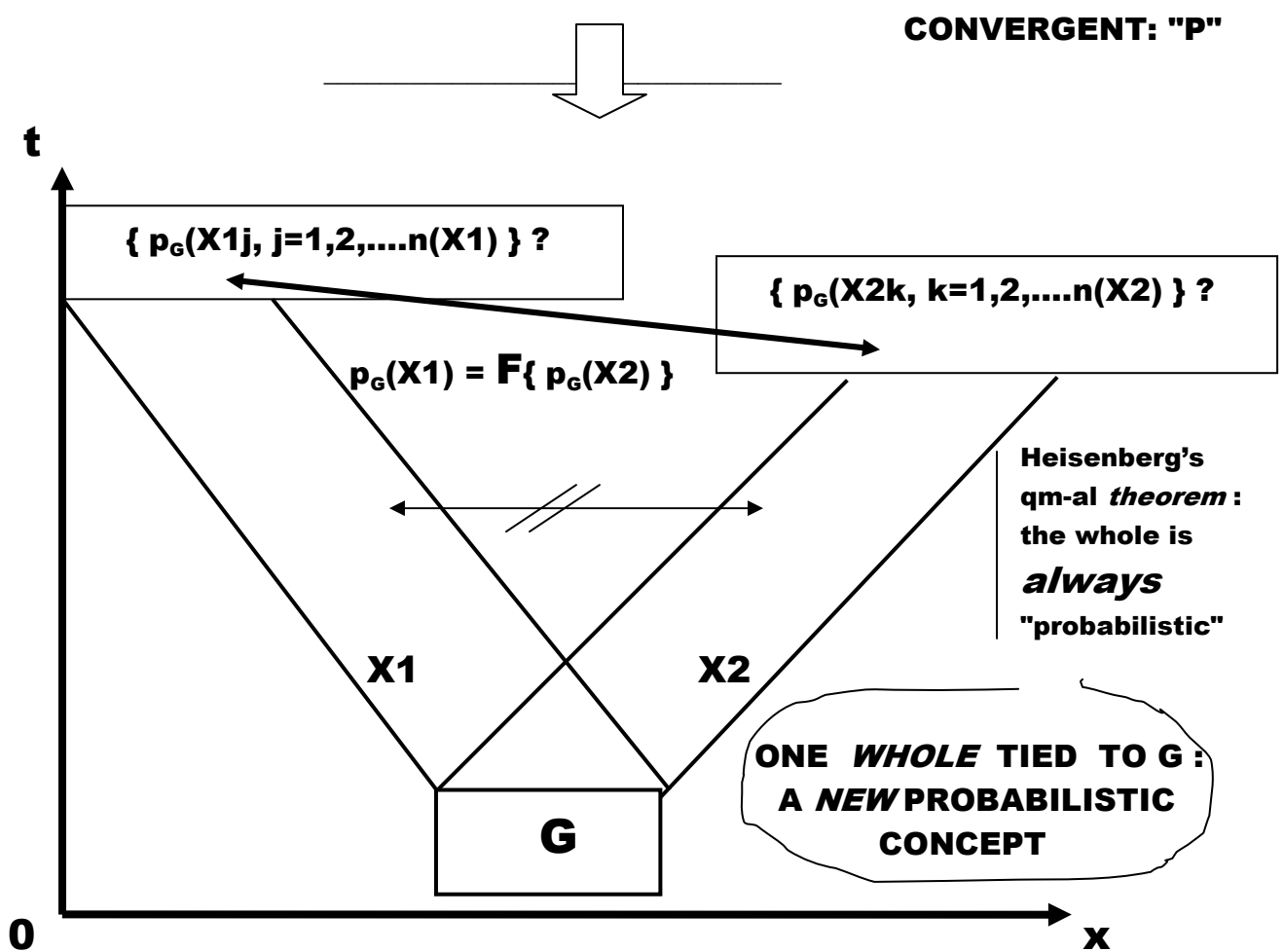
?

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

$X_j, X_j, X_j, \dots$   
Individual description

$X_4, X_{13}, X_1, \dots$   
statistical description

probabilistic ?  
{ $p_G(X_j, j=1,2,\dots,n(X))$ }  
**NO :**  
**STATISTICAL BUT**  
**CONVERGENT: "P"**



**A "PROBABILITY" TREE OF *G*, FOR ALL THE "X" DEFINED FOR A MICROSTATE**



**THE DESCRIPTIONS (ON THE TOP OF A TREE)**

**$D/G, ms_G, V(X) / \equiv \{ 'p'_G(X_j), j=1,2,\dots,n(X) \}$**   
***for any defined X***

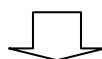
**ARE ESSENTIALLY *RELATIVE* TO :**  
 **$(G, ms_G, V(X))$**

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* ” :  $D^0$**

**A VERY *FIRST* DESCRIPTIONAL LEVEL :**  
**“BENEATH”, NO CONCEPTUAL PLACE FOR A DETERMINISTIC**  
**CONCEPTUALISATION : “*ABOVE*” : *MODELS M(D<sup>0</sup>)*.**



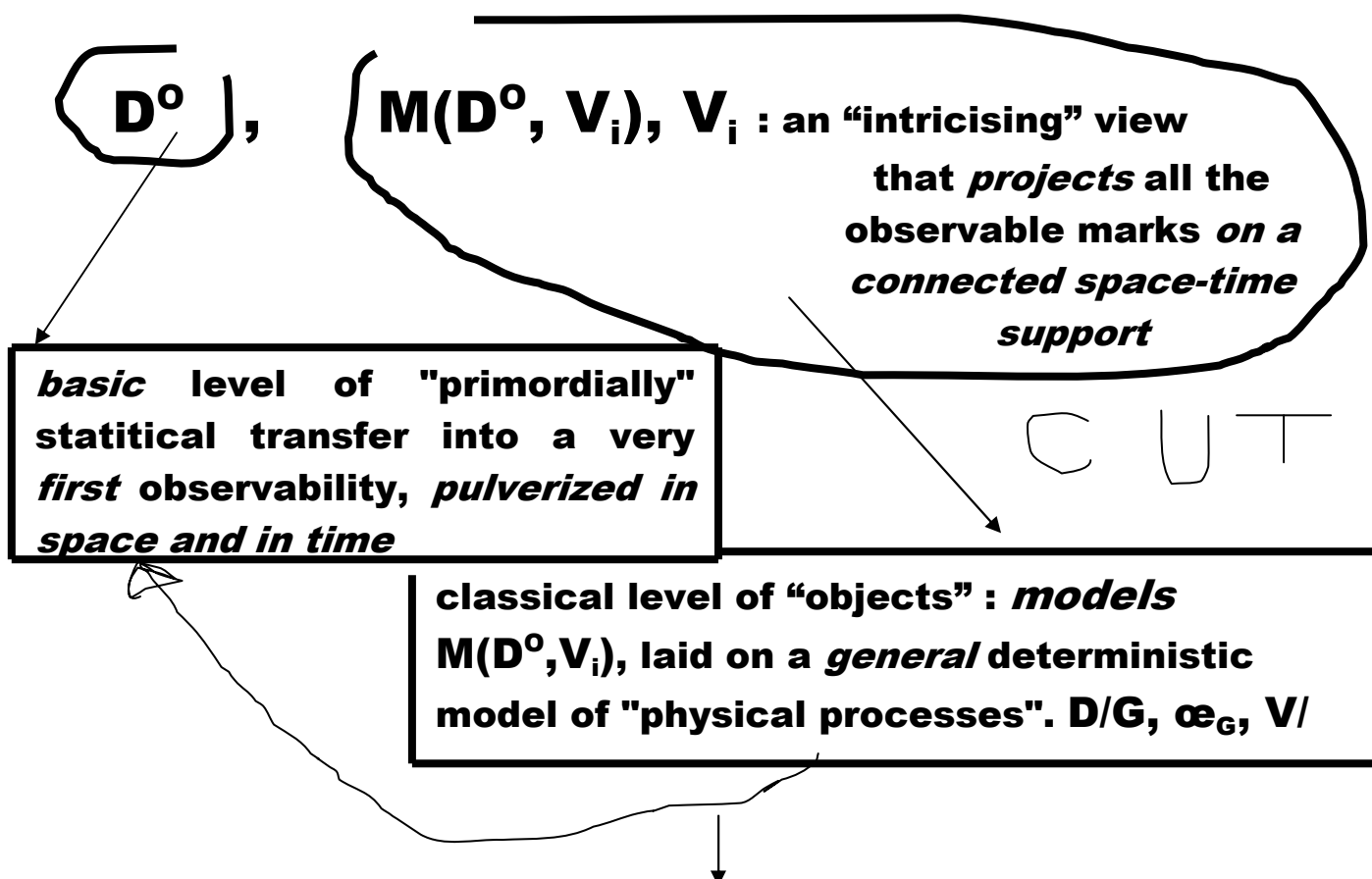
# PRIMORDIALLY STATISTICAL

the "formal-linguistic turning point" is very far

## UNIVERSALITY

**A GENERAL METHOD OF RELATIVISED DESCRIPTION: MRC FINITE, EFFECTIVE, FOUNDED ON BASIC TRANSFERRED DESCRIPTIONS, INCLUDES ALL THE SYSTEMS OF DESCRIPTIONS.**

### TWO DESCRIPTIVE STRATA :





↓

## **L' "ILLUSION DE RETROJECTION" (EXPRESSION DE FIRTH) :**

**COUPURE SUB-CLASSIQUE | CLASSIQUE**

↙

**DESCRIPTIONS TRANSFEREES  
RELATIVISEES,  
PRIMORDIALES ET  
PRIMORDIALEMENT  
PROBABILISTES, ETC.**

↘

**MODELES - « OBJETS »**

↓

**on les construit *d'abord***

↓

**on les construit *ensuite***

**'SOUS' LES DESCRIPTIONS DE BASE, TRANSFEREES, IL  
N'Y A PAS DE 'PLACE' POUR Y LOGER DES MODELES  
EXPLICATIFS : IL Y A VIDE DE CONCEPTUALISATION,  
*PAR CONSTRUCTION***

**POURTANT :**

**On *conçoit* le modèles- explications comme placés en  
*dessous* des descriptions transférées primordiales**

# SYSTÈMES

## RELATIVISATIONS, MAIS CLASSIQUES

ENTITÉS-OBJET PRÉEXISTANTES  
LAS "PRÉDICATS" SONT LÀ

*VERBAL*

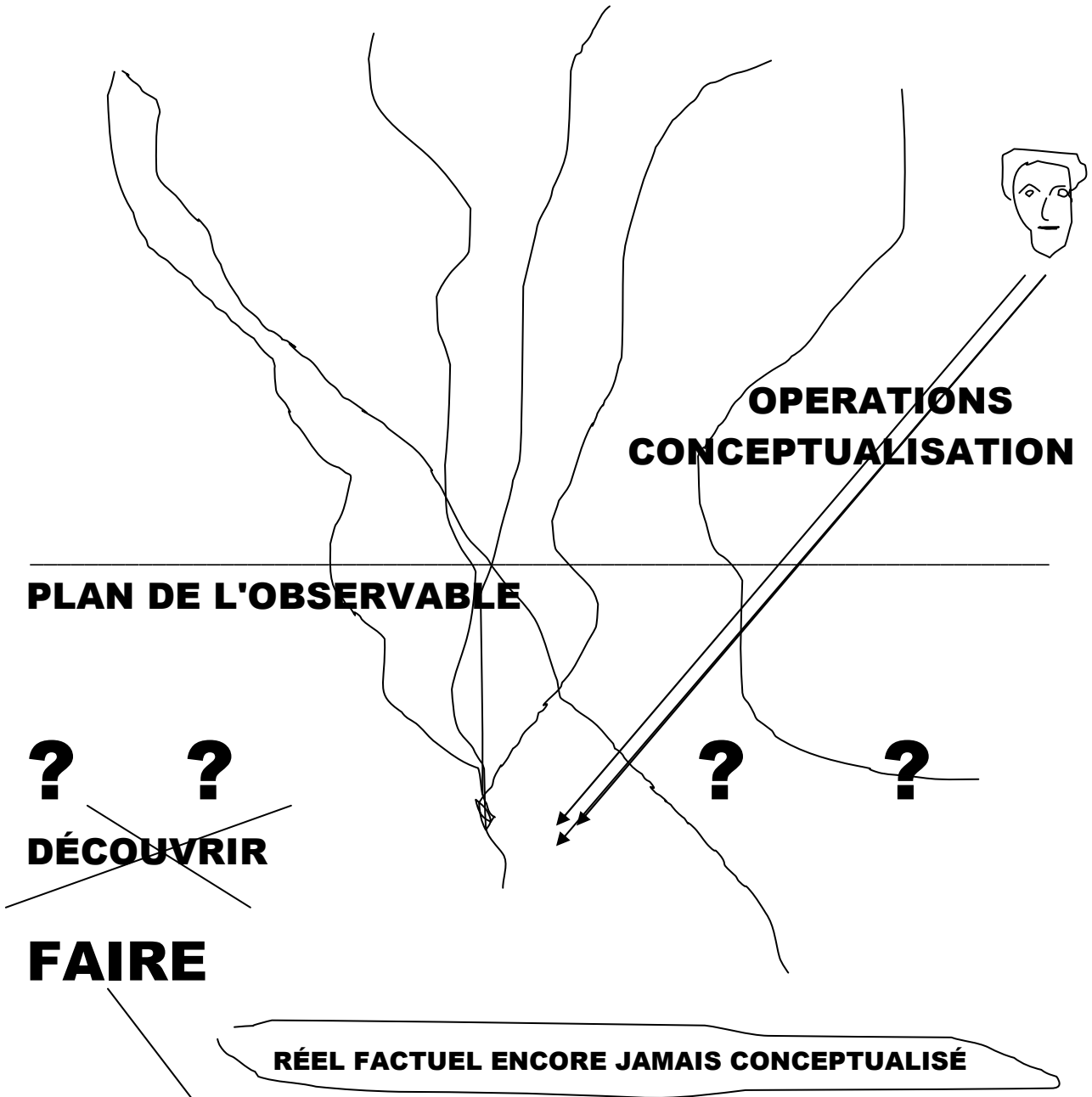
~~G~~

**V: MOTS**

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**FLOU ET BRANLEMENT**

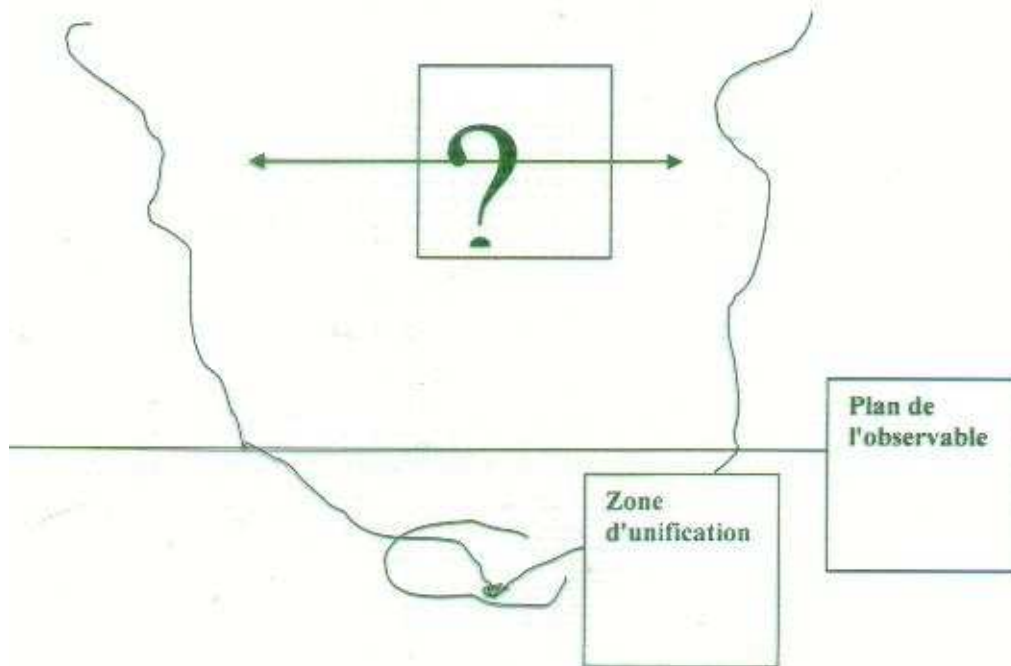
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***A LA BASE D/G, œ<sub>G</sub>, V/  
UNIVERSEL***

2

**FONDAMENTAL** → **GÉNÉRALITÉ**  
**GÉNÉRALITÉ** → **UNIFICATION**



**AINSI :**

**INFRA - [ MQ ]**

**MCR**

