

As all perspectives are equally valid for the wild territory variable then any singular Map representation of it, that does not represent that characteristic, must be inadequate (not is not describing it well).

The variables are the ordinary kinds of variables talked about in physics. There are dependent and independent ones, as that terminology is used in physics. The M-variable is correlated with the T variable interacted with via a particular relationship between observer and observed. The T-variable is unmeasured independent of an M-variable description or quantification IE. knowledge.

WT-variables can be differentiated into potential WT-variables, where those relations between the object or phenomenon and other potential reference objects, or apparatus, or observer are unknown. So its values or states include all that are possible. The circle symbolizing wholeness or totality can be used to represent that. So in full that would give  $\{\Sigma\}$ OWT-variable. That  $\{\Sigma\}$  is showing that the variable is the aggregation of all values or states pertaining to all relations with the object or phenomenon under consideration, not addition of them.

Another kind of WT-variable will be those that are actualized in Object reality because there is an existing relation; being all of those values that correspond to an existing relation with the object or phenomenon under consideration. That might be designated a  $\{\Sigma\}$ AWT-variables.

After  $\{\Sigma\}$ , representing aggregation, the following prefix of the Terrain variable shows if the aggregation is of all potential (O), or all actualized (A) relations.

The two kinds of WT variables are then imaginable as sets of values, the  $\{\Sigma\}$ AWT-variables being a sub set of the  $\{\Sigma\}$ OWT-variable set.

The Map variables are a different category from the Terrain variable. Depict-able at a different level. A Map variable value or state is correlated to a value or state in the sub set of  $\{\Sigma\}$ AWT values, but because there may have been alteration during measurement interaction and because of the limits of measurement resolution not identical. Not being able to precisely replicate the WT-variable does allow some room for chaos in the (quantitative) gap between the knowable and the existent. Some randomness in the production of the singular Map variable values is attributable to one relation being established from the possibilities.

### Terrain variables

#### Single property variable types

$\{\Sigma\}$ OWT-variable is the aggregation of all values or states pertaining to all possible but not necessarily actualized relations with the object or phenomenon under consideration.

$\{\Sigma\}$ AWT-variable is the aggregate of all values or states pertaining to actualized

relations with the object or phenomenon under consideration.

$L(\ )$  A limited consideration of only the local sub set of relations

$L(\{\Sigma\}AWT)$ -variable: A limited consideration of only a local sub set of values or states pertaining to actualized local relations with the object or phenomenon under consideration.

$L\{\Sigma\}LT$ -variable is a local sub set of values or states, the aggregate of values or states that pertain to relations *that are possible* under the constraints of measurement or observation (which may be due to apparatus or protocol or both IE. limited.)

$L\{\Sigma\}ALT$ -variable is a local sub set of values or states, the aggregate of values or states that pertain to relations under the constraints of measurement or observation (which may be due to apparatus or protocol or both) that have been actualized.

$L\{C\}P(<>)$ LT-variable is the aggregate of values that pertain to specific relations that are possible under the constraints of measurement or observation (which may be due to apparatus or protocol or both.) Wild values or states being affected by the experiment environment or protocol.

Property Characterization ( Properties are not singular valued but form a profile)

Static AV profile, (sAV): the many individual actualized variable values or states for a single property at a singular time.

Evolving AV profile, eAV: the many individual actualized variable values or states for a single property as they have evolved over time.

$L(AV)$ : the limited local sub set ( taken into consideration)of individual actualized variable values or states for a single property.

General Characterization: All properties Aggregation  $\{\Sigma\}AV$

The wild actualized Terrain variable relates to one 'element' of the whole Terrain at uni-temporal Now (or a sequence of uni-temporal Nows if duration is a part of the make up of the variable), being the amalgamation of the values or states of all relations with that singular object/phenomenon.

Also for each object there will be an number of associated 'properties", and so the object will have an evolving profile of all of the Terrain variables which amalgamated is a full profile of many variables ( the AT- profile),each with their own with evolving value profiles; the AV-profile).

OT profile: Amalgamation of all variable values and states relating to *all possible* relations to the object or phenomenon of consideration and for property types.

Not actual but representing lack of knowledge.

AT profile: Aggregation of all actualized property AV profiles for object or phenomenon of consideration.

$L(AT)$  profile:Aggregation of a limited local sub set of actualized property  $L(AV)$  profiles for object or phenomenon of consideration.

The actualized Terrain variable (for a 'property' under consideration ) for a given object under investigation is not a fixed profile of values, because either the object is moving, (or things external to it are moving, according to relative

perspective). As the relations between it and those things external to it, are viewpoints ("relative to this") forming each actualized variable value within the aggregation of values. So the actualized Terrain variable aggregated value 'profile' will be 'evolving' over time. Necessarily varying as there is continual change happening to the configuration of the Object universe (Terrain), that is foundational passage of time. That is to say all relations with the Object can not remain the same over time in a dynamic universe. IE There is a connection to an evolving wave function but this is aggregated variable profiles evolving. (Maybe an alternative to a wave function for anything exhibiting wave like, cyclic or oscillatory motion.)

Evolving AT profile set(of all variable types for an object/phenomenon under consideration) has many individual evolving AV profile subsets. There is a connection to the Many worlds idea (potential for many Maps at the source, not many Terrains on product side).

The Terrain (material, substantial, Object universe, that is the reality that exists outside of our minds and representations), is more than singular 'Map' representations encapsulate. There are many ways the Terrain can be interacted with and represented and so one deterministic Map doesn't show any of the other possibilities that have not been put into the 'Map'. What is seen and perceived is itself a 'Map' representation and not the 'territory',The Terrain. A seen image is formed only from the limit Electromagnetic ingratiation received and not all of the information emitted into the environment from the source object. EG. A cup is seen from the handle side alone not also from above, below, opposite side, other 2 sides and at all possible angles of orientation in-between.

The actualized Terrain, AT, itself is the material Object universe at uni-temporal Now. The wild actualized Terrain variable relates to one 'element' of the whole Terrain at uni-temporal Now. Though when  $W\{\Sigma\}$ AT-variables involving duration are involved there is consideration of what has happened over a sequence of configurations. Which can be designated (t)T So that also relates to the sequence of configurations imaginable spread along a time line (not a dimension of the Object universe.)

$W\{\Sigma\}$ AT-variable being the amalgamation of the values or states of all relations with that singular object/phenomenon. Necessarily varying as there is continual change happening to the configuration of the Object universe (Terrain), that is foundational passage of time. That is to say all relations with the Object can not remain the same over time in a dynamic universe. IE There is a connection to an evolving wave function but this is aggregated variable profiles evolving.

Map variables are of two kinds those that are obtained by direct measurement of the object, such as proximal measurement of the length of an object by placement of the standard scale on it. The Terrain variable is not altered by the act of measurement in that way but the map value obtained will be affected by the reliability of the scale ( eg consider does it expand /contract in different temperatures) and the limit of resolution of the scale used. This kind of map

variable can be designated M-variable. It has a singular value unless it includes a range to show uncertainty ( $\Delta$ )M-variable or a range of values over time (t)M-variable. The other kind of Map variable is a value (or range) that has been affected by interaction of the object under investigation with the apparatus or by 'interference' by the protocol employed, P(<>)M-variable.

### Map variables

M-variable	Map variable obtained by direct proximal measurement
(t)M-variable.	Map variable spanning time (a -Now sequence)
( $\Delta$ )M-variable	Map variable with range of uncertainty
P(<>)M-variable	Map variable affected by measurement

### An example of conversion from relations to wild Terrain to Map

1.START - $\{\Sigma\}$ OWT-variable: All possible relations. Imaginary total variable profile in unmeasured condition, representing lack of knowledge of existent relations.

2.NEXT OBSERVER STEP: from considering what could be to considering what is

▶  $\{\Sigma\}$ AWT- variable: All actualized relations in unmeasured condition ▶

3.NEXT OBSERVER STEP:[Experimental /observation choice $\{\Sigma\}$ LT-variable: limited selection ( chosen by observation method/design)]

4.NEXT INTERACTION WITH TERRAIN OBJECT OR PHENOMENON

▶  $\Delta \{\Sigma\}$  AWT- variable ▶▶: evolution of the variable profile from the natural wild state to the limited state by interaction with apparatus environment OR restriction of sampling to limited state LT values or states

5.NEXT RESULT OF 'EVOLUTION' OF VARIABLE

▶  $\{\Sigma\}$ ALT- variable: OR  $\{\Sigma\}$ P(<>)LT-variable: Actualized Limited state LT variable due to previous choice and protocol or method

**6.NEXT OBSERVER STEP ▶ Change from considering Terrain (territory) to considering (Map variable)result**

7.NEXT STEP RESULT OBTAINED

M-variable OR P(<>)M-variable

8. ▶ Map:

processing of variable or collection of variables into Map