

## 7. APPEARANCE AND FUNCTIONALITIES OF FRACTOLONS

Fractolons appeared due to one of the definitions of the triangular categories, first described by Alexander Groetendiech. According to the given definition, the figure of the triangulated categories consists of commutative diagrams that are bordered by cycles. The special property is that cycles are also bordered by commutative diagrams.

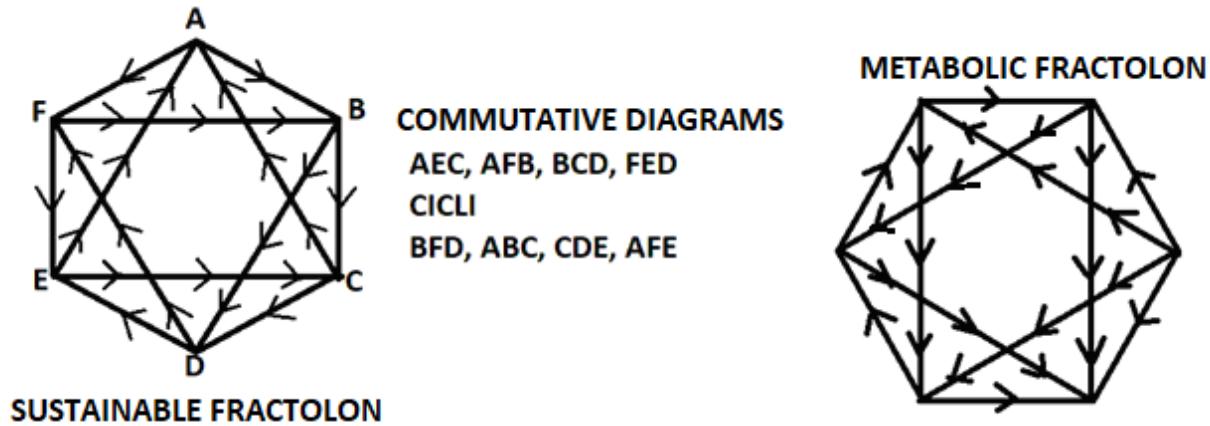


Fig. 1 the sustainable type fractolon

Feedback also comes as an essential component in the art of thinking. The simplified scheme of the feedback is due to the antique mathematician of Papus and is as follows:

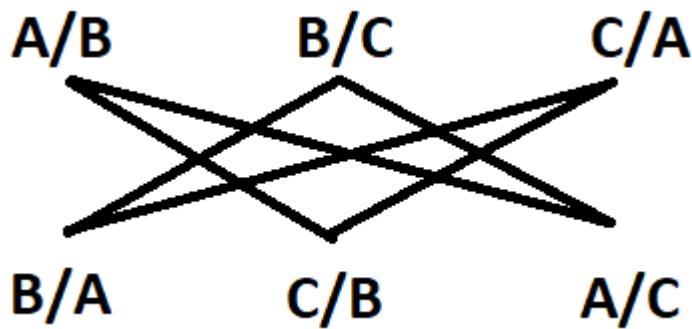


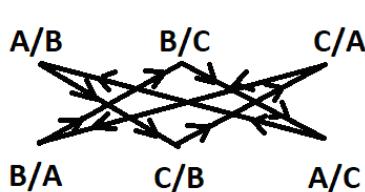
Fig. 3 unicursal diagram

Unicursal oriented diagram can also have semantic content.

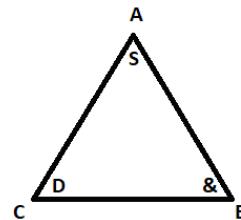
Generation operations and factorizations can make sense if in the initial triangle we will have a content generation relationship by identifying a source "S", a sensor "&" and a decider "D".

 In the case shown below, the source is kindness, the sensor is wisdom, and the decider is harmony. The general rule is the following:

Any two points generate the third point



kindness and harmony generate wisdom  
harmony and wisdom generate kindness  
kindness and wisdom generate harmony



EXAMPLE  
A= kindness  
B= wisdom  
C= harmony

A/B= the kindness of wisdom  
B/A= the wisdom of kindness

B/C= the kindness of harmony  
C/B= the harmony of kindness

A/C= the wisdom of harmony  
C/A= the harmony of wisdom

the wisdom of kindness goes towards the kindness of harmony  
the kindness of harmony goes towards the wisdom of harmony  
the wisdom of harmony goes towards the kindness of wisdom

the kindness of wisdom goes towards the harmony of kindness  
the harmony of wisdom goes towards the harmony of kindness  
the harmony of wisdom goes towards the wisdom of kindness

Fig. 4 multicursal diagrams

The factorizations show the meanings of the multicursal diagram vectors.

Sustainable fractolons allow in their own structure the development of unicursal diagram that generate feedbacks. They are presented as unicursal diagram that generate otherwise informational connections as specified above.

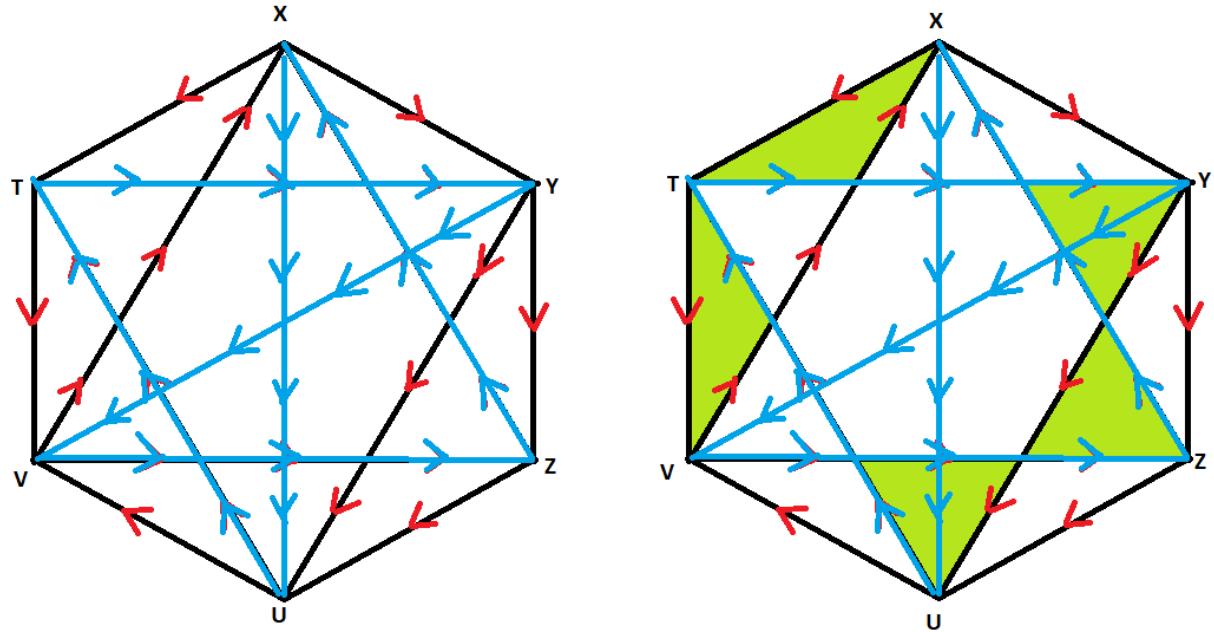


Fig. 5 short cycles

The structure on which the feedback is generated is an XYUV rectangular cycle, whose segments are also involved in the creation of short cycles.

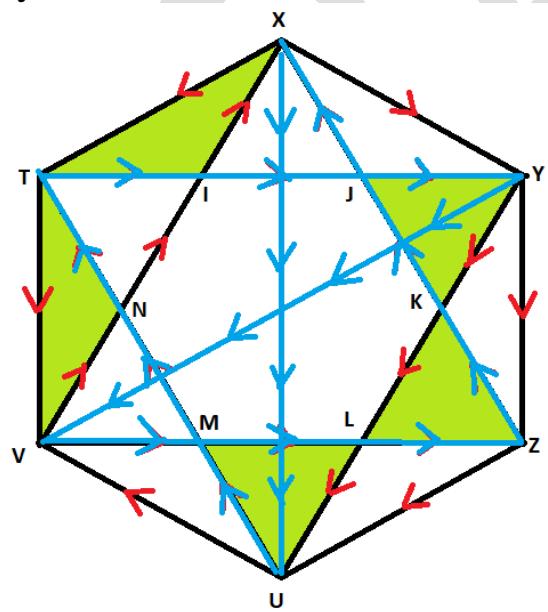


Fig. 6 semantics of short cycles

These short cycles complement the long TXU cycles. VXT, VZU, XYZ are of great semantic importance. This can be seen in the following example:

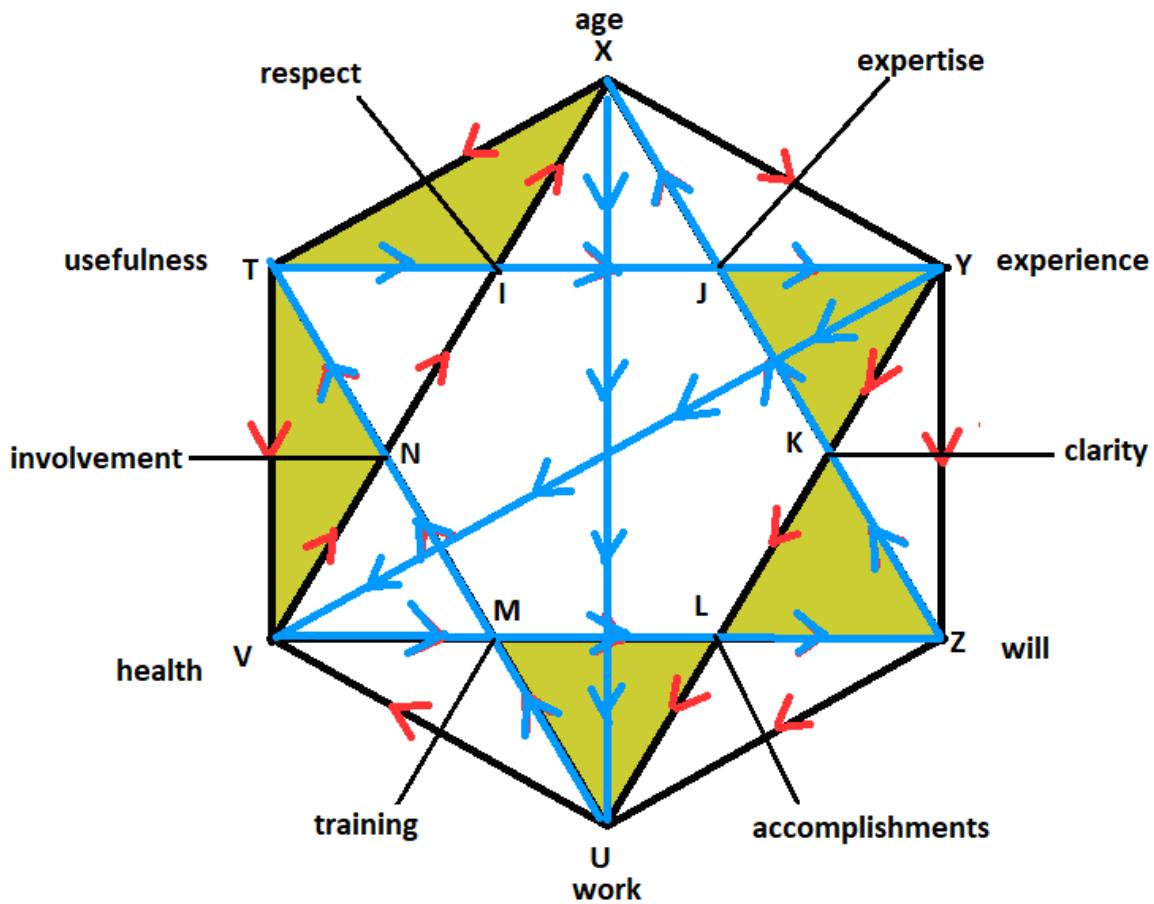


Fig. 8 an example

Experience leads to clarity if there is expertise

Clarity leads to achievements if there is a will

Achievements lead to work if there is training

Health leads to involvement if there is utility

Respect leads to age if there is utility

The addition of semantic structures to sustainable fractolons leads to a refined understanding of the relationships, context and usefulness of the approach.