From the Encyclical "Fides et ratio"

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This study is in progress and will be a part of [6], Chapter 29, Consciousness Experiments

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1 Introduction

The idea of *Global Autopoietic University* is an attempt to organize a worldwide institution of individuals willing to act autopoietically in the framework of Internet. The proposal comes from Professor Ante Lauc, an economist and psychologist, joining principles of economic development and autopoiesis of man's consciousness.

At the beginning of the GAU proposal document [2] a motto from the Encyclic *Fides et Ratio* is set. Paraphrasing the motto, the following reasonable sentence in two parts **(1)** and **(2)** follows:

> **(1)** *Emotions and cognition are like two wings on which the human consciousness rises to the informing of truth, and* **(2)** *conscience has placed in the human intention a desire to know truth — in a word, to know self-consciousness — so that, by knowing and intending conscience, human consciousness may also come to the fullness of truth about itself.*

In this sentence, a reasonable replacement of words of religion in the original sentence by words of informational consciousness was made in the following way, alphabetically:

> *contemplation — informing; faith — emotions; God — conscience; heart — intention; loving — intending; men and women — consciousness; reason — cognition; and spirit — consciousness.*

The sentence delivers a rough informational graph [6] in Fig. 1. This graph is an informational approximation to

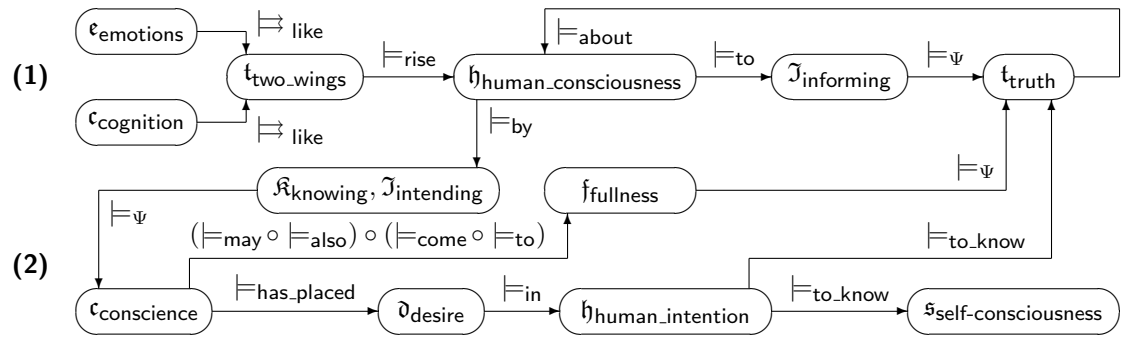

Figure 1: *This figure shows the literal English paraphrase from the Encyclic translated into the graph of informational language* $\mathfrak{Z}$.

the sentence in English. However, it already shows a kind of circular informational organization in parts of the graph. To be transparent, the figure needs an explanation. Operand and operators are listed in Tab. 1. This table is used for a further generalization of the graph in Fig. 1. There are common operands in parts **(1)** and **(2)**, namely, framed 'human consciousness' and 'truth'. By them, both graphs are connected into a single graph.

Graph	Operands	Operators
(1)	$\mathfrak{c}_{\text{cognition}}$, $\mathfrak{e}_{\text{emotions}}$, $\boxed{\mathfrak{h}_{\text{human\_consciousness}}}$, $\mathfrak{I}_{\text{informing}}$, $\boxed{\mathfrak{t}_{\text{truth}}}$, $\mathfrak{t}_{\text{two\_wings}}$	$\models\!\!\!\rightleftarrows_{\text{like}}$, $\models_{\text{rise}}$, $\models_{\text{to}}$, $\models_{\Psi}$
(2)	$\mathfrak{c}_{\text{conscience}}$, $\mathfrak{d}_{\text{desire}}$, $\mathfrak{f}_{\text{fullness}}$, $\boxed{\mathfrak{h}_{\text{human\_consciousness}}}$, $\mathfrak{h}_{\text{human\_intention}}$, $\mathfrak{I}_{\text{intending}}$, $\mathfrak{K}_{\text{knowing}}$, $\mathfrak{s}_{\text{self-consciousness}}$, $\boxed{\mathfrak{t}_{\text{truth}}}$	$\models_{\text{about}}$, $\models_{\text{by}}$, $\models_{\text{in}}$, $\models_{\text{has\_placed}}$, $(\models_{\text{may}} \circ \models_{\text{also}}) \circ (\models_{\text{come}} \circ \models_{\text{to}})$, $\models_{\text{to\_know}}$, $\models_{\Psi}$

Table 1: *Operands and operators figuring in sentences and graphs denoted by* **(1)** *and* **(2)**.

Identically marked binary operators depend anyway from the operand on the left and the right side of operator. Operator of being, $\models\!\!\!\rightleftarrows$ (see [4]), in the subscripted form $\models\!\!\!\rightleftarrows_{\text{like}}$, means 'is like'.

By replacement of words, the graph in Fig. 1 became 'scientific' in the sense of using terms of nowadays theory of emotions and cognition [1, 3]. Owing to the philosophy of the informational, the graph in Fig. 1 can be rationalized in a further way. The term 'human consciousness' can be replaced adequately by 'consciousness', and 'human intention' by 'intention'. The graph has to be closed in an informational way. This means that there must be not circularly connected operands. For instance, the informational consciousness grasped as a complex system $\mathfrak{z} \rightleftharpoons \mathfrak{c}_{\text{consciousness}}$, through its emergence, incorporates informationally the isolated (not circularly connected) operands $\mathfrak{e}_{\text{emotions}}$, $\mathfrak{c}_{\text{cognition}}$, and $\mathfrak{s}_{\text{self-consciousness}}$ in Fig. 1. Also, operands $\mathfrak{e}_{\text{emotions}}$ and $\mathfrak{c}_{\text{cognition}}$ depend strongly on each other and, in this texture impact $\mathfrak{z}$. The self-conscious subsystem $\mathfrak{s}_{\text{self-consciousness}}$ informs circularly $\mathfrak{z}$. The metaphorically used 'two wings', $\mathfrak{t}_{\text{two\_wings}}$, can be replaced by adequate operators $\models_{\text{cognize}}$ and $\models_{\text{emotionalize}}$ or, by the operator joker $\models$, leading to and from $\mathfrak{z}$ through an informational oval of operands $\mathfrak{m}_{\text{motivation}}$, $\mathfrak{h}_{\text{homeostasis}}$, $\mathfrak{b}_{\text{behavior}}$, ... (see [5]). In this view, the circularly pretentious graph in Fig. 2 comes into foreground.

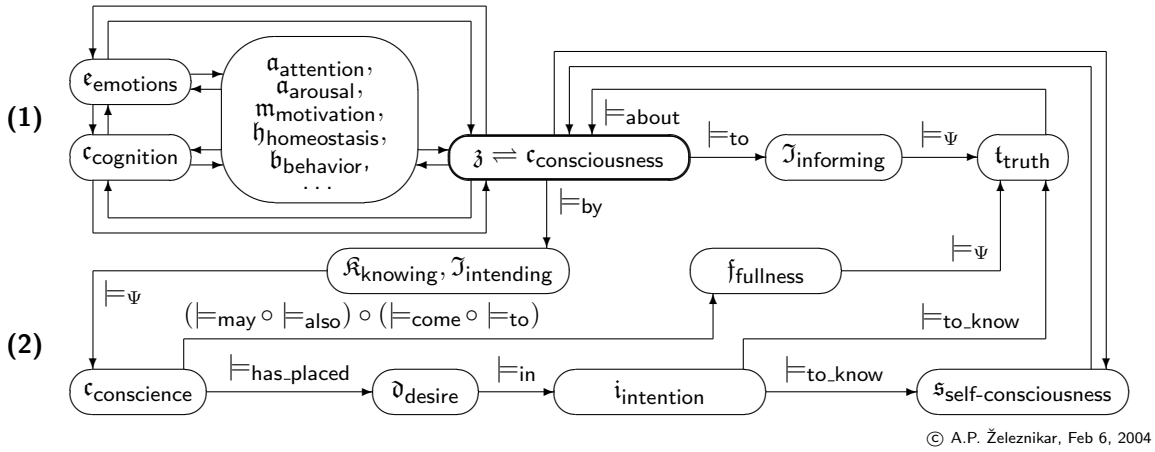

Figure 2: *Scientized graph from the sentence of Fides et Ratio, emerging out of the graph in Fig. 1 by rationalizing operands and their informational connections. Arrows without markers represent the most general operator of informing, the joker* $\models$.

We see how the graph in Fig. 2 combines the linguistical nature with the optical overview of the complex original and deduced scientized sentence. In this respect, the graph enables a sharpened and visible analysis of the original sentence in the form of its interpretation, directly from the graph and distantly by introducing operands, relating the original operands, operators, and also the sentence unrevealed potentialities. Such an approach can prove the important meaning relating the original sentence, especially, interpreted by the scientized form. The result is a graph, out of which significant definitions of operands can be achieved.

To the definition of kairology. $\boxed{\kappa\alpha\iota\rho\acute{o}\varsigma,\ \acute{o}}$ right proportion, due measure; right place; right time or season, opportunity; time, circumstances; critical moment; embarrassment; importance, influence; profit, success

References

[1] DALGLEISH, T. & M. POWER, EDS. 2000. Handbook of Cognition and Emotion. John Wiley & Sons. Chichester, England.

[2] LAUC, A. 2003. Global Autopoietic University. A proposal in progress. In HTML, at http://www.pol.hr/gau.htm.

[3] LEWIS, M. & J.M. HAVILAND-JONES, Eds. 2000. Handbook of Emotions. Second Edition. The Guilford Press. New York, London.

[4] ŽELEZNIKAR, A.P. 1997. Informationelle Untersuchungen. Grundlagenstudien aus Kybernetik und Geisteswissenschaft/Humankybernetik 38:147–158.

[5] ŽELEZNIKAR, A.P. 2003. Conscious informational entities. Informatica 27:483–494. In PDF, at http://www.artifico.org.

[6] ŽELEZNIKAR, A.P. 2004. Introduction to Artificial Consciousness. The Philosophy of the Informational, Formalization, and Implementation. A study in progress, pp. 415. In PDF, at http://www.artifico.org.

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