

SOME COMMENTARIES IN CONNECTION WITH DRĂGĂNESCU'S "MONOID OF EXISTENCE"

Gorun MANOLESCU

gmnoema@yahoo.com

ABSTRACT. The "Monoid of Existence" has been introduced by M. Drăgănescu. This "Monoid" tries to explain the appearance of anything (from an universe until an elementary particle) starting from the phenomenological realm. Some commentaries in connection with such "Monoid" are done. Finally, some open problems are pointed out.

KEYWORDS: *Monoid of Existence, Category theory, Automorphisms, Phenomenological realm, Phenomenological-Structural realm, Structural realm, Formative Image*

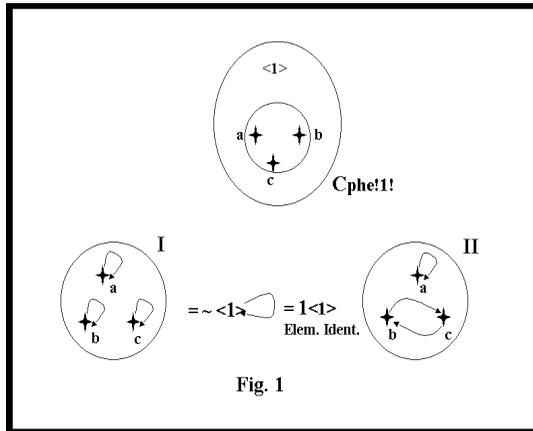
1. The Monoid of Existence

Accordingly to [Drăgănescu, 2001], if we consider **Cphe!1!** as the phenomenological category of entire existence, then there is the **fundamental set of existence <1> (monoid)** which is 'the infraconsciousness of existence, that is the orthosense or phenomenological information <to exist>'.

'<1> is a *set with three elements*: (a) *to exist in itself*, expressing also the unity of the entire existence; (b) *to exist from itself* which contains the autofunctor that generates families of orthosenses for building universes [...]; (c) *to exist into/for itself*, which brings back, from an universe, information on the

happenings in that universe in order to become new orthosenses in informatter [...].

In the phenomenological sense, **(a)** is a fixed star, only the permutations of **(b)** and **(c)** are permitted. It seems that **(b)** has normally a pole position because it is a generator of new orthosenses [...] for the generation of new universes [...] The orthosene **(c)** [...]has the role to bring back information from an universe [...]. It may change its position with **(b)** and to occupy the pole position. The chronos may produce such permutations. [...]. (See Fig. 1).



Commentary 1 (M.G.). It seems that:

(i) another interpretation of dynamics of the $\langle 1 \rangle$ (Monoid) one can be suggested; so, if we admit that there are some forms of 'chronos', 'which might be envisaged as a time without duration, as a tact (like that of a computer) in deep existence of informatter' [Draganescu,2001], then "to exist from itself" (Unfolded Existence), and "to exist into/for itself" (Folded Existence) might be interpreted as being consistent with the "Law of impermanence of every **real** thing" (i.e. "Absence of inherent – not inherit – existence of every **real** thing" [Gyatso, 1981]). That is to say, each **real** thing is born; it becomes mature, and dies. In turn, "to exist in itself" is, by its nature, **indestructible** ('is a fixed star'). The interplay between "to

exist from itself" and "to exist into/for itself" might be modeled by means of two morphisms, in fact an automorphism, between (b), and (c) orthosenses. The rule of (a) (as fixed star) might be modeled by automorphism "1a" (Fig. 1, II).

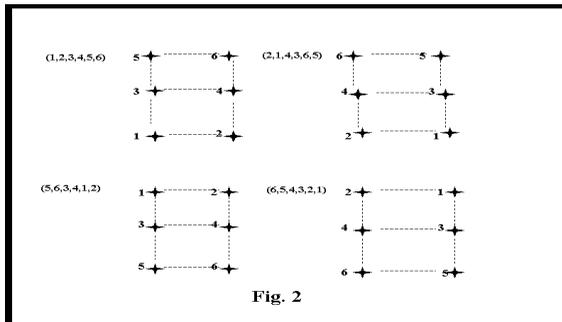
(ii) All three elements of $\langle 1 \rangle$ are always existent (Identity automorphism, "1<1>" Fig. 1, I); but only interplay between "to exist from itself" and "to exist into/for itself" leads to the appearance and disappearance of a real thing (from an universe until an elementary particle)

(iii) If we take into account the presumptions (i) and (ii), then only the automorphisms, which are shown in Fig. 1. I, and II, can appeared in $\langle 1 \rangle$ (Monoid of Existence), and (i) and (ii) might be considered as conditions of fiability of Cphen!!.

2. Graph Automorphism [Skiena, S., 1990, Voss, J., 2003]

An automorphism of a graph is a graph isomorphism with itself, i.e., a mapping from the vertices of the given graph G back to vertices of G such that the resulting graph is isomorphic with G . The sets of automorphisms define a "permutation group".

For example, the grid graph $G_{2,3}$ has four automorphisms (Fig. 2):

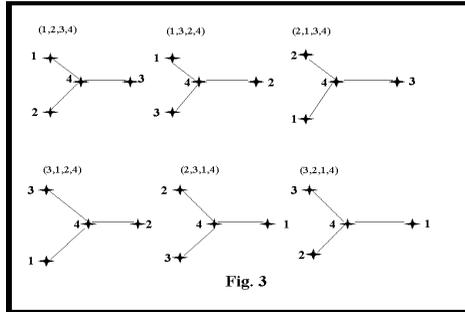


These automorphisms correspond to the following admitted permutations: the graph itself, the graph flipped left-to-right, the graph flipped up-down, and the graph flipped left-to-right and up-down, respectively.

More generally:

$$|\text{Perad}(G_{m,n})| = \begin{cases} 1 & \text{for } m = n = 1 \\ 2 & \text{for } m = 1 \text{ or } n = 1 \\ 4 & \text{for } m \neq n \text{ and } m, n > 1 \\ 8 & \text{for } m = n > 1 \end{cases}$$

Similarly, the star graph, S_4 has six admitted permutations (Fig. 3).

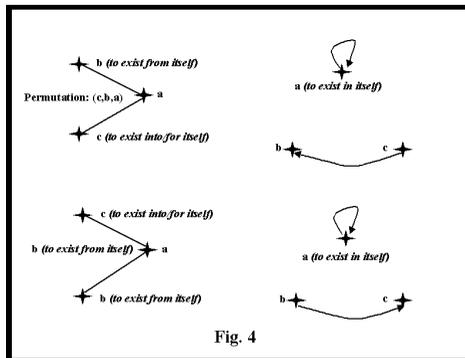


More generally:

$$|\text{Perad}(S_n)| = (n - 1)! \text{ For } n \geq 3.$$

3. Drăgănescu's Monoid Dynamics <1> as automorphism of Graph S_3

Commentary 2 (M.G.). The automorphisms from Fig. 1, I and II, are found for: $|\text{Perad}(S_n)| = (n - 1)! \text{ For } n \geq 3$, where $n = 3$.



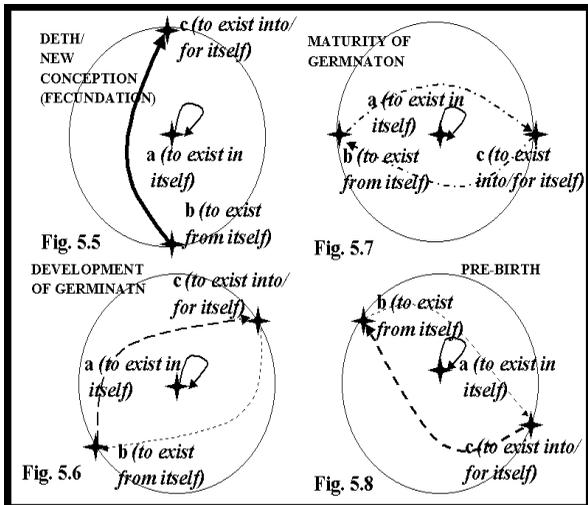
In this case, the number of permutation is 2 ($1 \times 2 = 2$) as we can see from Fig. 4.

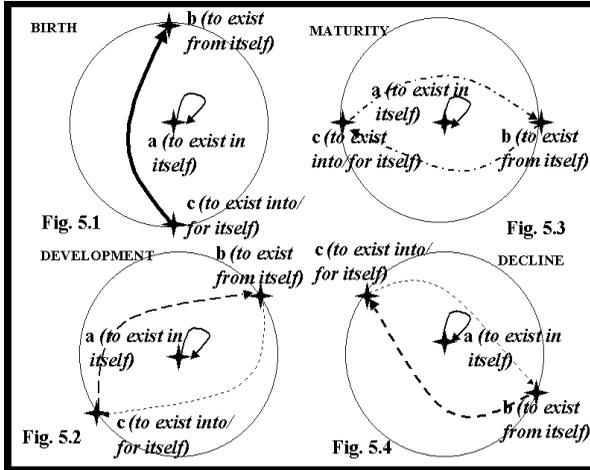
4. A new interpretation of Draganescu's Monoid Dynamics <1> as multiple automorphism of Graph S3

Commentary 3 (M.G.). Is there one "tact" only when (b) and (c) occupy the "pole position"?

We suggest that there is an infinite number of such "tact" (time without duration). In this case, the positions, which are successively occupied by (b) and (c), in the frame of the dynamics of Monoid, become more significant. In Fig. 5 there are shown some such positions.

In the following table it is exposed an analyzed of (a), (b), and (c) positions accordingly to Fig. 5.1,...,5.8.





Rotation in a clock wise sense (Figure)	Position of (a)	(c)→(b) morphism	(b)→(c) morphism	Phase of a thing life-gestation cycle
0 (Fig. 5.1)	Fixed star	Ultra-intense ((b) in pole position)	Ultra-weak (practically non- existent)	Birth of a real thing
1/8 (Fig. 5.2)		Very-intense	Very-weak	Development
2/8 (Fig. 5.3)		Intense/Weak	Weak/Intense	Maturity (Balance)
3/8 (Fig. 5.4)		Very-weak	Very-intense	Decline
4/8 (Fig. 5.5)		Ultra-weak (practically non- existent)	Ultra-intense	Death/ Fecunda-tion of a new thing
5/8 (Fig. 5.6)		Very-weak	Very-intense	Development of germination
6/8 (Fig. 5.7)		Weak/Intense	Intense/ Weak	Maturity of germination (new balance)
7/8 (Fig. 5.8)		Very-intense	Very-weak	Pre-birth
8/8 (Finally – not shown in a Figure)		Ultra-intense	Ultra-weak (practically non- existent)	New birth of a new real thing (new cycle)

5. Other interpretations

Commentary 4 (M.G.). If we suppose that there are the following three levels of Existence: *phenomenological*, *phenomenological-structural*, and *structural* respectively, then it could be suggested:

(i) Accordingly to [Dharmakīrti (1962), Dharmamottara (1962), Augustin (2003)] (the knowledge by means a "mark" of a thing when such thing is absentee – e.g. the presence of "smoke" in the absence of "fire") and to modern interpretation of this theory [Gyatso (1981), Manolescu (2003)], the "Monoid of Existence" might be interpreted as a **mark** in *phenomenological-structural* realm of an essential thing from *phenomenological* realm.

(ii) The following phases of the dynamics of the "Monoid of Existence": "Fecundation" (Fig. 5.5), "Development of gestation" (of a real thing, from an universe until an elementary particle – Fig. 5.6), "Maturity" of such "gestation" (Fig. 5.7), and "Pre-birth" (Fig. 5.8) are transparent for an human observer which uses only the five common senses (i.e. all these phases take place in the background of the *structural* realm). But, in some special circumstances, these phases can be directly perceived by a human observer by means of an inner (sixth) sense. In [Stcherbatsky (1962), App. III -manasa-pratyakṣa] such a perception is named "a pure perception", while in [Drăgănescu (1979)] such a perception is considered to be the result of the "intro-open" possibilities of a human being.

(iii) The phases from Fig. 5.1, 5.2, 5.3, and 5.4 take places in the *structural* realm and these phases can be directly observed by a human subject by means of the five common senses, eventually extended with some artificial direct measurement systems.

(iv) The "to exist in itself" orthosense (as a "fixed star" see all Fig. 5.i) represents the interface between the *phenomenological-structural* realm and the *phenomenological* realm.

6. Three open problems

Commentary 5 (M.G.). It seems that there are at least three open problems:

Does it exist, during the gestation period of a future new thing, an interaction between a (pure) human perception of such gestation and a reciprocally (pure) perception of the future new thing on a human being in the *structural-phenomenological* realm? And how such interaction influences the life-gestation cycle of both entities? And more than that: such interactions are stopped when a new real thing is born and can be perceived by a man by his common five senses or such interactions and reciprocally changes go on in the background (i.e. in the *structural-phenomenological* realm) when a human being “experiments” the thing, and the thing also “experiments” a human being by the “pure perceptions”? [Husserl (1917)]. More generally, does it exist any interactions between a human being and anything (animate or inanimate) during of the entire life-gestation cycle of both such entities? (The Buddhist “Origination Dependent Law” [Stcherbatsky (1962)] seems to offer a response to such question).

Can they help us the formal mathematics to describe the dynamics of *phenomenological -structural* realm? We think that they can. And they can do it because this realm, besides a *phenomenological* aspect, has also a complementary *structural* one. And it is mainly possible by Non-Metrics Topological Spaces [see Drăgănescu (2002)].

In turn, it seems that pure *phenomenological* realm can not be described by the formal mathematics. If we will paraphrase what Kamalasila said [cited in Stcherbatsky (1962)] (“The Transcendent is not real, but He is Existence itself, although not given in a concept, since by its very essence it is non-concept. More than that, the Transcendent is found in every real thing”) then we can say: “The Phenomenological is not real, but it is found in every real thing” and it can not be described nor quantitatively as well as nor qualitatively by means of mathematics or conceptual modes. However, it could be described by sentences which are “not true

and not false", according to "Tetralemma" of Buddhist Logic [Tillemans, (1999)], but these assertions must not be contradictory (in accordance with the statement of Buddha [cited in Stcherbatsky (1962)]). It seems that Platon and Plotin would have had a similar position [see Plotin (2002)]

7. Final remarks

Commentary 6 (M.G.). (i) As a corollary of previously Commentaries 4 and 5, we think that it is a good reason to consider the **Cphen!1!** Drăgănescu's **phenomenological category** of entire existence as **Cphen-str!1!** – **phenomenological-structural category** of only real existence.

(ii) Finally, we consider that the Draganescu's "Monoid of (real, but not entire) Existence" is a good and obviously example of an **architectural cosmological formative image** [see Manolescu (2001)].

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