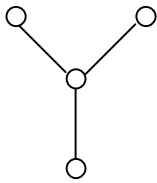# Prof. Dr. Alfred Toth

Is there a trichotomy of the Medad?

1. In Toth (2009), I have re-introduced the Peircean Medad or 0-valued relation into semiotics. Especially, it has been shown that the Peircean sign model requires the Medad for the triadic sign model on two reasons:

1. The early Peircean sign model (cf. Toth 2008a, pp. 61-69)

is a graph with 4 and not 3 nods.

2. Since sub-signs had been introduced by Peirce both as static objects and as dynamic morphisms, e.g.

$(1.1) \equiv (1 \rightarrow 1)$, $(1.2) \equiv (1 \rightarrow 2)$, $(1.3) \equiv (1 \rightarrow 3)$, etc.,
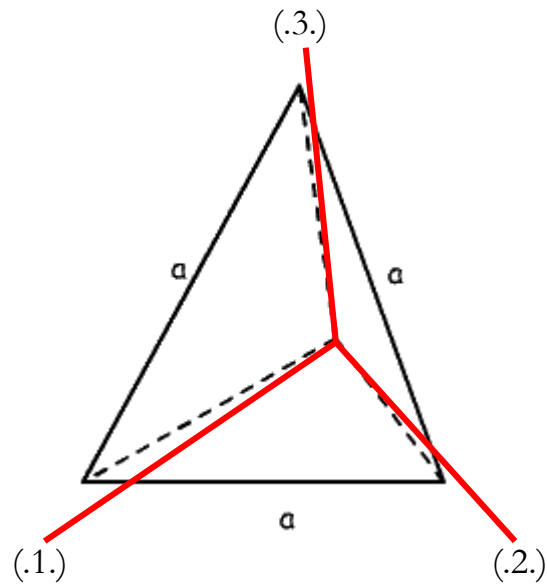
the introduction of the prime-signs (Bense 1980) requires this double character as well:

PS = {.1., .2., .3.) ≡ <[[[0, 1], [[0, 2], [0, 3]]]]>.

Therefore, the Medad or category of Zeroness is already required for a triadic sign model, and thus there is no contradiction between Peirce's graph with 4 nods and the triadic sign model.

3. However, we may ask the question if the Medad as 0-valued relation has only 1 trichotomy, namely (.0.) itself, or if it is split into three trichotomic values like the other three categories, Firstness, Secondness, and Thirdness, are.

It is easy to proof that there are 3 trichotomies also for Medads. All we have to do is to turn Peirce's 4-nod-graph into a (3-dimensional) tetraeder:

From the 4th nod of the tetraeder, there is a connection to all other three nods. If we interpret the 4th nod as Zeroness, than the Medad is the categorial number of the categorial object. Thus, there are three connections between the three semiotic categories and the ontological category (Bense 1975, pp. 65 s.; Toth 2009), whereby the contextural border between the object (.0.) and the sign (.1., .2., .3.) is transgressed:

$(0, [0, 1])$
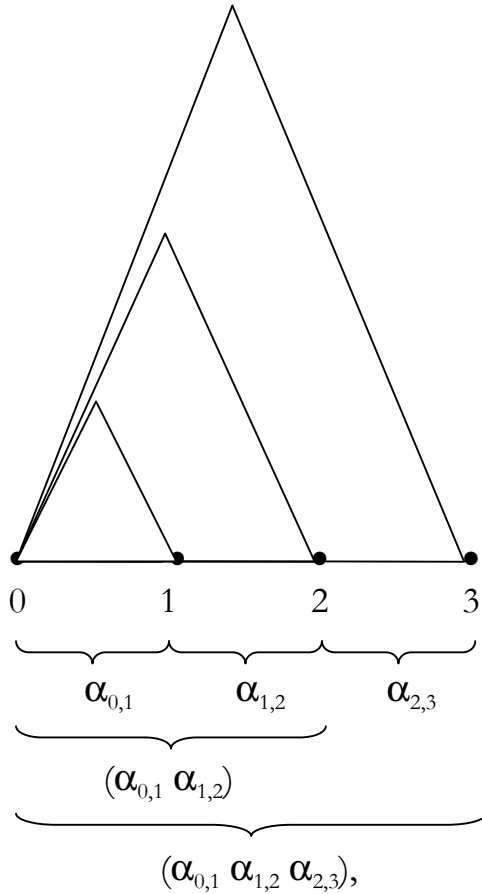$(0, [0, 1, 2])$
$(0, [0, 1, 2, 3])$

Now, we remember (Toth 2009) that

$[0, 1] \equiv (.1.)$
$[0, 1, 2] \equiv (.2.)$
$[0, 1, 2, 3] \equiv (.3.)$.

Therefore, we have

$(0, [0, 1]) = (0.1)$
$(0, [0, 1, 2]) = (0.2)$
$(0, [0, 1, 2, 3]) = (0.3)$,

i.e. we obtain the three "pre-semiotic" trichotomies introduced into semiotics by Götz (1982, p. 4, 28) simply in analogy to the trichotomie of First-, Second- and Thirdness (cf. also Toth 2008a, pp. 166-176).

3. Another way to introduce the trichotomies of the Medad starts again with the dynamical introduction of the prime-signs (cf. Toth 2009):

i.e., we have

$$\alpha_{0,1} = (0.1)$$
$$(\alpha_{0,1} \ \alpha_{1,2}) = (0.2)$$
$$(\alpha_{0,1} \ \alpha_{1,2} \ \alpha_{2,3}) = (0.3),$$

so that we have also solved the problem of the semiotic morphisms on the level of Zeroness which goes through a lot of articles of mine, especially in Toth (2008b).

Bibliography

Bense, Max, Semiotische Prozesse und Systeme. Baden-Baden 1975

Bense, Max, Die Einführung der Primzeichen. In: Ars Semeiotica 3/3, 1980, pp. 287-294

Götz, Matthias, Schein Design. PhD dissertation, Univ. of Stuttgart, 1982

Toth, Alfred, Semiotische Strukturen und Prozesse. Klagenfurt 2008 (2008a)

Toth, Alfred, Semiotics and Pre-Semiotics. 2 vols. Klagenfurt 2008 (2008b)

Toth, Alfred, Medads and the triadic sign relation. In: Electronic Journal for Mathematical Semiotics, www.mathematical-semiotics.com/pdf/medads.pdf (2009)

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