Prof. Dr. Alfred Toth

Eigenreality in mono- and polycontextural semiotic systems

1. One of the important discoveries in theoretical semiotics was that Being can only be represented (Bense 1981), but as a represented Being, it shows up in two shapes: the sign thematic and the reality thematic. According to Bense, the sign model serves here as a "doubled epistemological relation", insofar as the sign thematic indicates the subject, and the reality thematic indicates the object relation (Bense 1976, 1992). Thus, the triadic structure of the semiotic main values and the trichotomic structure of the semiotic secondary values are repeated in the epistemological schema (sign thematic), (dualization), (reality thematic). If we write down the 10 Peircean sign classes together with their dual reality thematics

(3.1 2.1 1.1) × (1.1 1.2 1.3)
(3.1 2.1 1.2) × (2.1 1.2 1.3)
(3.1 2.1 1.3) × (3.1 1.2 1.3)
(3.1 2.2 1.2) × (2.1 2.2 1.3)
<u>(3.1 2.2 1.3) × (3.1 2.2 1.3)</u>
(3.1 2.3 1.3) × (3.1 3.2 1.3)
(3.2 2.2 1.2) × (2.1 2.2 2.3)
(3.2 2.2 1.3) × (3.1 2.2 2.3)
(3.2 2.3 1.3) × (3.1 3.2 2.3)
(3.3 2.3 1.3) × (3.1 3.2 3.3),

we realize that only 1 sign thematic is identical with its dual reality thematic. According to Bense (1992), this is the sign class of the "sign itself", i.e. it does not refer to a reality outside of itself, but solely to its own inner reality, the semiotic reality, it is so-to-say composed of itself.

3. However, Rudolf Kaehr (2009) has shown, that eigenreality is a phenomenon that can only appear in monocontextural systems. Monocontextural systems are systems in which the logical Law of Identity (a ≡ a) is fully valid. In semiotics,

this means, f. ex., that every genuine sub-sign is self-identical, i.e. that semiotic identity of identitive morphisms cannot be split into 2 or more sub-signs:

$(3.1\ 2.\times.2\ 1.3) \times (3.1\ 2.\times.2\ 1.3)$,

thus the Law of Identity creates, in semiotics, in-between-symmetry. Now, in polycontextural semiotics, the Law of Identity is abolished, hence, we find genuine sub-signs in more than 1 contexture already in the most simple poly-contextural matrix for 3-adic 3-otomic sub-signs:

	1	2	3
1	$(1.1)_{1,3}$	$(1.2)_{1}$	$(1.3)_{3}$
2	$(2.1)_{1}$	$(2.2)_{1,2}$	$(2.3)_{2}$
3	$(3.1)_{3}$	$(3.2)_{2}$	$(3.3)_{2,3}$

i.e. we have here exchange relations between

(1.1): $1 \leftrightarrow 3$
(2.2): $1 \leftrightarrow 2$
(2.3): $2 \leftrightarrow 3$,

but the self-identity of the non-genuine sub-signs is abolished, too, since we also have

(1.2): $(1.2) \leftrightarrow (1.2)°$
(1.3): $(1.3) \leftrightarrow (1.3)°$
(2.3): $(2.3) \leftrightarrow (3.2)°$

while in dualizations, we have

(1.2): $(1.2)_{i,k} \leftrightarrow (1.2)_{k,i}$
(1.3): $(1.3)_{i,k} \leftrightarrow (1.3)_{k,i}$
(2.3): $(2.3)_{i,k} \leftrightarrow (2.3)_{k,i}$

This observation we want to write down in the following theorem:

Theorem: While pairs of converse dyadic relations of the shape ((a.b), (a.b)°) lie in the same contexture(s), pairs of dual dyadic relations of the shape ((a.b), ×(a.b)) lie in the same contextures with inverted order.

From this theorem it follows immediately:

Lemma: Eigenreality is a monocontextural structural feature because in systems with only 1 contexture, there is not differentiation between the order of contextures, and thus the pairs ((a.b), (a.b)°) and ((a.b), ×(a.b)) coincide.

4. Therefore, we can also say that binnensymmetry (in-between-symmetry) creates eigenreality in monocontextural systems. Knowing that, it will be shown now how eigenreality can be constructed in a very simple way. Lets start with the 3-contextural pseudo-eigenreal "dual" system:

$(3.1_3\ 2.2_{1,2}\ 1.3_3) \times (3.1_3\ 2.2_{2,1}\ 1.3_3)$

In this "complementary system" (Kaehr 2009), the sign class

$(3.1_3\ 2.2_{1,2}\ 1.3_3)$

with the inner environments of its dyadic sub-signs (<3, <1, 2>, 3>)

is assigned the reality thematic

$(3.1_3\ 2.2_{2,1}\ 1.3_3)$

with its outer environments (<3, <2, 1>, 3>). Remember that in classical semiotic dual systems the sign thematic stands for the subject and the reality thematic for the object relation. Therefore, we have

(<3, <1, 2>, 3>): Set of contextures for subject relation
(<3, <2, 1>, 3>): Set of contextures for object relation

for $(3.1_3\ 2.2_{1,2}\ 1.3_3) \times (3.1_3\ 2.2_{2,1}\ 1.3_3)$. If we now transport the genuine dyadic relation (identitive morphisms) with outer environment to its corresponding genuine dyadic relation with inner environment, we get

$(3.1_3\ 2.2_{1,2}\ 2.2_{2,1}\ 1.3_3)$.

Now, we have created binnensymmetry:

$(2.2_{1,2} \times 2.2_{2,1})$,

and thus eigenreality (theorem and lemma):

$(3.1_3\ 2.2_{1,2}\ 2.2_{2,1}\ 1.3_{\ 3}) \times (3.1_3\ 2.2_{1,2}\ 2.2_{2,1}\ 1.3_{\ 3})$.

But what have we done? We have exported an object element of the representation and imported it into the subjective relation of the representation, and we have exported a subjective element of the representation and imported it into the objective relation of representation. The above complementary system is thus a hybrid semiotic system with objective share in its subjective representation and with subjective share in its objective representation.

If we not note the abstract sign relation as follows (Toth 2008)

$SR = (<\pm S \pm O>_I, <\pm S \pm O>_O, <\pm S \pm O>_M)$,

considering that a sign mediates as a function between world (= object pole) and consciousness (= subject pole), then we get for our polycontextural-eigenreal representation system above

$<\pm S \pm O>_O = (2.2_{1,2})$

and

$<\pm O \pm S>_O = (2.2_{2,1})$,

so that we get

$<<\pm S \pm O><\pm O \pm S>> = (2.2_{1,2}\ 2.2_{2,1})$,

and thus again binnensymmetry and from here qua theorem and lemma eigenreality. However, we also learn something that appears only in semiotic structures with contextures $K > 3$, namely

$(a.b_i) \neq \times(a.b_1)$,

e.g. in the following context

$(3.1_3\ 2.1_1\ 1.3_3) \times (3.1_3\ 1.2_1\ 1.3_3) =$

$(<\pm 3\pm 1>_3, <\pm 2\pm 1>_1, <\pm 1\pm 3>_3) \times (<\pm 3\pm 1>_3, <\pm 1\pm 2>_1, <\pm 1\pm 3>_3)$,

that $(3.1)_3$ in the sign thematic is not $(3.1)_3$ in the reality thematic (and so on for the other two dyads), because subject- and object-position have been exchanged. To put it simply: $(3.1)_3$ (sign thematic) just looks like $(3.1)_3$ (reality thematic), because in a 3-contextural system, there are not enough contextures to let show the non-identity of dualized sub-signs, but cf. in 4 contextures: $(3.1)_{3,4} \neq ((3.1)_{4,3}$.

Bibliography

Bense, Max, Vermittlung der Realitäten. Baden-Baden 1976
Bense, Max, Axiomatik und Semiotik. Baden-Baden 1981
Bense, Max, Die Eigenrealität der Zeichen. Baden-Baden 1992
Kaehr, Rudolf Sketch on semiotics in diamonds http://www.thinkartlab.com/pkl/lola/Semiotics-in-Diamonds/Semiotics-in-Diamonds.html (2009)
Toth, Alfred, The sign as a "disjunction between world and consciousness". In: http://www.mathematical-semiotics.com/pdf/DisjWorldConsc..pdf (2008)

17.4.2009