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# Dualization und Triadization of sign classes

1. Everybody who has studied theoretical semiotics know, that a sign class of the general form

(3.a 2.b 1.c)

can be transformed in its reality thematics by application of the operation of dualization ("$\times$") to the sign class:

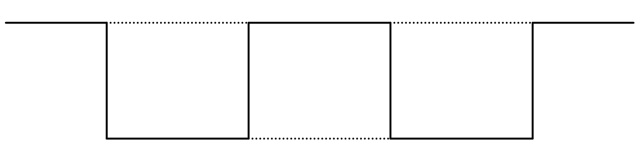
$\times$(3.a 2.b 1.c) = (c.1 b.2 a.3).

Hence, dualization turns not only the order of the sub-signs, but also the order of their prime-signs around. Another operation, which I had called "reflection" (R), has never been applied in Bense-Semiotics:

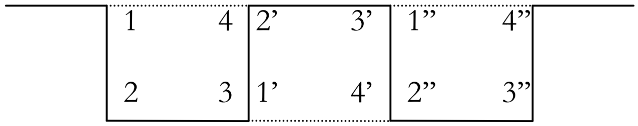
R(3.a 2.b 1.c) = (1.c 2.b 3.a),

but as I have shown in Toth (2008, pp. 177 ss.), reflection of a sign class leads to one of totally 6 possible permutations of a triadic sign class (and vice versa, of a reality thematic).

2. In one of the first attempts at polycontextural semiotics, Kronthaler had suggested that polycontextural sign classes should be triadized or even tetradized "in order to take care of the role of the localization of the interpretant" (1992, p. 293). As a sign model he suggested the partly open, partly closed meander (without reference from Kristeva's "Semeiotike", 1969)



However, I cannot see, what this model has to do either with triadization or with tetradization. If we label the corners




we recognize that a tetradic sign class following the meander model does not show any structural feature different from any monocontextural triadic sign class

(3.1 2.1 1.3) × (3.1 1.2 1.3) × (3.1 2.1 1.3)

In words: The tetradic structure (2’ –3’-1’-4’) is as different from the tetradic structure (1-4-2-3) as the triadic structure (3.1 1.2 1.3) is different from the triadic structure (3.1 2.1 1.3), one can see that best at the dashed connection between (2.1) and (1.2). That means: Both (2’ –3’-1’-4’) and (3.1 1.2 1.3) are reality thematics from (1-4-2-3) and (3.1 2.1 1.3), respectively, won by dualization, and only the doubled dualization brings back the original sign class:

××(4.a 3.b 2.c 1.d) = (4.a 3.b 2.c 1.d)
××(3.a 2.b 1.c) = (3.a 2.b 1.c)

3. Kaehr (2008) introduced inner semiotic environment, i.e. contextures for the sub-signs that constitute sign classes and reality thematics. If we take our example and write the corresponding contextural indices

$(3.1_{3,4}\ 2.1_{1,4}\ 1.3_{3,4})$,

then we already see, that converse relations (sub-signs) have the same contextural index. However, if we dualize, then not only the order of the prime-signs, but the order of the indices is inverted, too:

$\times(3.1_{3,4}\ 2.1_{1,4}\ 1.3_{3,4}) = (3.1_{4,3}\ 2.1_{4,1}\ 1.3_{4,3})$.

So, this is a real polycontextural sign class (in opposition to Kristeva-Kronthaler's model), but what did change? If we look at

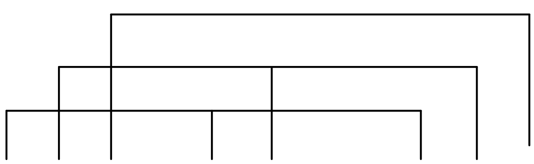
$(3.1_{3,4}\ 2.1_{1,4}\ 1.3_{3,4}) \times (3.1_{4,3}\ 2.1_{4,1}\ 1.3_{4,3}) \times (3.1_{3,4}\ 2.1_{1,4}\ 1.3_{3,4})$,

we see again that $(3.1_{4,3}\ 2.1_{4,1}\ 1.3_{4,3})$ is nothing else than the reality thematic of the un-dualized sign class $(3.1_{3,4}\ 2.1_{1,4}\ 1.3_{3,4})$ and that

$\times\times(3.1_{3,4}\ 2.1_{1,4}\ 1.3_{3,4}) = (3.1_{3,4}\ 2.1_{1,4}\ 1.3_{3,4})$.

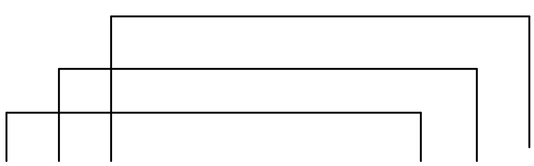
So, neither according to Kronthalers Meander nor according to Kaehr's contextuated sign classes there is a "triadization", "tetradization" or something like that.

4. But halt! Is not Bense's eigenreality (Bense 1992) exactly based on the fact that the eigenreal sign class is identical with its dualized structure? Is this not the reason why Bense ascribed the Möbius band as a model of eigenreality, and stated that in the eigenreal case 1 turning would lead back to the structure of the sign class, whereas in all other 9 sign classes there are 2 turnings needed to get back to the original structure (of the sign class)?



(3.1 2.2 1.3) × (3.1 2.2 1.3) × (3.1 2.2 1.3)

However, if we compare the above connections with the following:



(3.1 2.2 1.3) × (3.1 2.2 1.3) × (3.1 2.2 1.3)

than we see that

(3.1(sign class)) ≠ (3.1(reality thematic)), but (1.3(reality thematic))
(2.2(sign class)) ≠ (2.2(reality thematic)), but (2.2(reality thematic))
(1.3(sign class)) ≠ (1.3(reality thematic)), but (3.1(reality thematic)).

In other words: Already in monocontextural sign classes, we come to the insight that what looks identical is not identical, or to differentiate between semiotic surface identity and deep structure identity.

5. The conclusion is more than simple: Dualization (×) of a sign class – mono- or polycontextural – leads to its bijectively mapped reality thematics. In every case, i.e. the eigenreal sign class included, we need doubled dualization (××) to get back to the original structure (sign class or reality class). There is nothing like triadization, tetradization or the like.

5.1. Special conclusion for the Möbius ribbon: It can serve as a model for eigenreality only under the condition that it is possible to prove that "recto"- and "verso"-side of this band are behaving like morphismic (i, j, k) and hetero-morphismic (k, j, i) structures of the indices of the sub-signs in the dualized structures of sign classes (or reality thematics).

## Bibliography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