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Speculations about the addition of contextuated sign relations

1. As Günther had pointed out in his memories (Günther 1975), by aid of polycontextural numbers one can add objects of more than one quality, i.e. not only 1 apple + 1 apple = 2 apples (preservation of quantity and quality), but also 1 apple + 1 pear = 2 ???, where 2 "fruits" just preserves the quantity, but offers a kind of compromise for the (non-) added qualities. Also, Günther pointed out that it is possible to start counting in contexture 1 and to continue in another contexture, so that the border for the Here and the Beyond(s) are getting permeable for counting processes as well as for series of numbers. And finally, again according to Günther, it is not only possible to count polycontextural numbers, but the contextures themselves, in which they lie.

2. A nice little example of how counting could look in the semiotic subsystem of the dyadic sub-signs is given by Kaehr (2009, but going back to Kaehr's notes from the late 70ies). If T denote the transjunction operator (here: mathematical "Verwerfung"!), then we have, e.g.

T((2.1), (2.2)) = (2.3)

This is an example of a verwerfung of two trichtomic values in favor of a third one offered by trichotomic semiotics (already). However, how would T operate in the following examples:

T(2.1) = (2.2)?, (2.3)?
T((2.1), (2.2), (2.3)) = ? (Unsolvable or dyad from another triad?)
T((2.1), (3.1) = ? (Unsolvable or (1.1)?)
T((1.1), (2.1), (3.3) = ? (A whole set of dyads like ((1.2), (1.3), (2.2), (2.3), (3.1), (3.2)) or unsolvable?

3. If two ore more sign classes have to be added, this was defined by Berger (1976) as the maximum of the intersection of these sign classes, e.g.

(3.1 2.2 1.2) + (3.2 2.2 1.2) = max((3.1 2.2 1.2) ∩ (3.2 2.2 1.2)) = (3.2 2.2 1.2), a subtraction was defined conversely, with min- instead of maximum function. However, this addition/subtraction seems not to work of the level of the sub-sings, cf.

(3.1) + (3.2) = ?

We may also be aware that in a semiotics in which the inclusive semiotic order is eliminated, we may meet an example like follows:

(3.1 2.2 1.1) + (3.2 2.1 1.2).

Here, max((3.1 2.2 1.1) $\cap$ (3.2 2.1 1.2)) = ?? (3.2 ??)

4. However, if we also consider contextures, the problems start to increase quickly. Generally, we have the following problems:

4.1. Triadic values = trichotomic values = contextures, e.g.

$(3.1)_i + (3.1)_i = ?$

4.2. Triadic values = trichotomic values ≠ contextures, e.g.

$(3.1)_i + (3.1)_j = ?$

4.3. Triadic values ≠ trichotomic values ≠ contextures, e.g.

$(3.1)_i + (3.2)_j = ?$

4.4. Triadic values ≠ trichotomic values ≠ contextures, e.g.

$(2.1)_i + (3.2)_j = ?$

Of course, there are more combinations, but with these main types not only dyads, but triads (sign classes, reality thematics) can be added – provided that for question marked places there will be found a solution.

5. In order to solve the above marked problems, I shall suggest two ways:

5.1. Sub-signs with either/or – and – different triadic and trichotomic values cannot be added directly, since the prime sign-numbers (Bense 1980) are separated by contexture borders by themselves (Toth 2008, passim). If either the triadic and/or the trichotomic values coincide, they just can be added like in elementary arithmetics:

5.1.1. (3.1) + (3.1) = (3.1)

5.1.2. (3.1) + (2.1) = (3.1) + (1.2) + (2.1). This suggestion substitutes addition by composition, which is legitimated by the double nature of sub-signs as static dyads and as dynamic semioses.

5.1.3. (3.1) + (3.2) = max((3.1), (3.2)) = (3.2). Here, I agree with Berger (1976).

Now the types with contextures:

5.1.4. $(3.1)_i + (3.1)_i = (3.1)_i$

5.1.5. $(3.1)_i + (3.1)_j = (3.1)_{max((i,j)}$. Thus, I use Berger's lattice addition for contextures.

5.1.6. $(3.1)_i + (3.2)_i$ = max((3.1), (3.2)) = (3.2). (Berger)

5.1.7. $(3.1)_i + (3.2)_j$ = max((3.1), (3.2)) = (3.2); max(i, j) eat(Berger) Thus, here I use the max both for sub-signs and for their contextures.

5.1.8. $(2.1)_i + (3.2)_{jj}$ = min((2.1), (3.2)) = (2.1). Min-function is legitimated here because a triadic relation contains itself, a dyadic and monadic relation. min(i, k). The idea is that in contextuated semiotic relations, you do not add primarily the prime-sign-numbers, but the contextures themselves.

5.1.9. $(3.1)_i + (2.1)_j$ = (3.1) + (1.2) + (2.1); min(i, j), cf. 5.1.2.

I am closing in the conviction that the last words are not yet spoken.

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