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Embeddings of sign relations into sign relations

Since

$$\times(3.1_{3,4}\ 2.2_{1,2,4}\ 1.3_{3,4}) = (3.1_{4,3}\ 2.2_{4,2,1}\ 1.3_{4,3}) \neq (3.1_{3,4}\ 2.2_{1,2,4}\ 1.3_{3,4})$$

and

$$\times(3.3_{2,3,4}\ 2.2_{1,2,4}\ 1.1_{1,3,4}) = (3.3_{4,3,2}\ 2.2_{4,2,1}\ 1.1_{4,3,1}) \neq (3.3_{2,3,4}\ 2.2_{1,2,4}\ 1.1_{1,3,4}),$$

in Toth (2009), I have shown two possibilities of how to save eigenreality in polycontextural semiotic systems:

1. $(3.1_{3,4}$ ↑ $2.2_{1,2,4}$ ↑ ↑ $1.3_{3,4})$

$1.3_{3,4}$ $2.2_{4,2,1}$ $3.1_{4,3}$

i.e., by embedding of the sign relation

$$(1.3_{3,4}\ 2.2_{4,2,1}\ 3.1_{4,3})$$

into the sign relation

$$(3.1_{3,4}\ 2.2_{1,2,4}\ 1.3_{3,4}).$$

Thus, we turn

$$(IOM) \rightarrow (IMO \equiv OIM).$$

2. $(3.3_{2,3,4}$ ↑ $2.2_{1,2,4}$ ↑ $1.1_{4,3,1}$ ↑ $)$
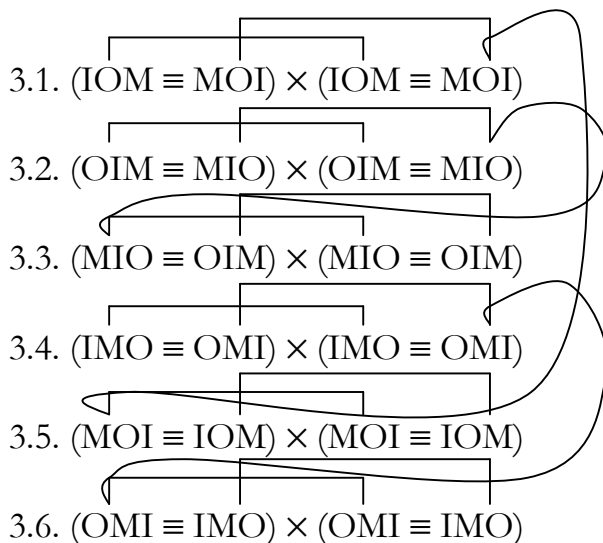
$1.1_{1,3,4}$ $2.2_{4,2,1}$ $3.3_{4,3,2}$

Here, the turned caused by the embedding of a sign class into a sign class is

$$(IOM) \rightarrow (IMO \equiv OMI).$$

3. Obviously, by re-establishing eigenreality, which goes lost during the transit from mono- to polycontexturality, we found a new kind of sign relation, namely the embedding of a sign relation A into the same sign relation A, but with the condition that the same fundamental categories (M, O, or I) match exactly in the middle of the new "doubled" sign relation and that the sign relation to embed consists of sub-signs whose morphisms have to be replaced by heteromorphisms, according to the positions in the original sign relation, into which the new sign relation is embedded; cf. the above examples 1 and 2. The middle part, where X ≡ X (X ∈ (M, O, I)) match, creates binnen-symmetry. As it seems, there are exactly 6 possible types of embedding sign relations into sign relations:

3.1. (IOM ≡ MOI)
3.2. (OIM ≡ MIO)
3.3. (MIO ≡ OIM)
3.4. (IMO ≡ OMI)
3.5. (MOI ≡ IOM)
3.6. (OMI ≡ IMO)

Qua binnen-symmetry, we get, by (monocontextural) dualization, eigenreal dual systems out of these double-sign-classe and thus double-reality-thematics:

3.1. (IOM ≡ MOI) × (IOM ≡ MOI)

3.2. (OIM ≡ MIO) × (OIM ≡ MIO)

3.3. (MIO ≡ OIM) × (MIO ≡ OIM)

3.4. (IMO ≡ OMI) × (IMO ≡ OMI)

3.5. (MOI ≡ IOM) × (MOI ≡ IOM)

3.6. (OMI ≡ IMO) × (OMI ≡ IMO)

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4. Although their structures (esp. the positions of the sub-signs to be embedded and their morphismic or hetero-morphismic form) have still to be scrutinized, 4-adic sign classes my be embedded into 4-adic sign classes in 4! = 24 different ways, f. ex.

(MOIQ ≡ QIOM)
(MIOQ ≡ QOIM)
(OIMQ ≡ QMIO)
(OMIQ ≡ QIMO)
(IMOQ ≡ QOMI)
(IOMQ ≡ QMOI), etc.

Another question to be investigated is which role the mediative morphisms play in the embedding of n-adic sign classes into n-adic sign classes.

Bibliography

Toth, Alfred, Types of semiotic reflexivity in polycontextural semiotics. In: Electronic Journal of Mathematical Semiotics, www.mathematical-semiotics.com (2009)

6.4.2009