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Primzeichen-Zahlen und semiotische Kontexturen

1. In Toth (2009) I have shown that it is possible to artificially construct eigenreality in polycontextural sign relations:

(3.1 2.2 1.3) × (3.1 2.2 1.3)

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

Hereby we thus import a reality relation into the sign class and a sign relation into the reality thematic.

A related idea stays behind Bense's definition of prime-signs: He starts with the monocontextural eigenreal sign class

(3.1 2.2 1.3) → (3. 2. 1.) + (.1 .2 .3)

explaining it by "additive association" of the triads of the sign class and the trichotomies of the reality thematic. Bense concludes: "Diese festgestellten Zuammenhänge legitimieren m.E. ausreichend, von **Primzeichen** als den die repräsentierenden und kategorialisierenden Zeichenfunktionen zusammenfassenden Bestimmungsstücken zu sprechen" (1981, p. 23).

Already a few years before, Bense succeeded in showing the intrinsic connections between Peano-numbers and the prime-signs:

"Nunmehr ergibt die semiotische Reduktion und Explikation der Peanoschen Axiome folgende Aussagen für das semiotische Repräsentationsschema:

1. Der Präsentant ist ein Repräsentant.
2. Der Repräsentant eines Repräsentanten ist ein Repräsentant.
3. Es gibt keine zwei Präsentanten mit dem gleichen Repräsentanten.
4. Der Präsentant ist nicht Repräsentant seines Repräsentanten"
   (Bense 1975, p. 171)

In this way, Bense introduces the antecessor/successor relation into semiotics. Obviously, this ASR parallels the natural numbers in semiotics, thus creating a formal mathematical basis for semiotics. However, it also parallels relational logic, namely the n-adic calculus for n = 1, 2, 3. That the prime-signs break up having reached 3, is due to Peirce's conviction that every relation can be reduced to triad (or according to Günther 1991 due to Peirce's Christianism).

However, if semiotics has as a mathematical basis the natural rumbers, then the question arises if there cannot be negative prime-signs. At this point, it is important to underline that kenonumbers do not have negative counterparts – they are not differentiated at all into positive and negative numbers. However, in polycontextural semiotics, one counts the contextures and not some keno-sequences or morphograms corresponding with the sub-signs, the signs and the reality thematics. Thus, there is no formal obstacle to redefine a sign relation like that

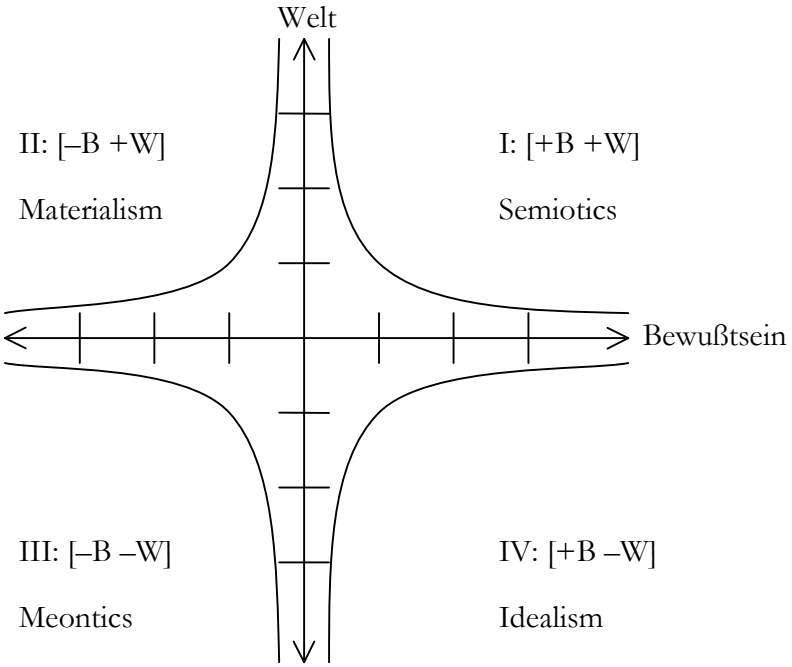
SR = (±3.±a ±2.±b ±1.±c),

so that we have on the level of the dyads the following 4 possible parametrizations:

(+a.+b)
(-a.+b)
(+a.-b)
(-a.-a).

Now these 4 types of dyads correspond with the parameters of the 4 quadrants of the Gaussian Number Field. Hence, in short, the introduction of negative prime-signs opens us up never before seen fields like complex semiotics (Toth 2007, 2008).

We get thus the following – very roughly sketched – graph as a new model for sign relation up to the number field of the complex numbers:



As one can see, too, from this graph, there is a bijection between the algebraic structure of a subsign (+a.-b, -a.+b, +a.+b, -a –b) and the epistemological structure of each dyadic sub-sign [+B -W], [-B +W] [+B +W] [-B +W]. The 4 quadrants correspond exactly both with the algebraic and the epistemological characterizations. Moreover, there is cylic transformation between semiotics and idealism: [+B +W] → [-B +W] → [-B -W] → [+B +W].

We can now start further semiotic inquieries by inaugurating the following 4-conxtextural 3-adic 3-otomic sign model

$$SCl = (\underline{\pm}3.\ \underline{\pm}1_{\underline{i,j,k}}\ \underline{\pm}2.\ \underline{\pm}b_{\underline{l,m,n}}\ \underline{\pm}1.\ \underline{\pm}c_{\underline{o,p,q}}) \text{ with } i, ..., q \in \{1, 2, 3, 4\}$$

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