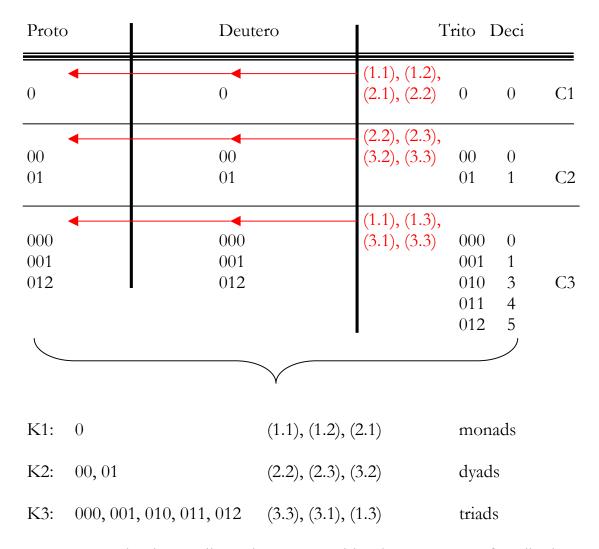# Prof. Dr. Alfred Toth

Contextures, relations, and dimensions

1. In Toth (2009b), I have shown that there is a correspondence between semiotic contextures and n-adic relations insofar as monads correspond with C1, dyads with C2, and triads with C3:

Proto	Deutero	Trito	Deci	
0	0	(1.1), (1.2), (2.1), (2.2) 0	0	C1
00 01	00 01	(2.2), (2.3), (3.2), (3.3) 00 01	0 1	C2
000 001 012	000 001 012	(1.1), (1.3), (3.1), (3.3) 000 001 010 011 012	0 1 3 4 5	C3

K1:	0	(1.1), (1.2), (2.1)	monads
K2:	00, 01	(2.2), (2.3), (3.2)	dyads
K3:	000, 001, 010, 011, 012	(3.3), (3.1), (1.3)	triads

2. However, that is not all. We have to consider the structures of qualitative numbers for every contexture and every number structure. Then, we obtain

0	1, 2, 3	1-dim semiotics

00	(1.1), (2.2), (3.3)	
01	(1.2)/(2.1), (1.3)/(3.1), (2.3/(3.2)	2-dim semiotics

000	(1.1.1), (2.2.2), (3.3.3)	
001	(1.1.2), (1.1.3), (2.2.1), (2.2.3), (3.3.1), (3.3.2)	
010	(1.2.1), (1.3.1), (2.1.2), (2.3.2), (3.1.3), (3.2.3)	3-dim semiotics
011	(1.2.2), (1.3.3), (2.1.1), (2.3.3), (3.1.1), (3.2.2)	
012	(1.2.3), (1.3.2), (2.1.3), (2.3.1), (3.1.2), (3.2.1)	

What we thus get here, is a one-to-one correspondence not only between n.th contexture and n-adic sign relation, but of n.th contexture, n-adic sign relation and n.th dimension. The notion of semiotic dimension (unlike the use of the same word in the works of Ch. Morris) had been introduced in mathematical semiotics by me (Toth 1993, pp. 28 ss.). Therefore, 1-dimensional semiotics is linear semiotics in the geometrical sense of Bernays (1997, p.2), 2-dimensional semiotics is plain semiotics, and 3-dimensional semiotics is spatial semiotics (cf. Toth 2007, p. 11).

1-dimensional semiotics is the order of the three fundamental categories. 2-dimensional semiotics is Peirce-Bense-semiotics based on the dyadic constituency of sign classes and reality thematics. 3-dimensional semiotics is Stiebing-semiotics based on the triadic constituency of the sub-signs (cf. for all that, extensively, my two volumes "Mehrdimensionale Semiotik", Toth 2009a).

Since it is thus possible to identify n-th contexture and n-th dimension of a sign relation, artificial separations as well as specifications can be introduced by assigning contextural values to the sign relations of the three dimensions, which do not agree with the contextural values.

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