

Prof. Dr. Alfred Toth

Semiotic paths and journeys

1. In his newest publication in polycontextural theory, Rudolf Kaehr has introduced diamond journeys, which are complementary to categorial paths. It is easiest just to copy out the formal description of the new notion of journey (Kaehr 2009b, p. 8):

3.2. Formal description of JOURN

Let denote a general bi-relation. We associate with it the *diamond* denoted by $\text{JOURN}((X,x),)$, $\text{JOURN}(X,x)$ or just JOURN .

Bi-objects: Bi-Elements $(X,x) \square\square\square\square (\mathbf{X}, \mathbf{x})$.

Morphisms: Sequences (paths) of consecutive arrows,
Hetero-morphisms: counter-sequences of antidromic arrows.
Complementarity: Category/Saltatory

JOURN is not a product of **PATH**, i.e. $\text{JOURN} \neq \text{PATH} \times \text{PATH}$ but a *complementary* (and not a dual!) interplay between **PATH** and **co-PATH**:

$\text{JOURN} = \text{compl}(\text{PATH},)$

There is a *morphism* $X \rightarrow Y$, iff $XRY \square\square \text{Cat}$.
There is a *hetero-morphism* $x \rightarrow y$, iff $xry \square\square \text{Salt}$.
There is a *diamond* if $[\text{Cat}; \text{Salt}]$.

$$\begin{array}{l} R^{1,2} \subseteq (A_o^1, A_o^2) \times (A_1^1, A_1^2) \\ (Rr) \subseteq (A_o^1, \bar{a}_o^2) \times (A_1^1, \bar{a}_1^2) \end{array} \Bigg|$$

While for categorial semiotic paths, there are extensive studies by me, f. ex. (Toth 2009a), the notion of semiotic journey has first to be introduced into semiotics.

2. If we accept that the basic sign model is the 3-adic 4-contextural sign class

$$\text{SCI}(3,4) = (3.a_{i,k,j} \ 2.b_{i,j,k} \ 1.c_{i,j,k})$$

where either i , or j , or $k = \emptyset$ for all non-identitive semiotic morphisms, i.e. for all non-genuine sub-signs, since they cannot lie in 3 contextures in a 4-contextural semiotics, then we have

1. 6 different morphisms per sub-sign, i.e. a morphism, its heteromorphism, and 4 mediative morphisms (Toth 2009b) and thus for a maximal 4-contextural sub-sign:

$$\begin{array}{ll} (a.b)_{i,j,k} & (a.b)_{j,k,i} \\ (a.b)_{i,k,j} & (a.b)_{k,i,j} \\ (a.b)_{j,i,k} & (a.b)_{k,j,i} \end{array}$$

2. If we restrict ourselves to such connections between dyads (sub-signs) that have identical fundamental categories (cf. Toth 2008, pp. 20 ss., 51 ss.), we have the following 6 types of semiotic connections:

$$\begin{array}{ll} (M \rightarrow O) \diamond (O \rightarrow I) & (O \rightarrow I) \diamond (I \rightarrow M) \\ (M \rightarrow I) \diamond (I \rightarrow O) & (I \rightarrow O) \diamond (O \rightarrow M) \\ (O \rightarrow M) \diamond (M \rightarrow I) & (I \rightarrow M) \diamond (M \rightarrow O) \end{array}$$

3. Therefore, together with 1., we get the following 21 types

$$\begin{array}{llllll} (i,j,k) \diamond (i,j,k) & & & & & \\ (i,j,k) \diamond (i,k,j) & (i,k,j) \diamond (i,k,j) & & & & \\ (i,j,k) \diamond (j,i,k) & (i,k,j) \diamond (j,i,k) & (j,i,k) \diamond (j,i,k) & & & \\ (i,j,k) \diamond (j,k,i) & (i,k,j) \diamond (j,k,i) & (j,i,k) \diamond (j,k,i) & (j,k,i) \diamond (j,k,i) & & \\ (i,j,k) \diamond (k,i,j) & (i,k,j) \diamond (k,i,j) & (j,i,k) \diamond (k,i,j) & (j,k,i) \diamond (k,i,j) & (k,i,j) \diamond (k,i,j) & \\ (i,j,k) \diamond (k,j,i) & (i,k,j) \diamond (k,j,i) & (j,i,k) \diamond (k,j,i) & (j,k,i) \diamond (k,j,i) & (k,i,j) \diamond (k,j,i) & \\ & & & & & \\ (k,j,i) \diamond (k,j,i) & & & & & \end{array}$$

for all 6 types of semiotic connections, and thus the maximal amount of 126 semiotic journeys. (Maximal, because all non-identitive 4-contextural morphisms have only two “indices”, so that the effective number of combinations is massively smaller.)

3. However, in a sign class like

(3.a_{i,j,k} 2.b_{k,j,i} 1.c_{i,k,j})

we have

- 1 morphisms which is to await for sign classes: (3.a_{i,j,k})
- 1 heteromorphisms which is to await for the complementary sign class, i.e. after reflecting or dualizing the sign class: (2.b_{k,j,i})
- 1 mediative morphisms that does neither belong to a sign class nor to its reality thematic (“complementary sign class): (1.c_{i,k,j}).

Thus, the question arises which epistemological explication does a sign class have whose parts are from sign classes, from reality thematics and from something between. And what is this between, i.e. to which cognitive, epistemic, or communicative notion do the mediative morphisms belong? On the other side, only the order of the contextures, i.e. inner semiotic environments have been scrambled – the basis for a sign class, namely the Peircean sing relation (3.a 2.b 1.c) is still present. Thus, another question is for what do the contextures stand? Kaehr (2009a) has made an attempt at ascribing them to different epistemological subjects (you, thou, we, you). However, it is not clear what decides which contexture is mapped to which subject.

Bibliography

- Kaehr, Rudolf, Xanadu's textemes. In:
<http://www.thinkartlab.com/CCR/2009/02/xanadu-textemes.html> (2009a)
- Kaehr, Rudolf, Diamond relations. In:
<http://www.thinkartlab.com/pkl/lola/Diamond%20Relations/Diamond%20Relations.pdf> (2009b)
- Toth, Alfred, Zeichenzusammenhänge und Zeichennetze.
In: Electronic Journal for Mathematical Semiotics,
<http://www.mathematical-semiotics.com/pdf/Zeichenzus.%20u.%20Zeichennetze.pdf> (2009a)
- Toth, Alfred, Mediation between morphisms and heteromorphisms in semiotic systems. In: Electronic Journal of Mathematical Semiotics,
<http://www.mathematical-semiotics.com/pdf/mediation.pdf> (2009b)