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Semiotic Coexistence

1. In combining logic and linguistics we can look back to a long tradition, up to the theory of logical forms in generative semantics and beyond (Toth 1993, pp. 71, from a semiotic point of view). About Montague grammar, modal logic and model theoretic interpretations from a semiotic standpoint cf. Toth (2008a, pp. 47ss.). Only recently, Rudolf Kaehr has published several papers in which polycontextual logic and polycontextual semiotics are investigated together. I especially want to point to Kaehr's paper (2009a), in which the inner semiotic environments of sign relations are, for the first time, set in connection with problems of reference, therefore also bridging to the shore of linguistics. In another paper (2009b), Kaehr delivers, also first the first time, a consistent analysis of triadic semiotics and Günther's epistemological categories (cf. also Toth 2008b, pp. 64 ss.). Since we deal here with one of the most difficult problems of semiotics, this article cannot be more than a forerunner of a future theory of semiotic reference, coexistence and epistemology.

2. The beginning of the semiotic-logical theory sketched here, is, as it is so often the case in connection with phenomena at the common borders of logic, semiotics and linguistics, presented already in Gotthard Günthers work. I want to quote here the full passage, contained in the 1st foreword to Günthers "Idee und Grundriss einer nicht-aristotelischen Logik":

> "Alle bisher entwickelten Sprachen in unseren terrestrischen Hochkulturen setzen ein zweiwertiges Weltbild voraus. Ihre Reflexionsstruktur ist deshalb ebenfalls rigoros zweiwertig, und es fehlen die linguistischen Mittel, um mehrwertige Erlebnissituationen in ihnen angemessen auszudrücken. Ein Beispiel soll die Situation verdeutlichen. Der klassische Kalkül kennt einen und nur einen Begriff von 'und'. Das gleiche gilt für die deutsche, englische, französische usw. Sprache. In einer dreiwertigen Logik aber werden bereits vier (!) verschiedene und durch differente logische Funktoren identifizierte Bedeutungen von 'und' unterschieden. In unseren heutigen Umgangssprachen hat 'und' in den folgenden Konjunktionen 'ein Gegenstand *und* noch ein Gegenstand', 'Ich *und* die Gegenstände', 'Du *und* die Gegenstände', 'Wir *und* die Gegenstände' immer die gleiche Bedeutung. In anderen Worten: die klassische Logik und die an ihr spirituell orientierten Sprachen setzen voraus, dass der metaphysische Begriff der Ko-existenz so allgemein gefasst werden kann und muss, dass in ihm der Unterschied zwischen gegenständlicher Existenz und den drei möglichen Aspekten von Reflexionsexistenz irrelevant ist. Begriffe wie 'Ich', 'Du' und 'Wir' haben in der uns überlieferten Logik schlechthin keinen Sinn" (Günther 1991, p. xviii).

Before we get into the details, a remark to "den drei möglichen Aspekten von Reflexionsexistenz": In his most recent paper, Kaehr writes: "Gunther's epistemological triadism shouldn't be taken too seductively, because (t)his obsession lasted only for a short and specific time of Gunther's speculations. In the early 60ies, the dialogical concept was replaced to a much more socialist distribution of subjectivity over a mass of 'subject centers' " (Kaehr 2009b, p. 14).

Another interesting fact is that from the three basic categories of linguistic reference: animate/inanimate object, person, number, the number, too (at least singular and plural) seem to have categorical status in a polycontextural logic, when we look at Günther's example "ein Gegenstand und noch ein Gegenstand". However, the problem does not lie in the summation of two or more existential objects, but in the summation of more than one existential subject. The "We" - at least in a polycontextural logic based on "epistemological triadism" - is not considered a summation of to "I's", but – as Kaehr (2009a) had pointed out in regard to Diamond theory -, it is the area of "the Others". Being so, however, it is the opposite of the dichotomy of "I" vs. "Thou".

3. A way to overcome such problems (or pseudo-problems) is to start with a maximal system of reference as presented in theoretical linguistics and than to compare it to systems of logical and semiotic reference (Toth 2008c, vol. 2, pp. 40 ss.). Proceeding like that, we will try to find out which categories or features of a relatively complete theory of reference and coexistence is represented in polycontextural logic on the one side and in polycontextural semiotics on the other side.

3.1. In Toth (2009), it was shown that every sub-sign of a semiotic matrix can principally stand in every contexture. Concretely speaking, the following 3-contextural 3-adic semiotic matrix presented by Kaehr (2008, p. 8)

$$
\begin{bmatrix}
1.1_{1,3} & 1.2_1 & 1.3_3 \\
2.1_1 & 2.2_{1,2} & 2.3_2 \\
3.1_3 & 3.2_2 & 3.3_{2,3}
\end{bmatrix}
$$

is one of several 3-contextural 3-adic semiotic matrices. Because of the dissemination of an n-contextural matrix into several 2-contextural matrices, what is really important in a matrix, is the diagonal whose number of indices in

an n-contextural matrix is (n-1). Since a 3-contextural matrix has trivially the three contextures 1, 2, 3, the pairs of contextures as indices of the sub-signs in the main diagonal are (1,2), (1,3), (2,3), but their position is arbitrary. To put it differently: There is no law that forces (1.2) to be placed in the contexture 1 and (1.3) to be placed in the contexture 3; it can also be opposite, for example. Therefore, it follows, that also the mapping of epistemological categories onto contextures is (widely) arbitrary. For example, based on Kaehr's above 3-contextural matrix, we could suggest the following mapping:

I-Subject := 1
Thou-Subject := 2
We-Subject := 3
It-Object := 4

But already at this point, another problem arises. As I (Toth 2008a, pp. 64 ss.) and Kaehr (2009b) have shown extensively, we would rather, according to Günther (1976, pp. 336 ss.), ascribe the epistemological functions to the fundamental categories of a sign model instead of ascribing them to the inner environments of the sub-signs of a semiotic matrix. But in the latter case – however, we would be forced to deal with the problem that the dyadic sub-signs are pairs of epistemological categories, rising from "objective subject-objective subject" (1.1) via "objective object-objective object" (2.2.) to "subjective subject-subjective subject" (3.3). The question would then be which contribution the contextures would have for this system of pairs of epistemological categories. Therefore, it seems to be better to separate the semiotic fundamental categories form their "personalization" or "objectivation" in different contextures.

3.2. Languages like most Middle European languages differentiate between the following 6 subjects:

- I (ich, ego)
-thou (du, tu)
- he/she (er/sie, is/ea)
- we (wir, nos)
- you (ihr, vos)
- they (sie, ii/eae)

Grammatical difference between the gender in the 3rd (and 2nd) persons exists in some semitic languages. However, there is no trace that gender is a category relevant to logic and/or semiotics.

It is also important to see that it is not the number that produces together with the first three epistemological categories the second three epistemological categories. This results clearly from the fact that in most languages, the etymologies of I/we, thou/you, he (she)/they are not related. Number, however, is relevant for coexistence ("I and you" = "we", etc.) to be handled below.

What we therefore need for a minimal linguistic system of grammatical subjects are the 7 epistemological categories I, thou, he/she, we, you, they, plus an object. All 6 epistemological subjects can either be subjective subject, objective subject and subjective object. Hence, here it shows that epistemological categories should not be ascribed to fundamental categories, but, as we decided to do, to contextures. In Günther (1975), we read that the contextural abyss between I and Thou is as big as the contextural abyss between the Here and the Beyond. Therefore we have the following mappings between epistemological categories and semiotic contextures:

I → 1
thou → 2
he/she → 3
we → 4
you → 5
they → 6
it → 7

3.3. Finally, we can now make the step from reference to coexistence.

(I and I) → (1,1)
(I and thou) → (1,2)   (thou and thou) → (2,2)
(I and he/she) → (1,3)   (thou and he/she) → (2,3)
(I and we) → (1,4)   (thou and we) → (2,4)
(I and you) → (1,5)   (thou and you) → (2,5)
(I and they) → (1,6)   (thou and they) → (2,6)
(I and it) → (1,7)   (thou and it) → (2,7)

(he/she and he/she) → (3,3)
(he/she and we) → (3,4)   (we and we) → (4,4)
(he/she and you) → (3,5)   (we and you) → (4,5)
(he/she and they) → (3,6)   (we and they) → (4,6)
(he/she an it) → (3,7)   (we and it) → (4,7)

(you and you) → (5,5)
(you and they) → (5,6)   (they and they) → (6,6)
(you and it) → (5,7)   (they and it) → (6,7)

(it and it) → (8,8)

Thus, there are 28 combinations possible.

A first remark is that obviously, in the logical-semiotic system presented here, we have

(I + I) ≠ we; (thou + thou) ≠ (you); (he/she + he/she) ≠ (they),

thus

(1 + 1) ≠ 4; (2 + 2) ≠ 5; (3 + 3) ≠ 6.

A second remark concerns Kaehr's introduction of hetero-morphisms into Diamond theory. This truly new concept allows to model, on logical and semiotic level, the linguistic difference between

(I and thou) ≠ (thou and I), (thou and he/she) ≠ (he/she and thou),
(I and we) ≠ (we and I)

existing not in Middle European languages, but, f. ex., in Hungarian, since the order of two different subjects controls verbal agreement in such a way that the verb congruence follows in such cases the last verb. E.g.

(1) én és mi írunk "I and we are writing" (lit. I and we we-write),

but

(2) mi és én írok "We and I are writing" (lit. We and I-write).

Therefore, (1) has the contextural structure (1,4), hence morphismic, but (2) has (4,1), hence hetero-morphismic.

Although this difference is nowadays obsolete in colloquial Hungarian, it is one of the extremely seldom instances for Günther's search for polycontexturality in natural languages as cited in the passage above. In this Hungarian examples, we have

(I + we) ≠ (we + I)

and further

(I + we) ≠ (we + I) ≠ (we),

hence a second, non-classical negation in the deep structure of sentences (1) and (2). However, the mono- and the polycontextural functions are both worked out by one and the same conjunction és "and" which therefore is a logical and semiotic porte-manteau.

A third remark concern the disequations

I + thou/you (thou/you + I) ≠ we
I + he/she/they (he/she/they + I) ≠ we

which are grammaticalized in many Polynesian languages, f. ex. in Hawaiian

Pl. incl. kākou "we = you + I"

but

Pl. excl. mākou "we = he + I"

Hence, this is a second of the very rare instances of Günther's search for polycontextural structures in natural languages. The first Hawaiian expression is used in a situation where the logical subjective object (Thou) knows that he is included, e.g., to join a dinner with the subjective subject (the speaking I). However, in the second expression, the subjective object (Thou) knows that there will be, e.g., an invitation, but he is with this exlusive device nicely told that he will not be from the party. In other words: The two polycontexturally

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different expressions fulfil here the social function of avoiding conflict, which is typical for Polynesian.

3.4. Since we have already mapped the semiotic contextures onto Günther's epistemological categories, we can analze all examples given in semiotic systems. On the other side, if we take Kaehr's 4-contextural 3-adic matrix whose sub-signs are more differentiated than in the corresponding 3-contextural matrix

$$\begin{bmatrix} 1.1_{1,3,4} & 1.2_{1,4} & 1.3_{3,4} \\ 2.1_{1,4} & 2.2_{1,2,4} & 2.3_{2,4} \\ 3.1_{3,4} & 3.2_{2,4} & 3.3_{2,3,4} \end{bmatrix}$$

we can, based on the mappings between semiotic contextures and epistemological categories, interpret this matrix as follows:

(I, he/she, we)   (I, we)   (he/she, we)

(I, we)   (I, thou, we)   (thou, we)

(he/she, we)   (thou, we)   (thou, he/she, we)

Of course, we see that this matrix is only fragment, since the epistemological categories you, and they are lacking. We may even re-interpret this matrix with the correspondences establish in the beginning of this article:

I-Subject := 1; Thou-Subject := 2; We-Subject := 3; It-Object := 4,

so that we get

(I, thou, it)   (I, it)   (we, it)

(I, it)   (I, thou, it)   (thou, we)

(we, it)   (thou, we)   (thou, we, it)

and analyze on this basis the sign classes, f. ex.

$(3.1\ 2.2\ 1.2) \rightarrow ((\text{we,it}), (\text{I, thou, it}), (\text{I, it}))$

which is a fully new way of analysis representative systems. However, the relation between this "epistemological analysis" and the usual "model-theoretic" analysis of sign classes by Peirce (cf. Walther 1979, pp. 82 ss.) is a desideratum for the future.

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