

**Prof. Dr. Alfred Toth**

## **Objective and reflective existence in semiotics**

1. In 1957, Gotthard Günther stated: “All hitherto known languages presuppose a two-valued worldview. Therefore, their reflective structure is rigorously two-valued, too, and linguistic means to express appropriately many-valued situations are lacking. An example shall clarify the situation: The classical logical calculus knows one and only one notion of ‘and’. The same is true for the German, English, French, etc. language. In a three-valued logic, however, already four (!) different meanings of ‘and’ are differentiated and identified by different logical functors. In our modern colloquial languages, ‘and’ has always the same meaning in the following conjunctions: ‘an object *and* again an object’, ‘I *and* the objects’, ‘thou *and* the objects’, ‘we *and* the objects’. In other words: Classical logic and the languages spiritually oriented towards it presuppose that the metaphysical notion of co-existence can be caught in such a general manner that in it the difference between objective existence and the three possible aspects of reflective existence is irrelevant. ‘I’, ‘thou’ and ‘we’ do not have a sense at all in traditional logic. In it, the concept of ‘absolute subject’ is alone relevant. However, a three-valued logic presupposes that it is logically relevant if I describe the process of reflection in the subjective subject (I) or in the objective subject (thou). Under this presupposition, however, the above four different meanings of ‘and’ have to be separated clearly from one another” (1957, p. xviii).

2. In Toth (2008), in addition to sign classes and their dual reality thematics, transpositions of sign classes obeying all possible types of triadic orders have been introduced. Thus, a sign class like (3.1 2.1 1.3) and its reality thematic (3.1 1.2 1.3) are considered a structural fragment of the following transposition system:

Triadic order	Sign Class	Reality thematic	Type of thematization of (M-them. I)
(I→O→M)	(3.1 2.1 1.3)	(3.1 <u>1.2</u> 1.3)	right-thematization, generative
(I→M→O)	(3.1 1.3 2.1)	( <u>1.2</u> 3.1 <u>1.3</u> )	Sandwich-thematization, generative
(O→I→M)	(2.1 3.1 1.3)	(3.1 <u>1.3</u> 1.2)	right- thematization, degenerative
(O→M→I)	(2.1 1.3 3.1)	( <u>1.3</u> 3.1 <u>1.2</u> )	Sandwich- thematization, generative
(M→I→O)	(1.3 3.1 2.1)	( <u>1.2</u> <u>1.3</u> 3.1)	left- thematization, generative
(M→O→I)	(1.3 2.1 3.1)	( <u>1.3</u> <u>1.2</u> 3.1)	left- thematization, degenerative

According to Bense, the sign relation is “both a material and intelligible representational mediation which, as a whole, does not allow the complete separation between (material) world and (intelligible) consciousness” (1979, pp. 18-19). Therefore, the constitutive sub-signs of a sign class and its reality thematic are “the moments of the mediation process between world and consciousness” (Gfesser 1990, p. 131).

In 1966, Günther showed that the three reflexive categories of a three-valued logic, objective subject (oS), object (O) and subjective subject (sS) correspond (in this order) with the semiotic categories of medium (firstness), object (secondness) and interpretant (thirdness) (cf. Toth 2008, p. 64):

$$oS \Leftrightarrow M \equiv (.1.)$$

$$O \Leftrightarrow O \equiv (.2.)$$

$$sS \Leftrightarrow I \equiv (.3.)$$

From these correspondences, we get the following further correspondences between triadic orders of a sign class in a transposition system and logical categories:

$$\begin{array}{llll} (I \rightarrow O \rightarrow M) & \Leftrightarrow & sS & \Leftrightarrow (3.1 \ 2.1 \ 1.3) \\ (I \rightarrow M \rightarrow O) & \Leftrightarrow & sS & \Leftrightarrow (3.1 \ 1.3 \ 2.1) \\ (O \rightarrow I \rightarrow M) & \Leftrightarrow & O & \Leftrightarrow (2.1 \ 3.1 \ 1.3) \\ (O \rightarrow M \rightarrow I) & \Leftrightarrow & O & \Leftrightarrow (2.1 \ 1.3 \ 3.1) \\ (M \rightarrow I \rightarrow O) & \Leftrightarrow & oS & \Leftrightarrow (1.3 \ 3.1 \ 2.1) \\ (M \rightarrow O \rightarrow I) & \Leftrightarrow & oS & \Leftrightarrow (1.3 \ 2.1 \ 3.1) \end{array}$$

3. Since it is possible to establish correspondences between a three-valued Günther-logic and semiotic categories, it follows already that a semiotics, which is based on transposition systems, is polycontextural. However, in addition to the three logical categories oS, O and sS or “thou”, “he” and “I” required for a minimal polycontextural logic by Günther, we get the whole set of logical categories two times, expressed by different semiotic transpositions. Apparently, the semiotic transposition system does not only provide us with correspondences for the respective logical categories but also for the notion of number of these categories. We thus get:

$$\begin{array}{llll} (I \rightarrow O \rightarrow M) & \Leftrightarrow & sS\text{-singular (I)} & \Leftrightarrow (3.1 \ 2.1 \ 1.3) \times (3.1 \ \underline{1.2} \ 1.3) \\ (I \rightarrow M \rightarrow O) & \Leftrightarrow & sS\text{-plural (we)} & \Leftrightarrow (3.1 \ 1.3 \ 2.1) \times (\underline{1.2} \ 3.1 \ 1.3) \\ (O \rightarrow I \rightarrow M) & \Leftrightarrow & O\text{-singular (thou)} & \Leftrightarrow (2.1 \ 3.1 \ 1.3) \times (3.1 \ \underline{1.3} \ \underline{1.2}) \\ (O \rightarrow M \rightarrow I) & \Leftrightarrow & O\text{-plural (you)} & \Leftrightarrow (2.1 \ 1.3 \ 3.1) \times (\underline{1.3} \ 3.1 \ \underline{1.2}) \\ (M \rightarrow I \rightarrow O) & \Leftrightarrow & oS\text{-singular (he/she)} & \Leftrightarrow (1.3 \ 3.1 \ 2.1) \times (\underline{1.2} \ \underline{1.3} \ 3.1) \\ (M \rightarrow O \rightarrow I) & \Leftrightarrow & oS\text{-plural (they [m., f.])} & \Leftrightarrow (1.3 \ 2.1 \ 3.1) \times (\underline{1.3} \ \underline{1.2} \ 3.1) \end{array}$$

Furthermore, we also notice that all of the six logical-semiotic categories have their own reality thematics, which stand, according to Bense, for their logical objects, since “notions of objects are relevant only in view of a sign class and possess only in relation to this sign class a semiotic reality thematic” (1976, p. 109). Therefore, in addition to even a polycontextural logic, which has, like Aristotelian logic, only one category for “it”, in a transposition semiotic system, we get six logical-semiotic objective categories corresponding to the six logical-semiotic reflective categories. Thus, each reflective logical-semiotic category presents in its dual reality thematic an objective logical-semiotic category with differentiation of the number inherent in these reflective categories.

In no hitherto known system of logic, the basically grammatical notion of number corresponds to logical categories. But it turns out that the above examples of logical conjunctions given by Günther are highly fragmentary, since we have theoretically the following 21 possibilities:

I and I		
I and thou / thou and I	thou and thou	
I and he / he and I	thou and he / he and thou	he and he
I and we / we and I	thou and we / we and thou	he and we / we and he
I and you / you and I	thou and you / you and thou	he and you / you and he
I and they / they and I	thou and they / they and thou	he and they / they and he
we and we		
we and you / you and we	you and you	
we and they / they and we	you and they	they and they

As we see from the above table, the grammatical notion of number has a strong logical impact insofar as number is never independent of logical categories. F. ex., “we” can mean the following logical conjunctions: “I and I”, “I and thou”, “I and he”, “I and we”, “I and you”, “I and they”; “we and I”, “we and thou”, “we and he”, “we and we”, “we and you”, “we and they”, a few of which are expressed by different morphological or lexical means in a number of languages. F. ex., in Hawaiian there are two different lexical forms for “we”: the inclusive “we” denoting “I and you / you and I” and the exclusive “we” denoting “I and he / he and I” similar to a recent development in colloquial English where the contracted form “let’s” is inclusive while the full form “let us” is exclusive (Wales 1996, p. 58). In Hungarian, when a verb refers to an object (“it”) or to the objective subjects “him” and “they”, but not to a subjective subject (“I”, “we”), different verbal morphemes are agglutinated to the verbal stem, f. ex. lát-Ø “he sees/he sees me/us” vs. lát-ja “he/she sees it/him/them”. If the verb expresses the logical relation of a subjective subject to the objective subject “you”, the morpheme –lak is agglutinated to the verbal stem, f. ex. lát-lak “I see thou”. However, if the objective subject is the plural-form “you”, the accusative personal pronoun titeket has to be added: lát-lak titeket “I see you (pl.)” which denotes itself both the logical category “thou” together with the number “plural”, so that the logical object is redundantly expressed twice.

Thus, the semiotic transposition system provides us with logical-semiotic categories for all three reflexive objects of a three-valued polycontextural logic as well as for all combinations of grammatical and logical numbers, hence the six transpositions of each sign class correspond to the six possible reflective logical categories, their six dual reality thematics to the six possible objective logical categories and each representation system of sign class and reality thematic to the logical conjunctions of reflexive and objective categories of logical existence as required for a polycontextural logic by Günther (1957, p. xviii).

Therefore, from the above shown possible logical conjunctions, the following 15 can be represented in semiotics:

I and thou = thou and I  
 I and he = he and I      thou and he = he and thou  
 I and we = we and I      thou and we = we and thou  
 I and you = you and I      thou and you = you and thou  
 I and they = they and I      thou and they = they and thou

he and we = we and he  
 he and you = you and he      we and you = you and we  
 he and they = they and he      we and they = they and we      you and they = they and you

4. Given the correspondences between logical categories and triadic semiotic order, we thus can establish the following system of reflective and objective logical-semiotic existence:

I and we:	I and thou:	I and you:	I and he:	I and they:
(3.1 2.1 1.3)	(3.1 2.1 1.3)	(3.1 2.1 1.3)	(3.1 2.1 1.3)	(3.1 2.1 1.3)
(3.1 1.3 2.1)	(2.1 3.1 1.3)	(2.1 1.3 3.1)	(1.3 3.1 2.1)	(1.3 2.1 3.1)

We and thou:	We and you:	We and he:	We and they:
(3.1 1.3 2.1)	(3.1 1.3 2.1)	(3.1 1.3 2.1)	(3.1 1.3 2.1)
(2.1 3.1 1.3)	(2.1 1.3 3.1)	(1.3 3.1 2.1)	(1.3 2.1 3.1)

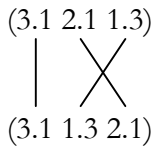
Thou and you:	Thou and he:	Thou and they:
(2.1 3.1 1.3)	(2.1 3.1 1.3)	(2.1 3.1 1.3)
(2.1 1.3 3.1)	(1.3 3.1 2.1)	(1.3 2.1 3.1)

You and he:	You and they:	He and they:
(2.1 1.3 3.1)	(2.1 1.3 3.1)	(1.3 3.1 2.1)
(1.3 3.1 2.1)	(1.3 2.1 3.1)	(1.3 2.1 3.1)

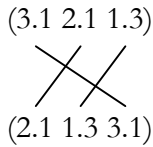
To our surprise, we recognize that the following logical-semiotic conjunctions have the same type of thematization:

(I and we) = (Thou and you) = (He and they)  
 (I and thou) = (We and he) = (You and they)  
 (I and you) = (We and they) = (You and he)  
 (I and he) = (We and thou) = (Thou and they)  
 (I and they) = (We and you) = (Thou and he)

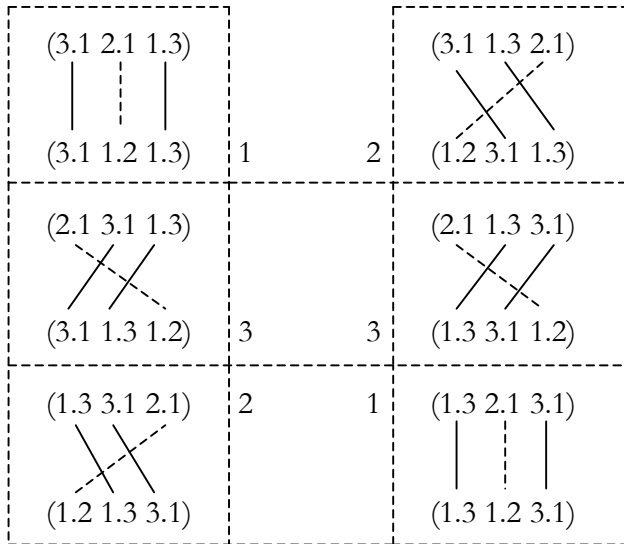
Identical conjunctions, i.e. “I and I”, “thou and thou”, “we and we”, etc. would thus mean to be the connections of two identical semiotic transpositions and their respective diagrams thus would not contain any crossing relations between the logical-semiotic categories like the diagrams above do. Speaking about cross-relations, it should be noted that the logical-semiotic conjunction “I and we” contains one straight and two cross-connections pointing out that both “I” and “we” are subjective subjects, but they also cross the categories between subjective and objective subject insofar as “we” contains at least one subject that must be objective:



On the other side, in the logical-semiotic conjunction “I and you” the subjective subject “I” and the objective subject “thou” cross one another as well as a (possibly other) objective subject in the plural-notion “you” crosses the subjective subject “I”, too, so that we have in the respective diagram two cross-relations and no straight relation:



5. The diagrammatic structures of the logical-semiotic relationships between reflexive and objective categories we get by looking for the types of relations between the six transpositions and their dual reality thematics:



Again to our surprise, we see that both diagonal structures and the two horizontal structures have the same type of thematization, i.e. the following conjunctions of reflexive and objective logical-semiotic categories:

(I and it-I) = (They and it-they)  
 (We and it-we) = (He and it-he)  
 (Thou and it-thou) = (You and it-you)

In conclusion, the present little study shows that triadic-trichotomic semiotics based on transposition systems corresponds to a three-valued polycontextural logic. At the same time, however, it shows also that triadic-trichotomic semiotics transcends enormously the logical capacity concerning objective and reflective existence present in a polycontextural logic based on any number of logic values.

## Bibliography

- Bense, Max, *Vermittlung der Realitäten*. Baden-Baden 1976  
 Bense, Max, *Die Unwahrscheinlichkeit des Ästhetischen*. Baden-Baden 1979  
 Gfesser, Karl, *Bemerkungen zum Zeichenband*. In: Walther, Elisabeth/Bayer, Udo, *Zeichen von Zeichen für Zeichen*. Baden-Baden 1990, pp. 129-141  
 Günther, Gotthard, *Formal logic, totality and the super-additive principle (1966)*. In: id., *Beiträge zur Grundlegung einer operationsfähigen Dialektik*, vol. 1. Hamburg 1976, pp. 329-351  
 Günther, Gotthard, *Idee und Grundriss einer nicht-Aristotelischen Logik*. 3<sup>rd</sup> ed. Hamburg 1991 (1<sup>st</sup> ed. 1957)  
 Toth, Alfred, *Semiotische Strukturen und Prozesse*. Klagenfurt 2008  
 Wales, Katie, *Personal Pronouns in Present-Day English*. Cambridge 1996

©2008, Prof. Dr. Alfred Toth