

IV.

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**THE INTERPRETATION AND APPLICATIONS
OF THE DOUBLE SYLLOGISM**

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0. The term *double syllogism* appeared in scientific research in the early 90's to denote a semantic-pragmatic construction as part of text meaning analysis, first in Hungarian (BÉKÉSI 1991a, 1991b), then in German (BÉKÉSI 1994). Two authors have directly discussed *double syllogism* in their logical systematizing papers: AVI SION (Sion 1990/1996), and JONATHAN DOLHENTY (no year specified). Both studies became widely accessible with the Internet gaining popularity.

0.1. Logical interpretations of *double syllogism*

0.1.1. JONATHAN DOLHENTY arrived at a description and application of "double syllogisms" through an analysis of compound syllogisms, which he approached, as a first step, in the course of examining the overt or covert "compound propositions" appearing in syllogisms (ibid., Ch. 4, 1–2). For the purposes of this topic, the analysis of *covertly multiple syllogisms* is particularly relevant; among them, especially the propositions called *exclusive*, containing an exclusive lexeme like „only”, „just”, „exclusively”, or „alone”. Such exclusive lexemes represent covert propositions, thereby adding one extra proposition:

First proposition:

Only the evil are rich.

Second proposition:

Those who are not evil are not rich.

DOLHENTY suggests that the second proposition is the tool, rather than the result, of the argument. He considers *double syllogism* as a compound logical figure used, among other things, to confirm the proposition building role of *exclusive* lexemes: that is, to confirm the existence of a covert second proposition complementing the explicit proposition. The easiest way to follow DOLHENTY's concept is by applying a syllogism with both its premises containing the exclusive „exclusively” lexeme.

Exclusively the rich are happy.

Exclusively the evil are rich.

Therefore, exclusively the evil are happy.

According to the author, „Both premises contain two covert propositions” (ibid. Ch. 4, 5–7). The major premise is composed of the following two propositions:

The rich are happy and

Everyone who is not rich is not happy.

The minor premise contains the following two propositions:

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*The evil are rich and
Everyone who is not evil is not happy.*

„Both arguments are valid” – states DOLHENTY. Consequently, we can combine the conclusion of the first syllogism (*The evil are rich*) with the conclusion of the second syllogism (*Everyone who is not evil is not happy*).

In this way, the formula of double syllogism acquires a confirming role, whereby both the first and the second syllogism follow the first figure of syllogisms (M–P, S–M, S–P), with the major premises all being universal, and the minor ones – assertive:

First syllogism:			Second syllogism:	
M – P	<i>The rich are happy,</i>	and	<i>Everyone who is not rich is not happy.</i>	
S – M	<i>The evil are rich</i>	and	<i>Everyone who is not evil is not rich.</i>	
S – P	<i>The evil are happy,</i>	and	<i>Everyone who is not evil is not happy.</i>	

By combining the conclusion of the first and the second syllogism (S – P **and** S – P), one can create the single exclusive proposition: „*Exclusively the evil are happy*”.

0.1.2. AVI SION published the first version of his study bearing a promising title (*Future Logic*) in 1990, and re-worked it in 1996; this latter version is available on the Internet (SION,1996). The author discusses *double syllogism* in the summarizing Chapter 52. Here, he focuses on the *elementary* and *compound* character of propositions contained in various types of operations. Of these, we are interested in the *compound* character of propositions. Here both *quantity or extensional* and – through a concessive relation in the second syllogism – *deontic modality* play a role:

First syllogism:			Second syllogism:	
	All M are P,	and	all P must be M,	
	Some S are M,	though	these S can not-be M,	
So	Some S are P,	though	these S can not-be P.	

It is not by accident that the first and second syllogism constitute a whole identified as *double syllogism* in the present case. Actually, they represent, in the first place, the most immediate constituents of a paradigm consisting of four figures, well-known in logic. Here we have the terms of the two major premises arranged in reverse order (M – P, and P – M); the order of the minor premises and also that of the conclusions are identical (S – M, S – P).

In SION’s interpretation, terms related with the conjunctions *and* and *though* represent parts constituting a mixed modality system. That provides the framework in which a logical analysis of the compound propositions takes place in the same medium of examination as the semantic-pragmatic research outlined below. However, it goes without saying that this latter relies on a “practical”, rather than formal, concept of syllogism, similarly, using Shakespeare’s well-known example, to LAUSBERG:

„*Well, think of marriage now (= propositio): younger than you, I here in*

Verona,... / are made already mothers (= *premissa maior*)... / I was your mother much upon these years / that you are now a maid (= *premissa minor*). Thus then in brief (= *conclusio-Formel*): the valiant Paris seeks you for his love (*conclusio*, die inhaltlich nur eine konkrete ratio der propositio ist). (RJ 1,3,69: LAUSBERG 1963. p.119)

0.2. Double syllogism as a semantic-pragmatic figure

The term *double syllogism* as used here refers to linguistic usage where deductive reasoning may take not one, but two, simultaneous or consecutive paths in the argumentation of natural texts. In its most evident manifestation, the conjunction *but* in the role of denial of expectation models the contradiction between an implicit assertive first element and an explicit subsequent element of negation. Since, however, the two contradictorily related elements are both conclusions, at the same time, of deductive reasoning, the interlocutor may be able to reconstruct the implicit major or minor premises, providing that he has some knowledge of the state of affairs described. *Double syllogism* is thus an initial structure bearing a semantic-pragmatic character. It has been created to analyze the structure embracing the *but*-relation. It builds on the hypothesis that the conjunction *but* models the contradiction between two syllogistic conclusions, rather than that between two elementary items.

0.2.1. Representing double syllogism

Let us signify the terms of the two syllogisms with the symbols (**Apr**), (**Ap**), (**Aq**), and (**Bpr**), (**Bp**), (**Bq**), respectively. (**A**) is the first syllogism, (**B**) stands for the second. (**Apr**) is the major premise of the first syllogism, (**Bpr**) is the major premise of the second syllogism. These meaning components are mostly implicit (as indicated by the asterisk symbol): (**Apr***), (**Bpr***). (**Ap**) is the minor premise of the first syllogism, (**Aq**) is the conclusion (concluding term) of the first syllogism. (**Bp**) is the minor premise of the second syllogism, (**Bq**) is the conclusion (concluding term) of the second syllogism. The major premise is the linguistic formulation of the conceived/known, etc. general experience about the piece of reality represented in the utterance, occasionally containing a *pragmatic presupposition*.

Here is an example:

*Gyerekkoromban
boldog lehettem volna,
de nem értettem hozzá.*

[Lit.] *In my childhood,
I could have been happy
But I did not know how to do that.*

*Felnőttkoromban
boldog lehettem volna,
de nem értem rá.*

*In my adulthood,
I could have been happy
But I did not have the time.*

*Óregkoromban
boldog lehetnék,
de a közelgő halál okozná.
(Weöres Sándor: De)*

*In my old age,
I could be happy
But that would be due to oncoming death.
(Sándor Weöres: But)*

The contradiction of the direct relation on the surface structure of the rhyme cited above holds between the two – explicit and implicit – conclusions:

(Aq) *I could have been happy* but (Bq*) I wasn't,

(Aq) *I could have been happy* but (Bq*) I wasn't,

(Aq) *I could be happy* but (Bq*) I can't.

It follows from the above relations that the explicit contradictory closing sentence of each verse appears as a (Bp), i.e., a minor premise: ..., *but* I was not happy because.....

(Aq) *I could have been happy* but (Bp) *I did not know how to do that.*

(Aq) *I could have been happy* but (Bp) *I did not have the time.*

(Aq) *I could be happy* but (Bq*) *that would be due to oncoming death.*