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## THE CONCEPT OF LOGICAL CONSEQUENCE IN ANTIQUITY AND ITS EXPLICATION IN SOME NON-CLASSICAL LOGICS

The aim of this talk is to present and compare the fundamental characteristics of the concepts of logical consequence in relevant and connexive logics and to give arguments which of them explicates more accurately the main requirements of logical consequence, proposed in Aristotle's, Boethius's and some not very famous Megarian-Stoics' views, namely – the conclusion to follow necessarily from the premises as well as the transfer of informational content between the premises and the conclusion to be ensured – conditions, which classical logic and some non-classical logics do not fulfill.

Various attempts have been made to amend the notion of logical consequence from classical logic in order to satisfy the above requirements as well as to become closer to this one, which is used in natural language. Since relevant logic is one of the main pretenders that offer an explication of the notion of logical consequence, which lies close to its intuitive meaning, the focus will be firstly put on the meaning of logical consequence in the relevant systems  $E_{fde}$ ,  $E$  and  $R$ . Then it will be made a comparative analysis between it and the concept of logical consequence proposed by Aristotle. One of the special merits of Aristotle in the field of logic is that he gives a method for deducing a conclusion from premises from which it logically follows [see 1, p.11]. It will be paid attention to those formulas of his assertoric logic, which ensure that the informational content of the conclusion is deduced from the information of the premises. It will be shown how the main requirements of relevant logic – for presence of content connection between the premises and the conclusion as well as all the premises to be used in order to infer a conclusion – are achieved in Aristotle's assertoric syllogistics. On the other hand, there are some, not very famous, views, pertaining probably to representatives of the Megarian-Stoic School that are against truth-functionality and also require content dependence between the premises and the conclusion. Their similar characteristics to those that relevant logic proposes will be scrutinized.

Connexive logic is another contemporary logic that tries to overcome the shortcomings of classical logic with regard to the meaning of logical consequence as it is used in natural language, and respectively it is offering different notion of logical consequence, which will be analyzed and compared with the ancient views. Connexive logic also corresponds to some of Aristotle's requirements, namely no proposition should imply, or should be implied by, its own negation [2, p. 415]. The connexive properties of logical consequence have been famous also to Boethius and for some representatives of Megarian-Stoic School. All of them will be regarded in detail. The common and different features of these views as well as the specific formulas valid and/or invalid for the ancient logicians and for the contemporary relevant and connexive logics will be discussed and comprehensively analyzed.

Finally, regarding which of the above two contemporary logics explicates more precisely the ideas of logical consequence from Antiquity, it will be given more serious arguments in favor of relevant logic.

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### References

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- [2] McCall, S. Connexive Implication. *The Journal of Symbolic Logic* 31(3), Sep. 1966, p. 415–433.