Varieties of Erotetic Implication

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By and large, Inferential Erotetic Logic (IEL for short) is a logic that analyzes inferences in which questions play the role of conclusions and proposes criteria of validity for these inferences. IEL was developed in the nineties (of the 20th century) as an alternative to the received view in the logic of questions, which situated the answerhood problem in the center of attention, and to the Interrogative Model of Inquiry, elaborated by Jaakko Hintikka.

IEL starts with a trivial observation that before a question is asked or posed, a questioner must arrive at it. In many cases arriving at questions resembles coming to conclusions: there are premises involved and some inferential thought processes take place. In other words, there exist erotetic inferences, that is, thought processes in which one arrives at a question on the basis of some previously accepted declarative sentence(s) and/or a previously posed question. These inferences are of (at least) two kinds, depending on the type of premises involved. In the case of an erotetic inference of the first kind the set of premises consists of declarative sentence(s) only, and an agent passes from it to a question. For example:

- Mary is Peter’s mother.
- If Mary is Peter’s mother, then John is Peter’s father or George is Peter’s father.

Who is Peter’s father: John or George?

The premises of an erotetic inference of the second kind comprise a question and possibly some declarative sentence(s). For instance:
Where did Andrew leave for?
If Andrew took his famous umbrella, then he left for London;
otherwise he left for Paris or Moscow.

Did Andrew take his famous umbrella?

Erotetic inferences in which no declarative premise occurs can be regarded as a special case of erotetic inferences of the second kind. Here is an example of an appropriate erotetic inference which does not rely on any declarative premise:

Did Andrew fly by BA, or by Rynair, or by neither of them?

Did Andrew fly by BA?

IEL defines validity of erotetic inferences of the second kind in terms of erotetic implication, being a ternary semantic relation between a question, a (possibly empty) set of declarative sentences/formulas, and a question.

The concept of erotetic implication used in IEL will be discussed in detail and compared with some alternative proposals.