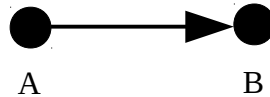# The Subjective Sense of IO

by Sven Nilsen, 2021

In this paper I show that subjectivity emerges from the sense of input and output and forms a Catuṣkoṭi.

Assume that there are two nodes A and B with an edge between them:

Using this simple model as a grounding of truth for a simple mathematical language, I will use the sense of input and output to derive notions of subjectivity over the language of graphs[1].

The method I use is to assign a truth value of input and output to the edge between A and B and ask for which form of subjectivity this truth value makes sense. This method shows that subjectivity emerges from the sense of input and output, because it covers assignments of forms of subjectivity.

Question	Answer
When does it make sense to think of the edge as output?	When A is the subject
When does it make sense to think of the edge as input?	When B is the subject
When does it make sense to think of the edge as both input and output?	When A is identical to B
When does it make sense to think of the edge as neither input and output?	When there is no edge

These 4 cases form a Catuṣkoṭi[2] logic, where input/output maps to true/false or false/true.

An extended Catuṣkoṭi case makes sense when the edge is between two other nodes.

References:

[1]   "Graph theory"
        Wikipedia
        https://en.wikipedia.org/wiki/Graph_theory

[2]   "Catușkoți"
        Wikipedia
        https://en.wikipedia.org/wiki/Catu%E1%B9%A3ko%E1%B9%ADi