

Reasoning strategy continued AFTER experiment is performed

AND

Expected experimental outcome DOES occur
(Judgment based on analysis of uncertainties)

(What we expected *should* happen, based on rule, DOES occur)

THEREFORE

The explanation/rule/idea has not yet been disproved

(Conclusion based on positive outcome: Explanation has not yet been ruled out)

BUT

Expected experimental outcome DOES NOT occur
(Judgment based on analysis of uncertainties)

(What we expected should happen, based on rule, DOES NOT occur)

THEREFORE

EITHER: We made a mistake with our experiment, assumptions,
OR the explanation/rule/idea is not valid in this regime

(Conclusion based on negative outcome: Reject explanation)