Title: The effect of the logical relatedness and semantic overlap on argument evaluation.
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Submitted Abstract:
In two studies, we examined the extent to which skilled and less-skilled reasoners of arguments relied on relevance relations (semantic & logical relatedness) between claims and reasons when evaluating arguments. College students, selected as having high or low analytical reasoning skill, evaluated the quality of a set of two sentence arguments and rated the strength of their agreement with them. The arguments were structured to vary in their degree of semantic and logical relatedness. Experiment 1 used a direct test of readers' evaluation of the logical connection while Experiment 2 used a more naturalistic, multifactor task (agreement judgment). Overall, both skilled and less-skilled reasoners accepted and more strongly agreed with high logical arguments than they did with low logical arguments. This indicates that both skilled and less-skilled reasoners rely more on logical relatedness when evaluating arguments. However, skilled reasoners' reliance on logical relatedness was higher than that of less-skilled reasoners,' particularly when evaluating the quality of and not their strength of agreement with arguments. With respect to semantic relatedness, readers' reliance on this factor was minimal across experiments. Contrary to the findings in the narrative comprehension research, less-skilled reasoners did not excessively rely on semantics under low logical conditions. In fact, skilled evaluators relied on semantics more when evaluating the quality of high logical arguments. Finally, the current studies confirm the earlier findings that precision in remembering the main verb of the claim is fundamental to one's skill in evaluating arguments.

Purpose and Questions Investigated, Assessments or Tools developed
Being able to comprehend, evaluate, and produce arguments is a critical aspect of academic literacy. In two studies, we examined whether logical relatedness (can the reason support the claim) and lexical overlap (word-to-word relatedness) between claims and reasons of arguments affect how skilled and less-skilled reasoners evaluate arguments. It may be that less skilled reasoners can be duped into accepting poor arguments if they rely on lexical overlap instead of logical relatedness.

Research Context or Methodology
      Setting and Participants: Participants were forty-three undergraduates in Experiment 1 were sixty-two undergraduates in Experiment 2.
      Research Design, Data Collection, and Analysis: Participants read reason-claim ordered arguments one-clause-at-a-time and made quality judgments (evaluating the relevance of the reason to the claim) claim in Experiment 1 and agreement judgments in Experiment 2. After evaluating all the arguments, participants were asked to recall the

arguments. Participants were preselected from a large pool of students based on their reasoning skill, which was determined by their performance on the verbal reasoning section of the Law School Admissions Test (LSAT).

General statement of findings
Skilled and less-skilled reasoners judged high logically related arguments high in quality and agreement than low logically related arguments. Lexical overlap only influenced quality judgments but rather than harming the less skilled reasoners, high lexical overlap facilitated skilled reasoners in accepting good arguments. The findings also show that readers rely on logical relatedness more than on lexical overlap, even under agreement tasks.

Implications
First, logical relatedness guides the evaluation of both types of judgments. Second, Experiment 2 replicated the finding that those skilled at accurately recalling the predicates of claims were also more accurate at making quality judgments and extended this effect of memory precision on a quality judgment task and after a delay. These results further support helping less skilled reasoners attention to and retrieve claim predicates when evaluating arguments. Third, shallow semantics helped under some circumstances, but, contrary to predictions, the results of Experiment 1 suggest that lexical overlap can actually facilitate, rather than hinder, the evaluation of the quality of arguments. One practical implication of these findings is that the fear that people are excessively sensitive to spurious arguments that are based on relationships that rest on lower level semantics may not be warranted. Readers presented with arguments that vary in logical adequacy will use the criteria of relevance, and they do so even under more spontaneous conditions.