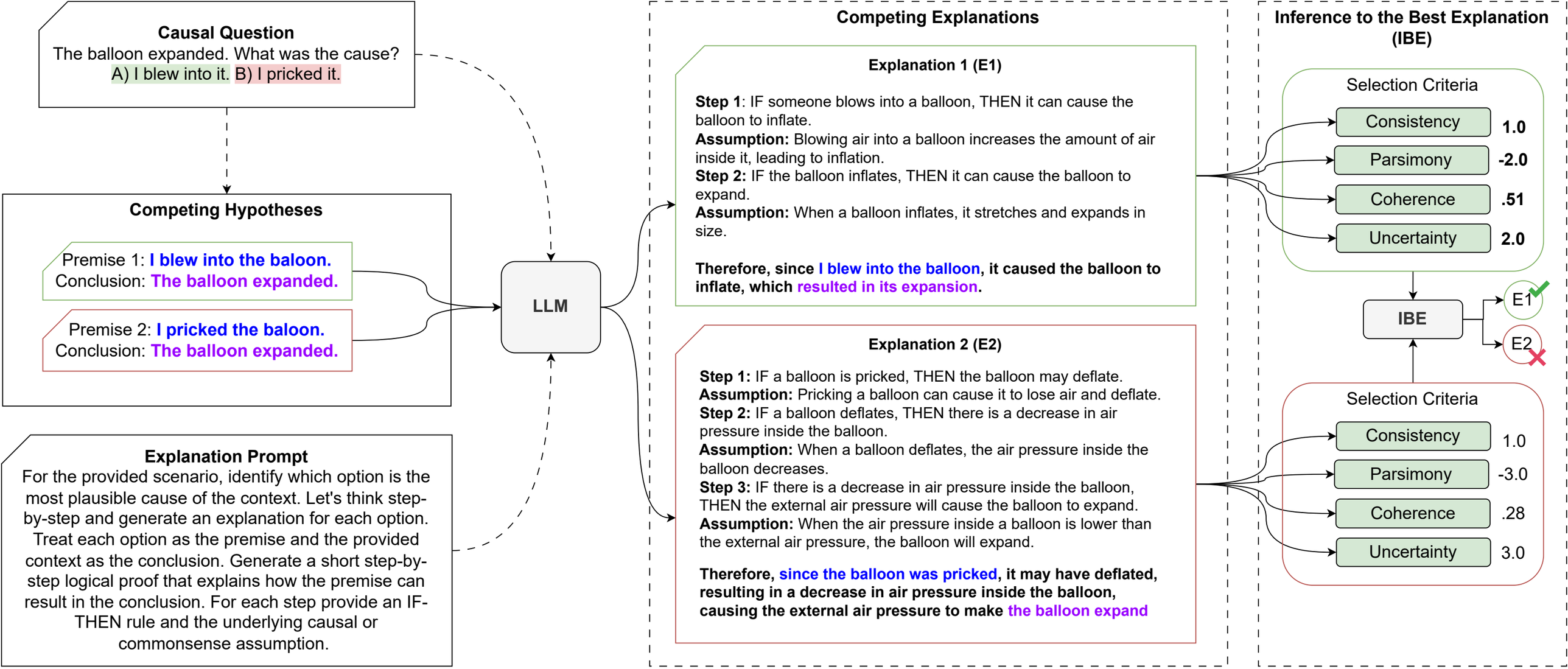
Causal Question
The balloon expanded. What was the cause?
A) I blew into it. B) I pricked it.
Competing Hypotheses
Premise 1: I blew into the baloon.
Conclusion: The balloon expanded.
Premise 2: I pricked the baloon.
Conclusion: The balloon expanded.
Explanation Prompt
For the provided scenario, identify which option is the most plausible cause of the context. Let's think step-by-step and generate an explanation for each option. Treat each option as the premise and the provided context as the conclusion. Generate a short step-by-step logical proof that explains how the premise can result in the conclusion. For each step provide an IF-THEN rule and the underlying causal or commonsense assumption.
LLM
Competing Explanations
Explanation 1 (E1)
Step 1: IF someone blows into a balloon, THEN it can cause the balloon to inflate.
Assumption: Blowing air into a balloon increases the amount of air inside it, leading to inflation.
Step 2: IF the balloon inflates, THEN it can cause the balloon to expand.
Assumption: When a balloon inflates, it stretches and expands in size.
Therefore, since I blew into the balloon, it caused the balloon to inflate, which resulted in its expansion.
Explanation 2 (E2)
Step 1: IF a balloon is pricked, THEN the balloon may deflate.
Assumption: Pricking a balloon can cause it to lose air and deflate.
Step 2: IF a balloon deflates, THEN there is a decrease in air pressure inside the balloon.
Assumption: When a balloon deflates, the air pressure inside the balloon decreases.
Step 3: IF there is a decrease in air pressure inside the balloon, THEN the external air pressure will cause the balloon to expand.
Assumption: When the air pressure inside a balloon is lower than the external air pressure, the balloon will expand.
Therefore, since the balloon was pricked, it may have deflated, resulting in a decrease in air pressure inside the balloon, causing the external air pressure to make the balloon expand
Inference to the Best Explanation (IBE)
Selection Criteria
Consistency 1.0
Parsimony -2.0
Coherence .51
Uncertainty 2.0
IBE
E1
E2
Selection Criteria
Consistency 1.0
Parsimony -3.0
Coherence .28
Uncertainty 3.0