

Solving a “Knight-Knave” Puzzle

- **Translate** what the speaker said into formal language.
- (Following the laws of the island), **build two conditionals** guaranteed to be true.
 1. If that person is a Knight, then [sentence the person said].
 2. If [sentence the person said], then that person is a Knight.
- Use semantic methods (truth tables or a truth tree) to work out **where those two sentences are both true**. That reveals the status (knight or knave) of the individuals in that puzzle.
- As a shortcut: instead of building the two conditional sentences lists above, just build a **biconditional** guaranteed to be true.

That person is a knight if and only [sentence that person said].

Then use semantic methods to find where the biconditional is true.

- If there is more than one speaker in a puzzle, build a biconditional for each sentence uttered, then use semantic methods to find the situation where **all the biconditionals are true**.