

The Knowledge Attribution Game: Against Interest-Relative Invariantism

Felipe Romero

Philosophy-Neuroscience-Psychology Program

Department of Philosophy

Washington University in St. Louis

Two Theories of Knowledge Attribution

(a) “I know that p ”

(b) “John knows p ”

Interest-Relative Invariantism (IRI): the epistemic standards for knowledge attributions are determined by the practical circumstances of the subject. (Stanley, Hawthorne)

Epistemic Contextualism: the epistemic standards for knowledge attributions are determined by the context of the speaker who utters the attribution. (DeRose, Lewis)

The Stakes Cases: Low

Hannah and her wife Sarah are driving home on a Friday afternoon. They plan to stop at the bank on the way home to deposit their paychecks. It is not important that they do so, as they have no impending bills. But as they drive past the bank, they notice that the lines inside are very long, as they often are on Friday afternoons. Realizing that it isn't very important that their paychecks are deposited right away, Hannah says, 'I know the bank will be open tomorrow, since I was there just two weeks ago on Saturday morning. So we can deposit our paychecks tomorrow morning.'

Data Stanley thinks we have to account for: Hannah is right, she does know the bank will open tomorrow.

The Stakes Cases: High

Hannah and her wife Sarah are driving home on a Friday afternoon. They plan to stop at the bank on the way home to deposit their paychecks. Since they have an impending bill coming due, and very little in their account, it is very important that they deposit their paychecks by Saturday. Hannah notes that she was at the bank two weeks before on a Saturday morning, and it was open. But, as Sarah points out, banks do change their hours. Hannah says, 'I guess you're right. I don't know that the bank will be open tomorrow.'

Data we have to account for: Hannah is right again, she doesn't know the bank will open tomorrow.

The Stakes Cases

Hannah knows in Low and does not know in High.

Contextualist explanation: The standards of the context of the speaker (Hannah) change from Low to High.

IRI explanation: The stakes for Hannah (the subject of the attribution) change from Low to High.

High and Low are First-person cases. Maybe we need *third-person* cases in which attributors and subjects come apart.

The Stakes Cases: Low Attributor-High Subject

[Low-High] *Hannah and her wife Sarah are driving home on a Friday afternoon. They plan to stop at the bank on the way home to deposit their paychecks. Since they have an impending bill coming due, and very little in their account, it is very important that they deposit their paychecks by Saturday. Two weeks earlier, on a Saturday, Hannah went to the bank, where Jill saw her. Sarah points out to Hannah that banks do change their hours. Hannah utters, 'That's a good point. I guess I don't really know that the bank will be open on Saturday' Coincidentally Jill is thinking of going to the bank on Saturday, just for fun, to see if she meets Hannah there. Nothing is at stake for Jill, and she knows nothing of Hannah's situation. Wondering whether Hannah will be there, Jill utters to a friend, 'Well, Hannah was at the bank two weeks ago on a Saturday. So she knows the bank will be open on Saturday'.*

Data: Hannah is right, she doesn't know. Jill's claim is false.

Contextualism: Hannah is correct. Jill is correct. (Problem)

IRI: Hannah is correct. Jill is incorrect.

The Stakes Cases: High Attributor-Low Subject

[High-Low] Hannah and her wife Sarah are driving home on a Friday afternoon. They plan to stop at the bank on the way home to deposit their paychecks. Since they have an impending bill coming due, and very little in their account, it is very important that they deposit their paychecks by Saturday. Hannah calls up Bill on her cell phone, and asks Bill whether the bank will be open on Saturday. Bill replies by telling Hannah, 'Well, I was there two weeks ago on a Saturday, and it was open.' After reporting the discussion to Sarah, Hannah concludes that, since banks do occasionally change their hours, 'Bill doesn't really know that the bank will be open on Saturday'

Data: Hannah is right, Bill doesn't know.

Contextualism: Hannah is correct.

IRI: Hannah is incorrect. The relevant standards are Bill's (Problem)

Requirements for a Theory of Knowledge Attribution

(R1) A theory of knowledge attribution should explain our common intuitions in the stakes cases.

Both contextualism and IRI satisfy it partially. Error theories?

Requirements for a Theory of Knowledge Attribution

(R1) A theory of knowledge attribution should explain our common intuitions in the stakes cases.

Both contextualism and IRI satisfy it partially. Error theories?

Proposal:

(R2) A theory of knowledge attribution should explain how attributors form their knowledge claims in the stakes cases.

General Argument Against IRI

(P1) Nothing but the information that attributors have available can explain how they form their knowledge claims in Low-High and High-Low.

(P2) IRI cannot explain how attributors form their knowledge claims in Low-High and High-Low on the basis of the information they have available.

(C) IRI cannot explain how attributors form their knowledge claims in Low-High and High-Low.

Knowledge Attribution Game

Assumptions of the model:

- 1.** Speaker's intuitions in Low-High and High-Low are as philosophers describe (Stanley, 2005, p.1-14)
- 2.** Only stakes determine knowledge attributions, and other determiners remain constant.
- 3.** If both the stakes for the attributor and subject are low, then "the subject knows" is true. If both the stakes for attributor and subject are high, then "the subject doesn't know" is true.

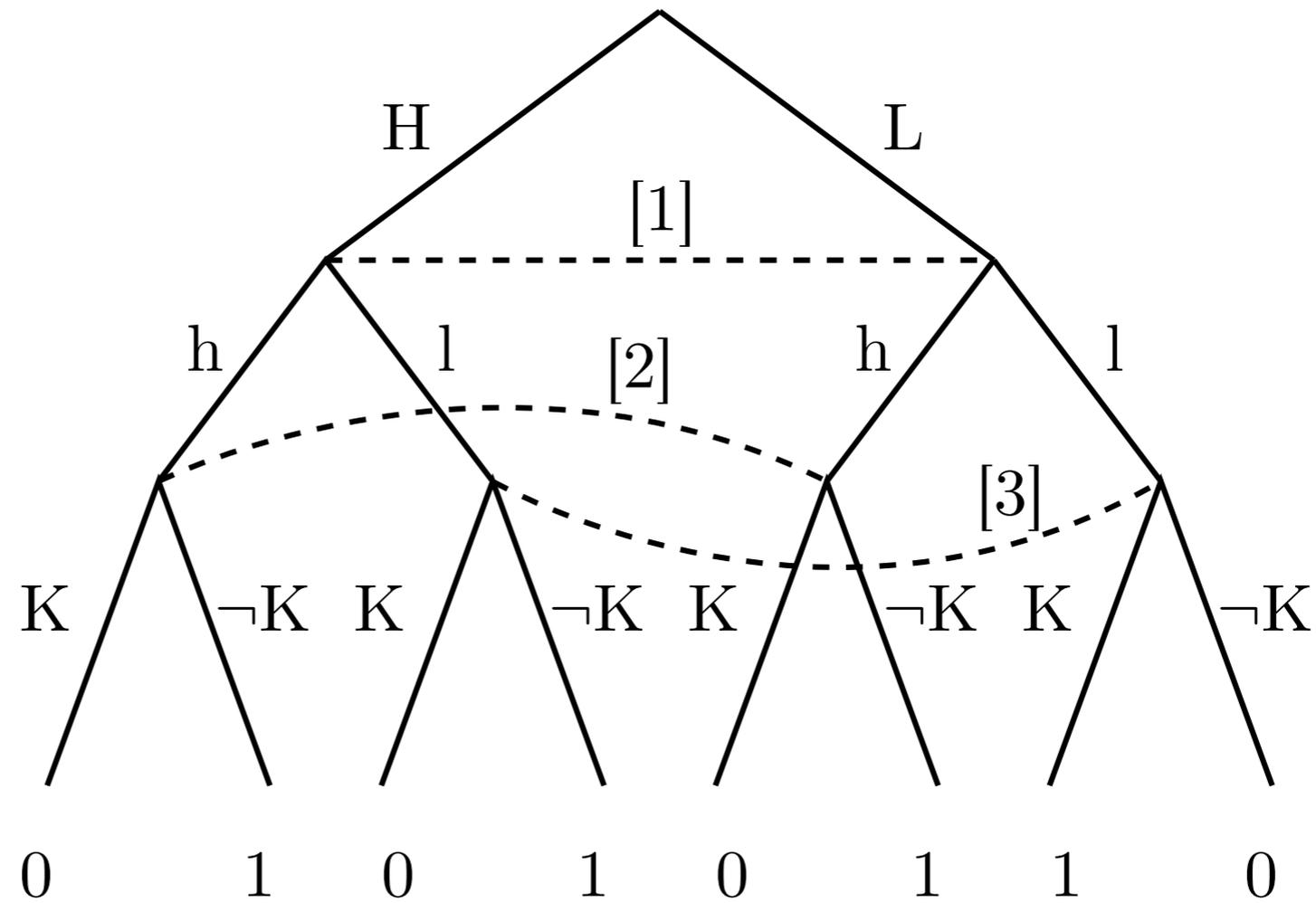
Knowledge Attribution Game

Stakes for the subject

Stakes for the attributor

Attributor

Payoffs



One player game against nature.

Nature determines the stakes for subject and attributor.

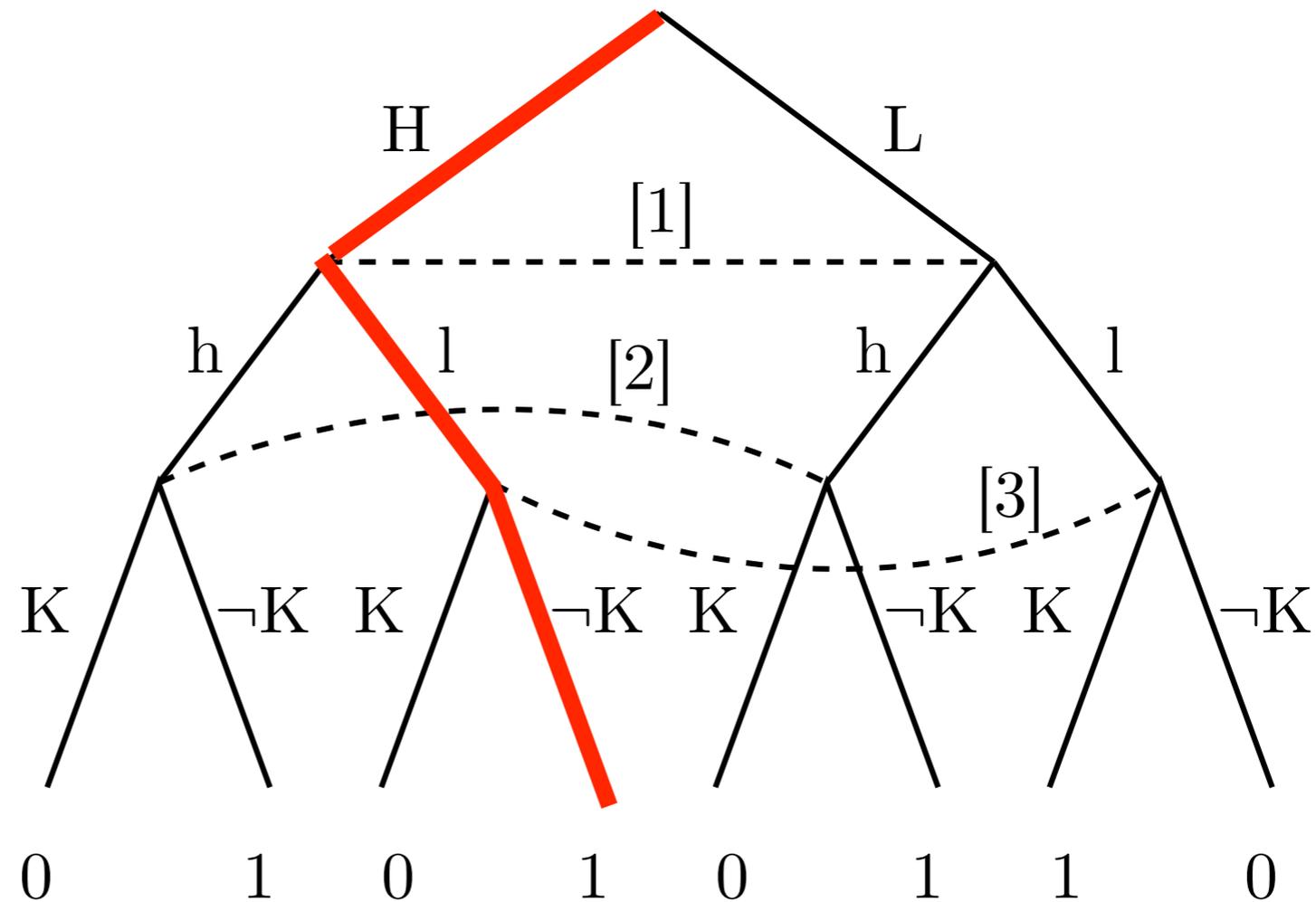
Knowledge Attribution Game

Stakes for the subject

Stakes for the attributor

Attributor

Payoffs



Example:

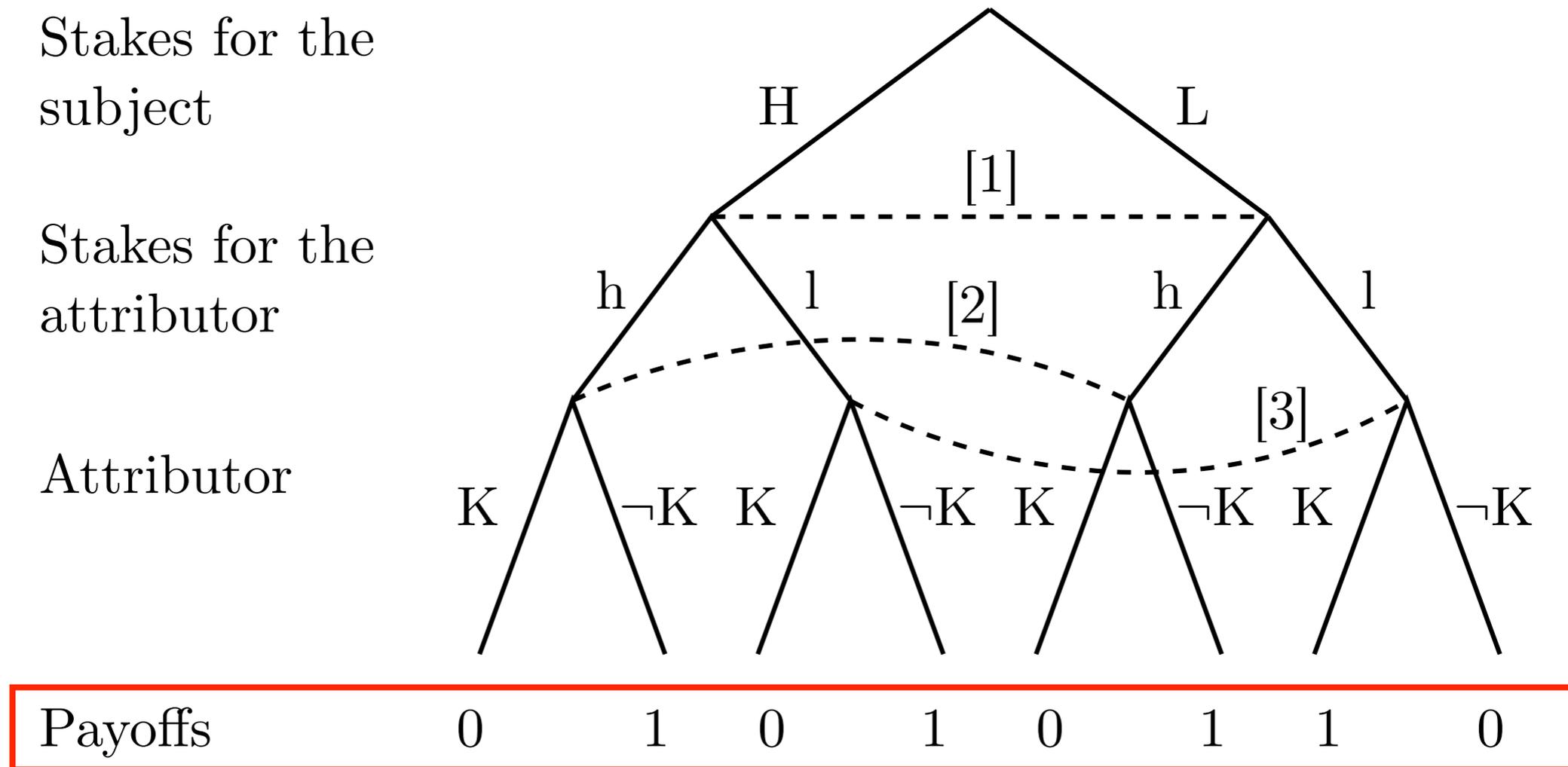
High stakes for the subject (**H**), low stakes for the attributor (**l**).
If the attributor says “the subject doesn’t know” (**¬K**), her payoff is **1**. (i.e., the attribution is right)

Knowledge Attribution Game

Stakes for the subject

Stakes for the attributor

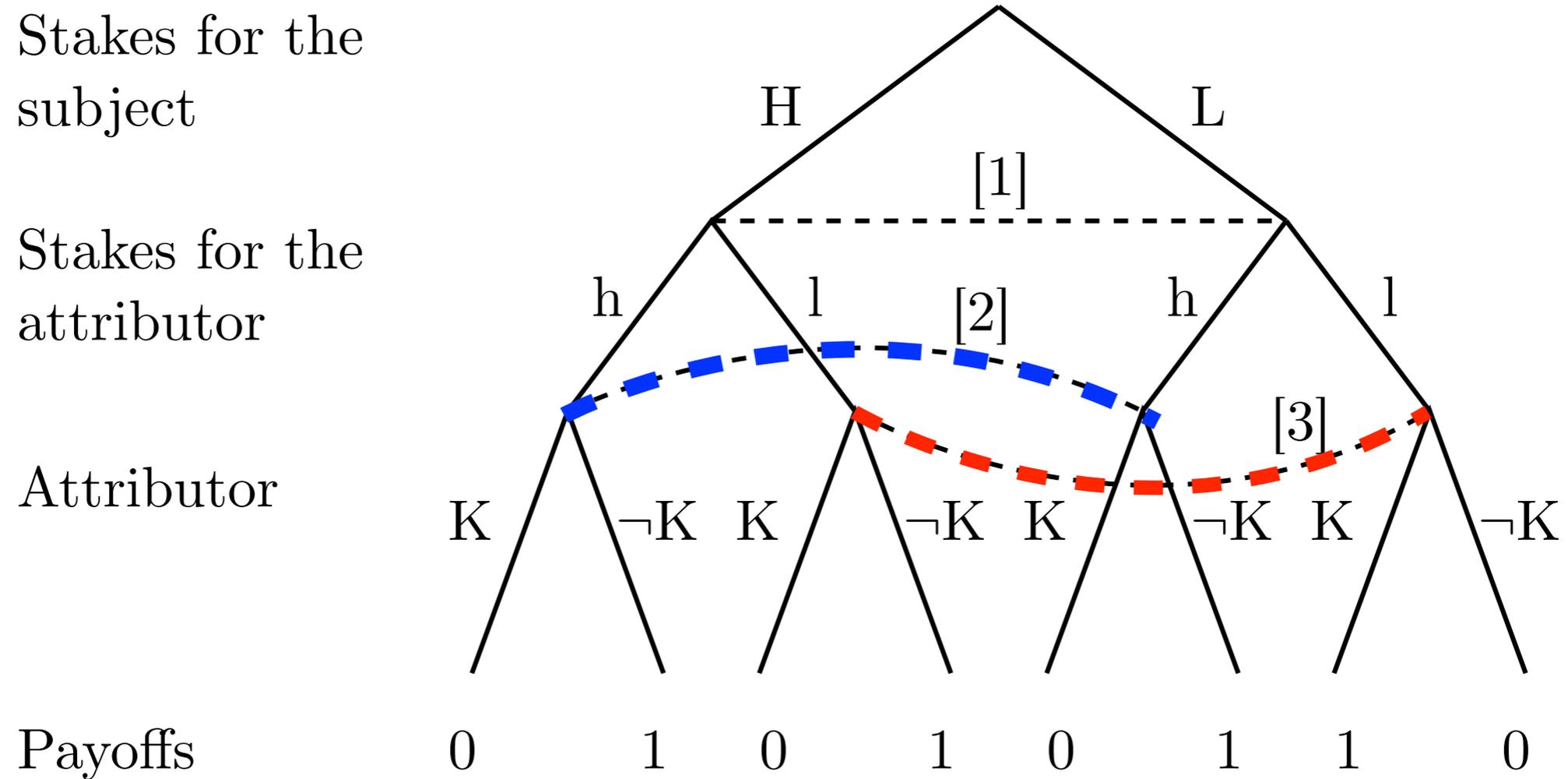
Attributor



Data from Low-High
Jill's claim that
"Hannah knows" is
incorrect

Data from High-Low
Hannah is right in
claiming that "Bill
doesn't know".

Knowledge Attribution Game: Information



The attributor doesn't know the stakes for the subject:

In Low-High, Jill “knows nothing about Hannah’s situation”

In High-Low, Hannah knows nothing of Bill’s situation.

Strategies

Remember requirement (R2): **A theory of knowledge attribution should explain how attributors form their knowledge claims in the stakes cases.**

Explanation: A function for the attributor's decision of attributing **(K)** or denying knowledge **(¬K)** to the subject.

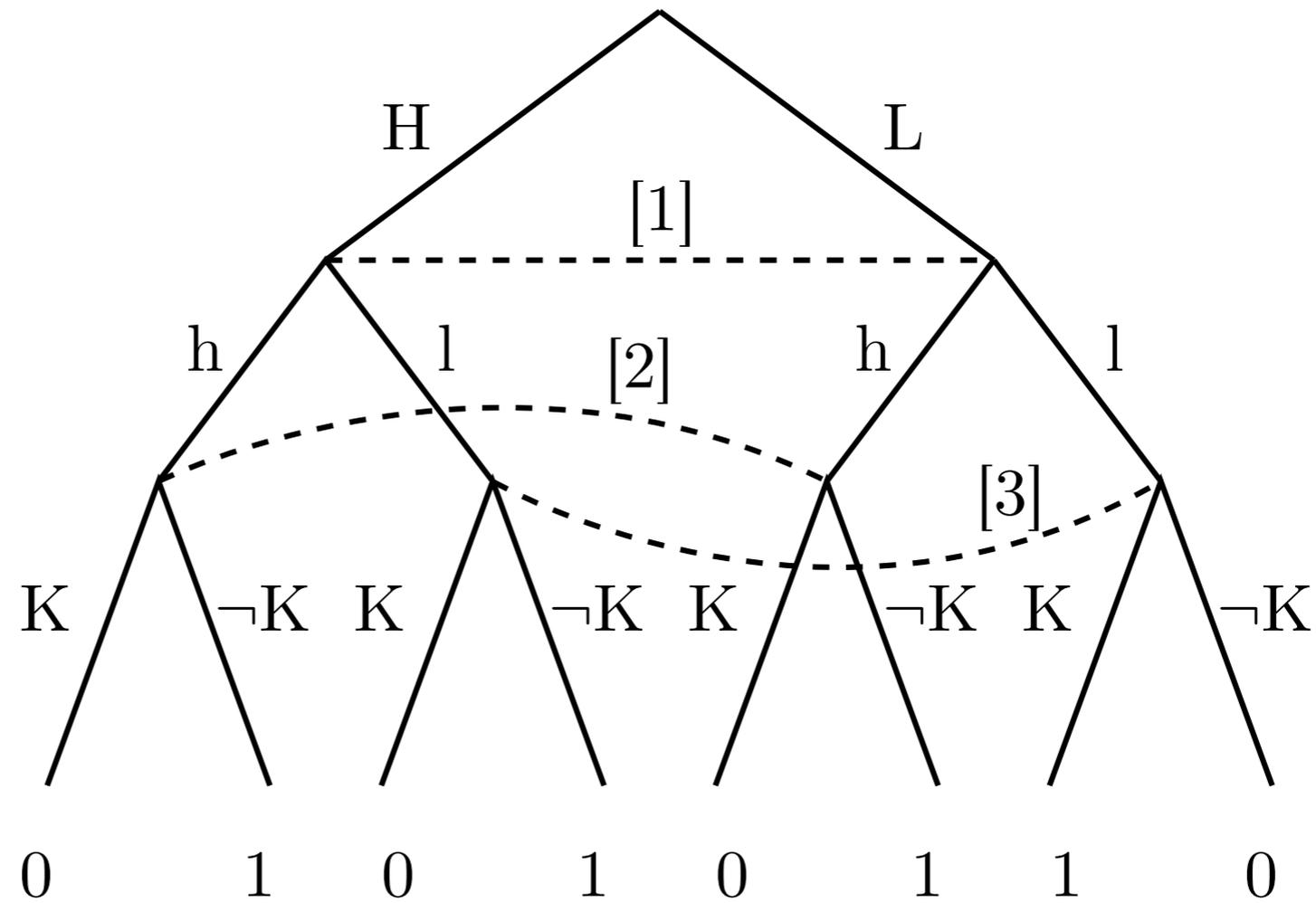
Contextualist Strategy

Stakes for the subject

Stakes for the attributor

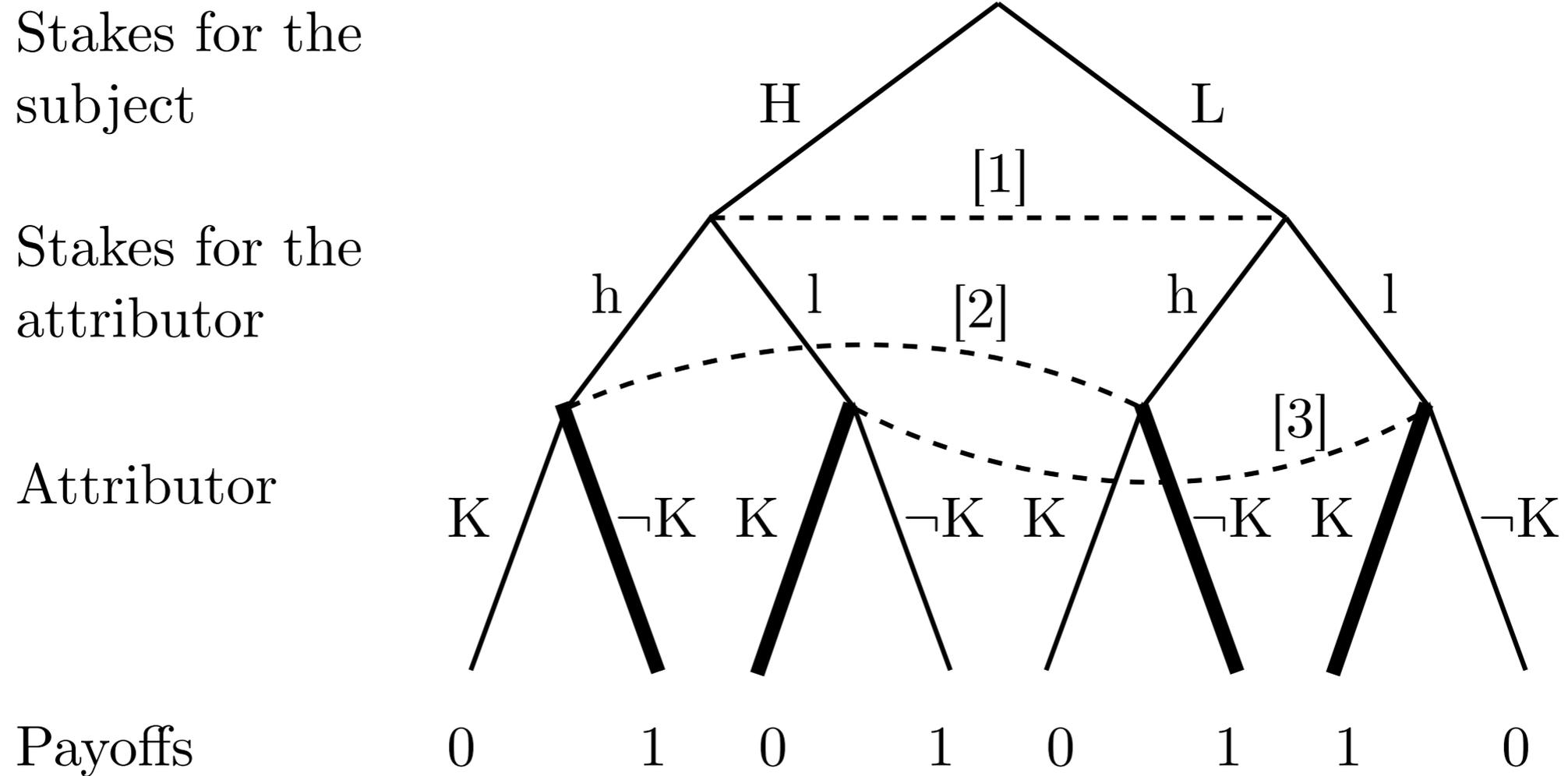
Attributor

Payoffs



Look at what is salient in the context of utterance.

Contextualist Strategy



Look at what is salient in the context of utterance.

Contextualist Strategy:

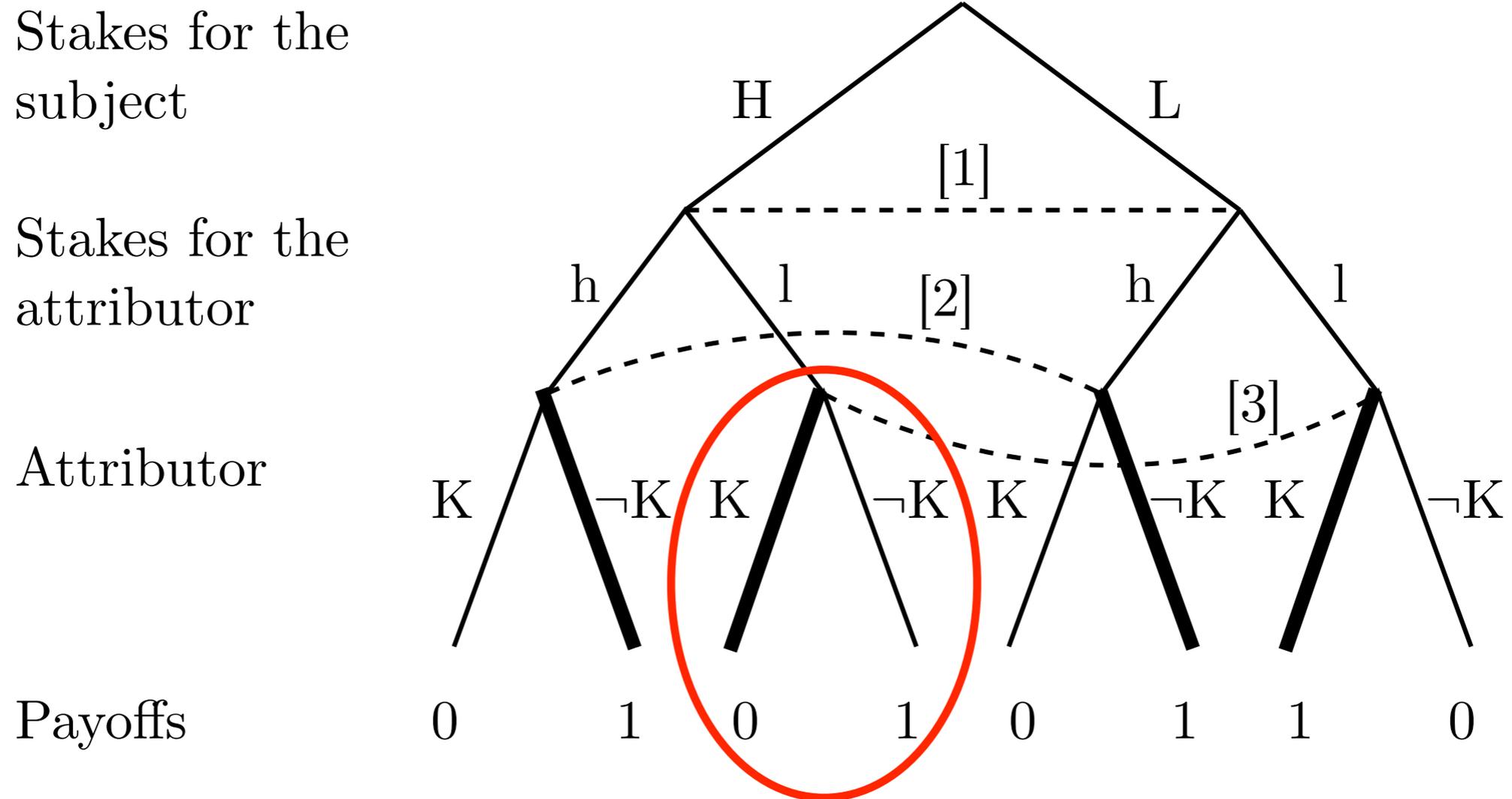
$$s_{\text{CTX}}(h|H) = \neg K$$

$$s_{\text{CTX}}(h|L) = \neg K$$

$$s_{\text{CTX}}(l|H) = K$$

$$s_{\text{CTX}}(l|L) = K$$

Contextualist Strategy



Look at what is salient in the context of utterance.

Contextualist Strategy:

$$s_{\text{CTX}}(h|H) = \neg K$$

$$s_{\text{CTX}}(h|L) = \neg K$$

$$s_{\text{CTX}}(l|H) = K$$

$$s_{\text{CTX}}(l|L) = K$$

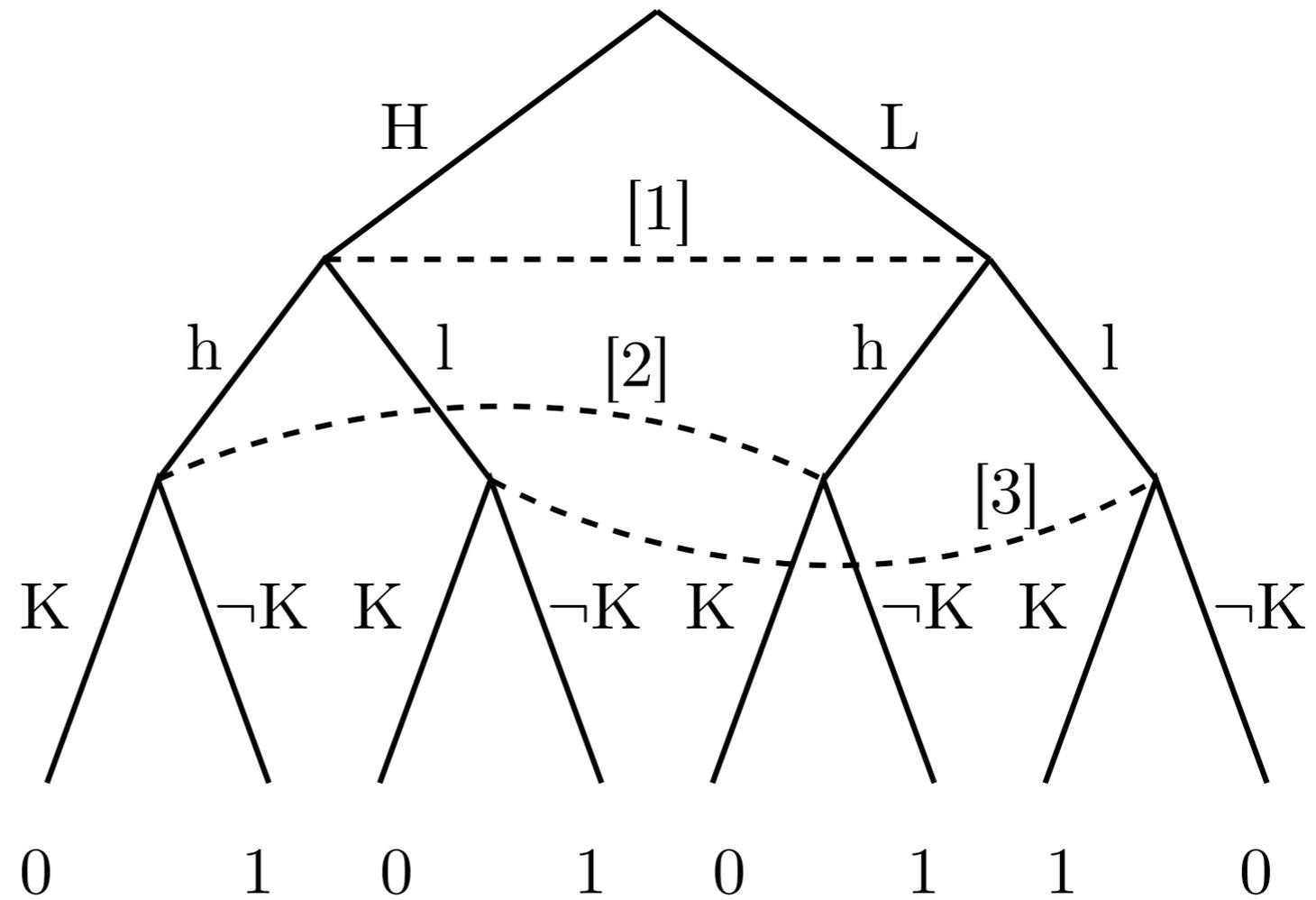
IRI Strategy

Stakes for the subject

Stakes for the attributor

Attributor

Payoffs



Look at the stakes for the subject.

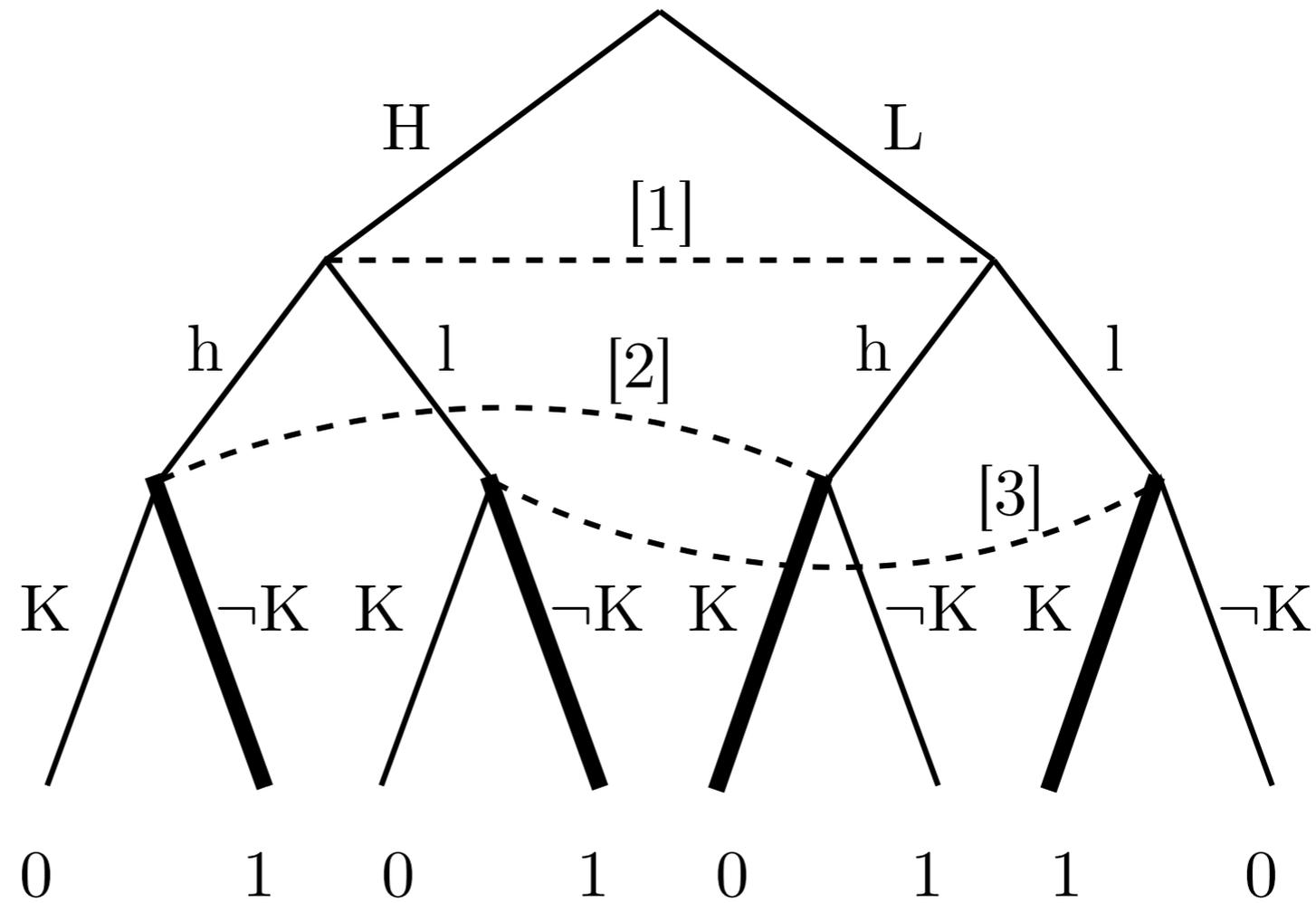
IRI Strategy

Stakes for the subject

Stakes for the attributor

Attributor

Payoffs



Look at the stakes for the subject.

IRI Strategy:

$$s_{\text{IRI}}(h|H) = \neg K$$

$$s_{\text{IRI}}(h|L) = K$$

$$s_{\text{IRI}}(l|H) = \neg K$$

$$s_{\text{IRI}}(l|L) = K$$

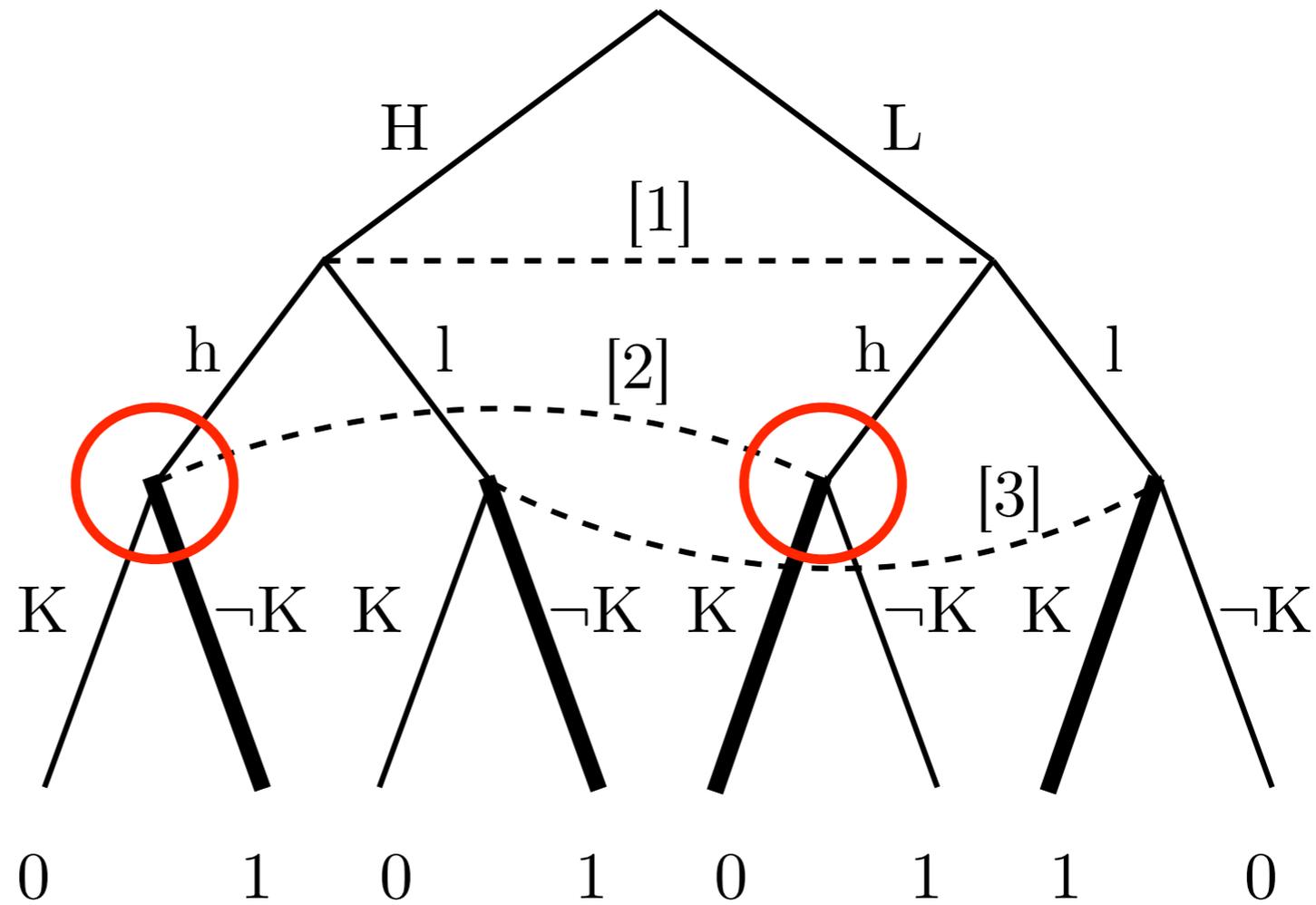
IRI Strategy

Stakes for the subject

Stakes for the attributor

Attributor

Payoffs



Look at the stakes for the subject.

IRI Strategy:

~~$$s_{\text{IRI}}(h|H) = \neg K$$

$$s_{\text{IRI}}(h|L) = K$$

$$s_{\text{IRI}}(l|H) = \neg K$$

$$s_{\text{IRI}}(l|L) = K$$~~

Formally impossible

(R2) A theory of knowledge attribution should explain how attributors form their knowledge claims in the stakes cases.

Only IRI fails.

Objection: “Why should I care about (R2) ?”

Objection: “Why should I care if IRI fails to predict what attributors will say? IRI is normative! If attributors do not know the stakes for the subjects, then they **should not utter any knowledge claim”.**

Objection: “Why should I care about (R2) ?”

Objection: “Why should I care if IRI fails to predict what attributors will say? IRI is normative! If attributors do not know the stakes for the subjects, then they **should not** utter any knowledge claim”.

Is IRI’s normativity grounded?

How to play the game

What should speakers do? Game-theory offers tools to find the answer.

We can find solutions (a strategy is a solution iff it is at least as good as any other strategy available to the agent)

1. Compute expected utilities for the different actions.
2. Design a strategy that maximizes utility for the attributor

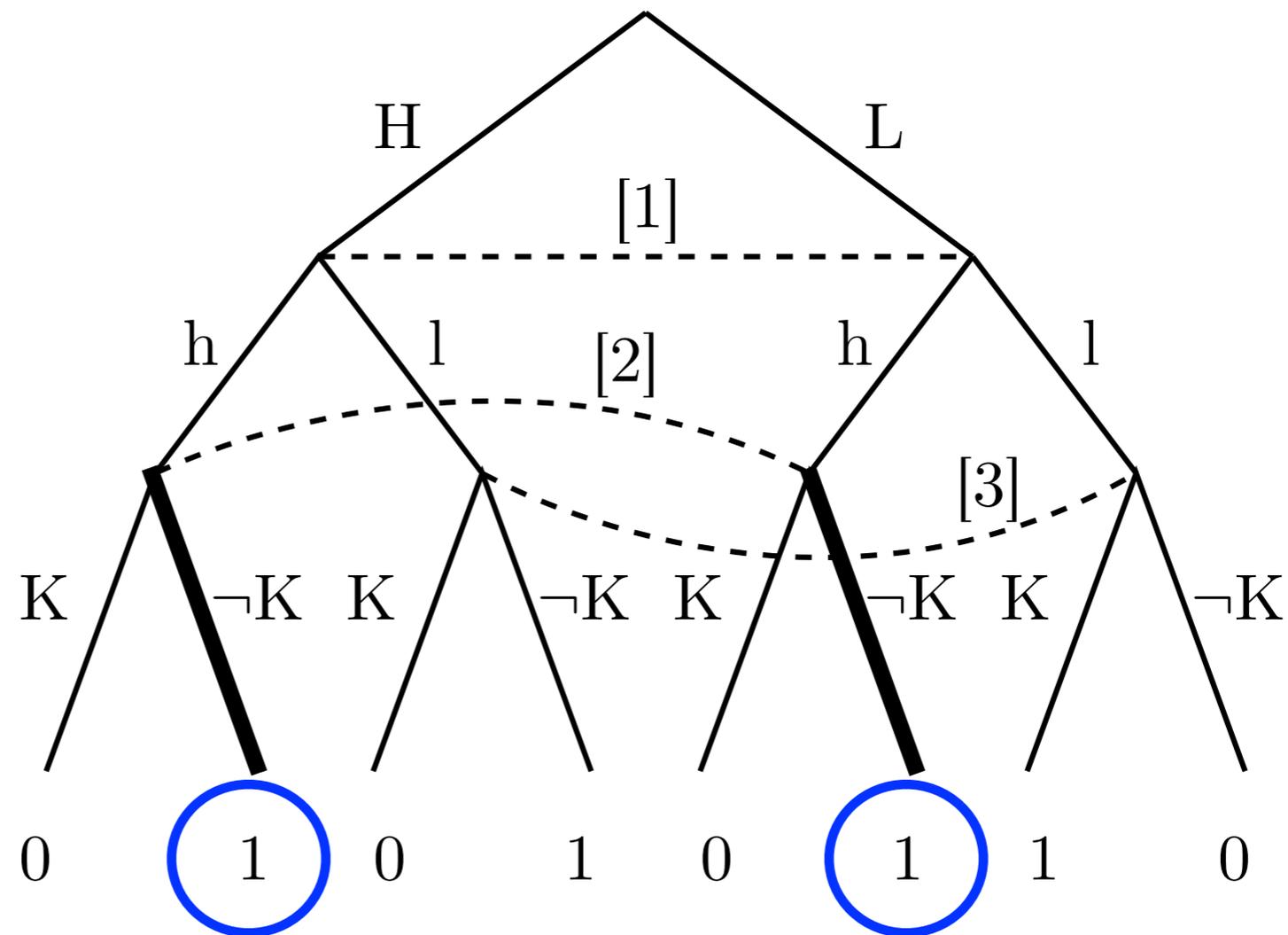
How to play the game

Stakes for the subject

Stakes for the attributor

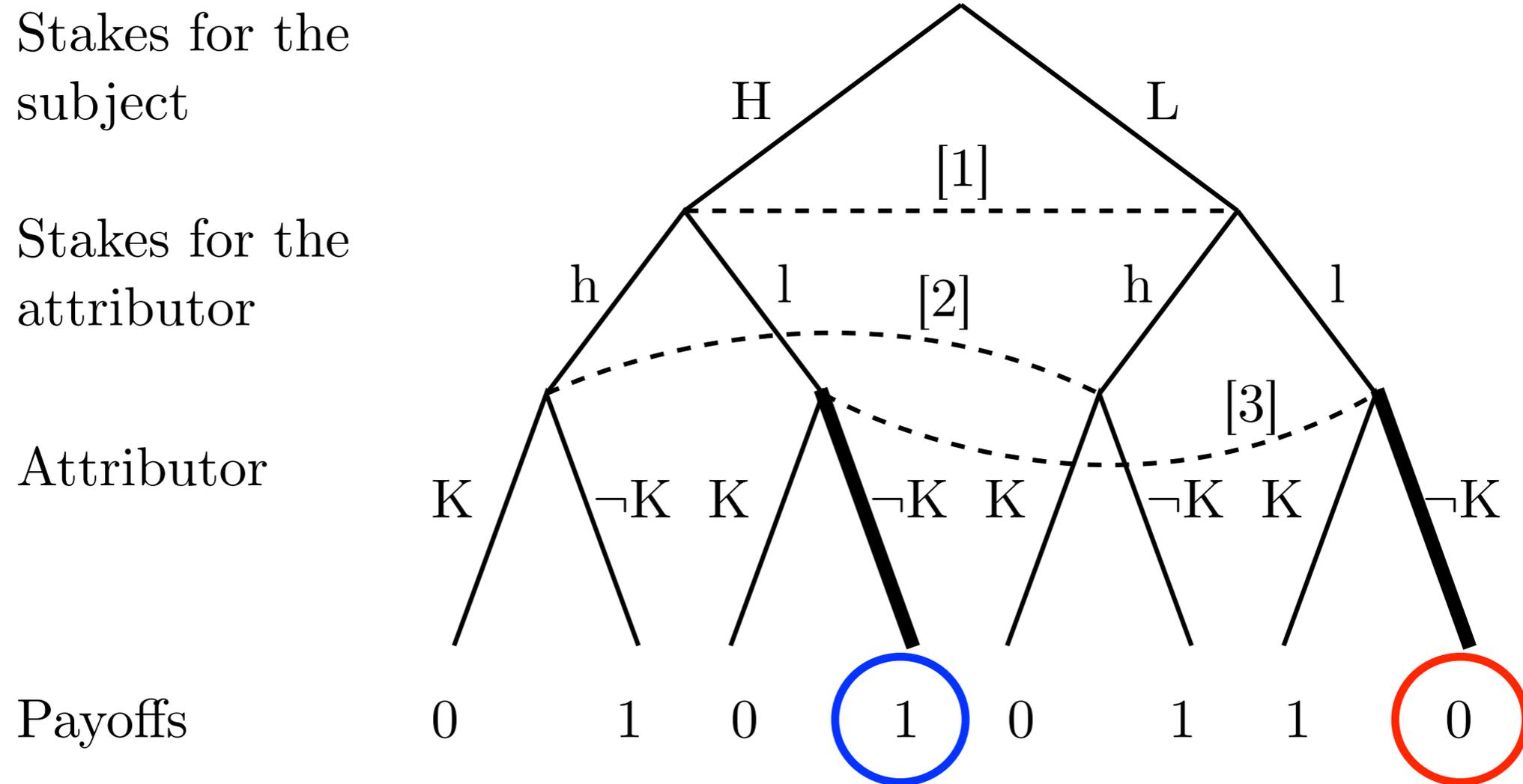
Attributor

Payoffs



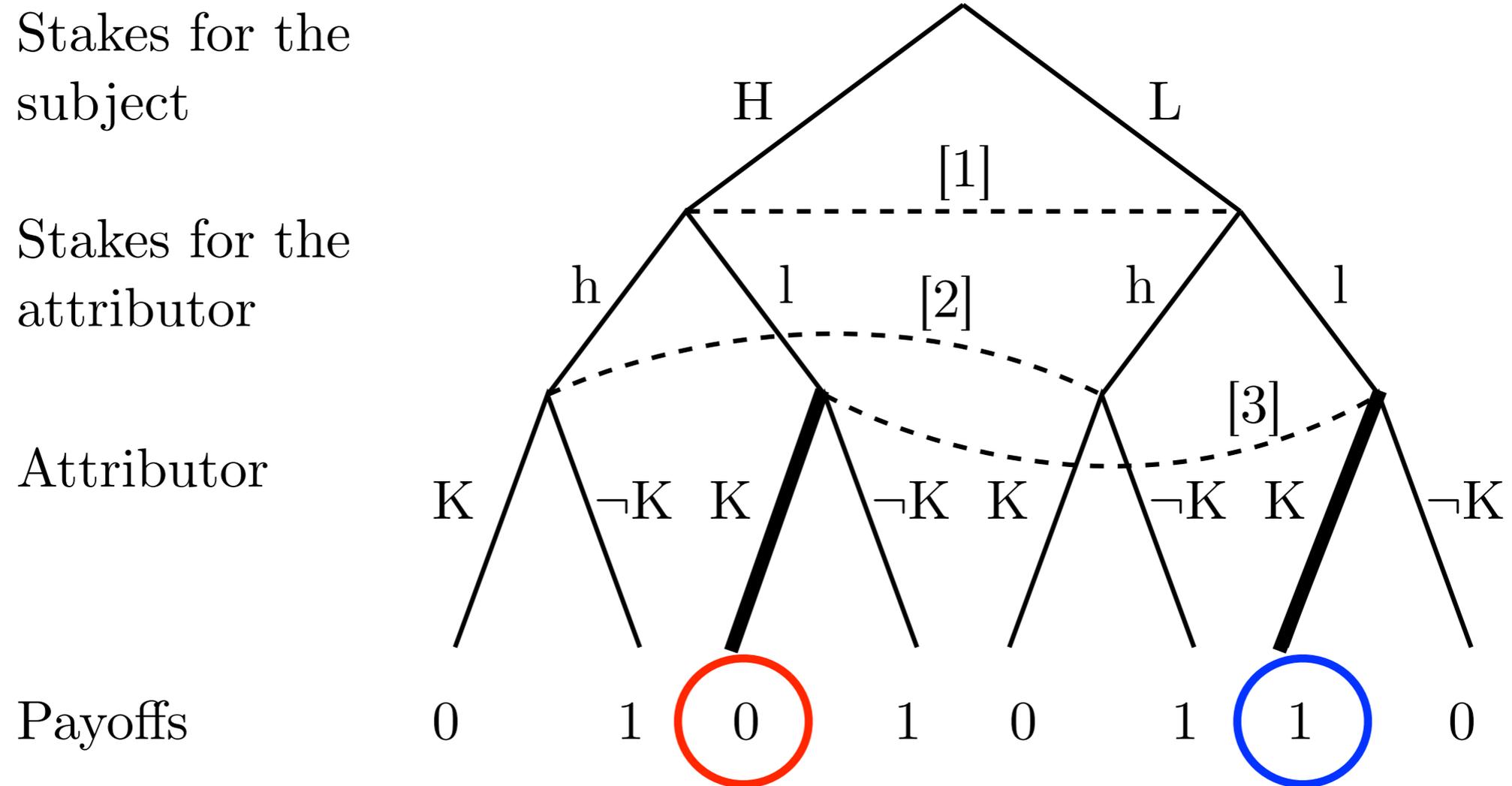
If the attributor is in **h**, then **¬K** is the rational choice.

How to play the game



Suppose the attributor is in **I**. If she chooses always $\neg K$ then she succeed sometimes and fail other times.

How to play the game



Suppose the attributor is in **I**. If she chooses always **K** then she will fail sometimes and succeed other times.

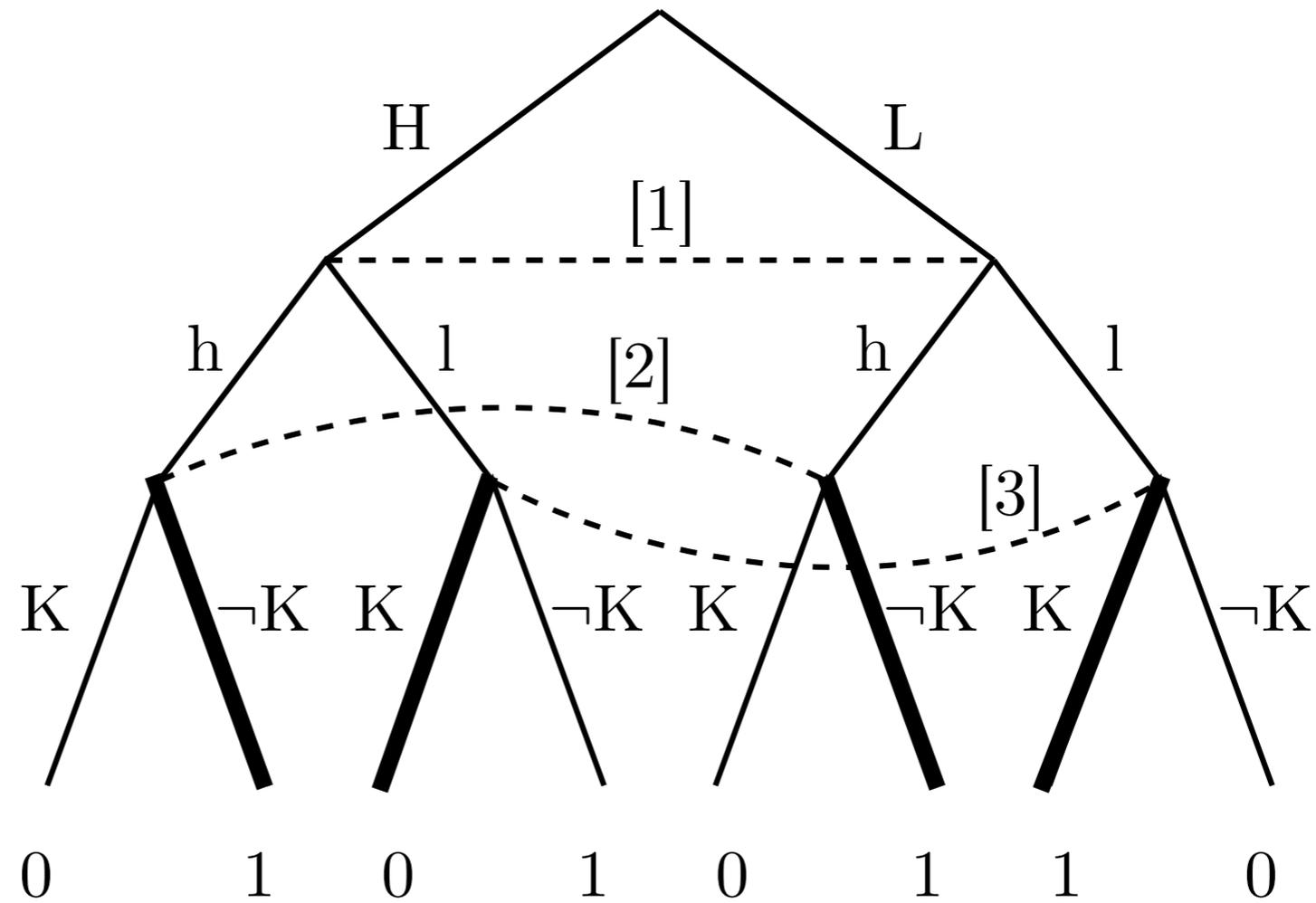
How to play the game

Stakes for the subject

Stakes for the attributor

Attributor

Payoffs



To specify a solution we need to use beliefs.

Solution:

$$\begin{aligned}
 s_1^*(h) &= \neg K \\
 s_1^*(l) &= K \\
 \beta_1^*(l|H) &< \frac{1}{2}
 \end{aligned}$$

How to play the game

Lessons of the normative solution:

Response to the objection: if the project is to find a normative theory of knowledge attribution, then IRI is not a good result. IRI is not rationally justified given the game.

Another lesson: Stakes alone do not fully determine the epistemic standards for knowledge attributions.

Summing up

- 1.** Contextualism does a better job than IRI accounting for the attributor's beliefs.
- 2.** It is not clear whether IRI is supposed to be descriptive or normative. However, it fails descriptively and we have strong reasons to doubt it is normative.

Thank you!