1. A simple example

I start writing a series of numbers: 2, 4, 6, 8, 10, 12, 14. Then I say to you, "That's only part of the series; it continues. How do you think the series continues? At the very least, what is the next number?" I won't tell you the answer, and you've not been previously given the answer.

To properly answer my question, you'd need to know what rule I was following in constructing the series. So, what rule was I following? The most natural response is "you were following the add 2 rule." So the most natural answer to my question would be '16'.

But why favor the natural response? What privileges it over this response: You were following the add 2 six times, then begin adding 3 rule. This rule yields the same initial series as the add 2 rule.

Notice that seeing the next number in the series won't really help. Even if you're told that the next number is indeed 16, you still face the same basic problem. You might initially think it's the add 2 rule, but why not the add 2 seven times, then begin adding 3 rule?

2. The problem: arbitrariness

We face a problem. Our limited evidence is consistent with multiple rules. It's worse than that actually: *our evidence is equally consistent with an infinite number of rules*. It seems **arbitrary** to judge that any particular one of these is operative. But if it's arbitrary, then we can't reasonably believe, much less know, which rule is being followed.

3. Language use

The problem generalizes. We start with language use.

We think we know what others refer to with the term 'vase'. We think they're referring to a vase. Call this the **natural proposal**. Our evidence for this consists mainly in our observation that people respond to vases, but not much else, by uttering 'vase'. But note this: everything that is a vase is either a vase or a fifteen pound pink rat. So consistent with all our evidence, they might be using it to refer to anything that is either a vase or a fifteen pound pink rat. Call this the **alternative proposal**.

"But wait!" you say. "No, I've never observed someone use that term to refer to a fifteen pound pink rat." But that's beside the point. The fundamental point is that you've never made an observation that disconfirms the alternative proposal. To disconfirm it, you'd need to observe people *not* using the term 'vase' in a fifteen pound pink rat's presence.

"But wait!" you say. "There have never been any fifteen pound pink rats around here." But that evinces no defect in the proposal. Compare: there have never been any exosolar planets around here either, but 'planet' refers to them.

The crucial point is this: the natural and alternative proposals are equally consistent with all our observations. And the term 'vase' is not special; similar points will apply to all other terms. But if we're unable to non-arbitrarily judge which semantic rules others follow, then we can't reasonably believe or know what their words mean.

4. Induction

We can understand the problem of induction as a special instance of the problem under investigation.

We wondered whether a standard inductive inference is reasonable. That amounted to wondering whether it is reasonable for us to judge that a certain observed pattern carried over to unobserved instances. In particular, we wondered whether it's reasonable to move from the premise <m/n observed As have been Bs> to the conclusion <m/n of all As are Bs>.

But we might have phrased it this way: what rule (or law) actually governs the relation between As and Bs? Is it m/n of all As are Bs? This is the natural proposal. Or is it m/n observed As are Bs, and .5m/n unobserved As are Bs? This is the alternative proposal.

How could we non-arbitrarily decide between these two rules? Both **perfectly** predict our observations!