Transcript: Philosophy VIDEO 2.2 – Questioning Q: Failing Upwards!

Let's review: two videos ago I proposed to explain how this Q business is supposed to work: I said it would help you understand the university, and make you smarter—more critical. In the last video, I taught you a card game. I hope that game taught you a lesson about confirmation bias.

I taught you that the way to win the card game—the Wason Selection Task—is to aim for disconfirmation. Which reminds me of a point I put forward in an earlier video.
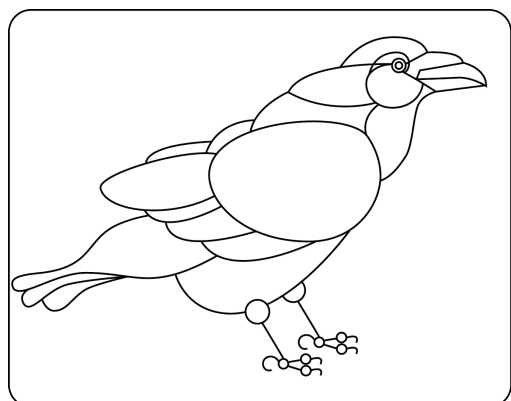
Science aims at disconfirmation.

This was Karl Popper's big idea. Science as big guessing game.

Someone makes a hypothesis—that is, a guess. They advance a general rule, like 'All ravens are black'—but usually more fancy. Like Newtonian laws, for example.
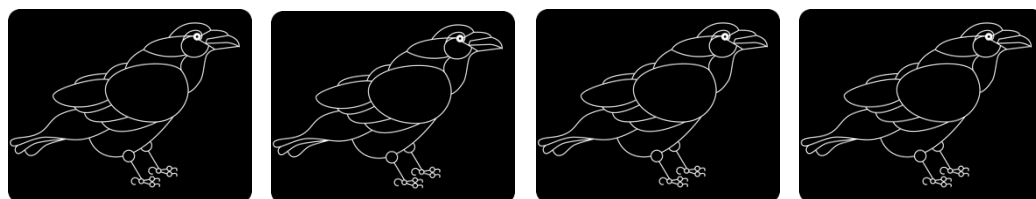
Then everyone else runs around trying to turn these bets into bad bets.

I mentioned at the time that picture has definite appeal, yet is a little weird. Science as big guessing game? For real? But if—if—there's some truth to this Popper picture, then it seems like the card game, far

from being a mere game, is a miniature model of science. Think about it.

Let me make this proposal even stronger.

Remember Hempel and Oppenheim's idea—the DN model? Deductive-nomological model. It says science—scientific explanation, anyway—is a matter of deducing things from laws.

That's like having an if-then card rule, and using it to predict what you'll see if you flip cards.

Remember our rule:

If a card has a star on one side, then it has an even number on the other side

With that rule, assuming it's a good rule, you can explain stuff about cards, as well as predict stuff about cards.
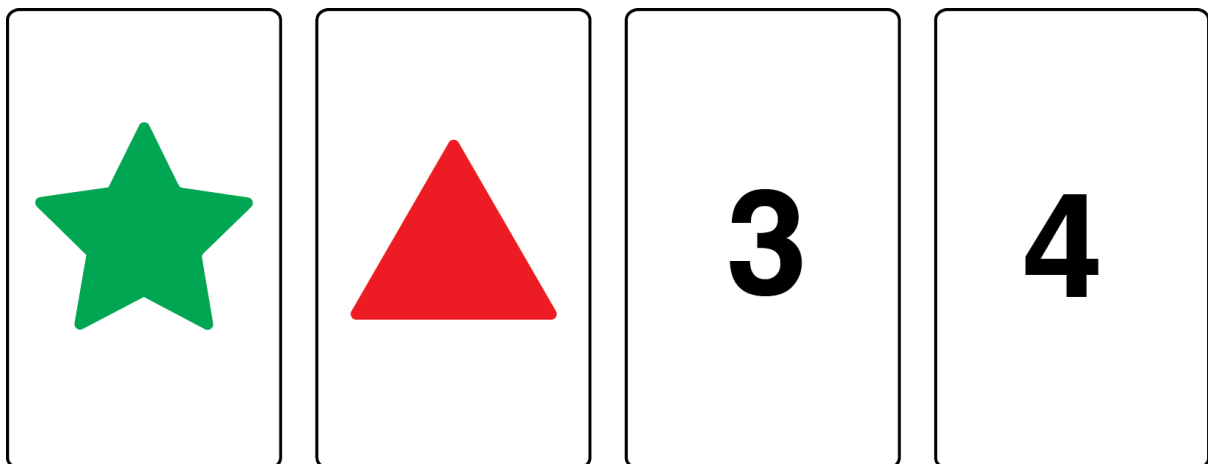
So if science turns out to be something like Popper plus something like Hempel and Oppenheim, then the simple card game is kind of a toy model of both together.

Of course it's hard to think both ways at once. It's hard to use the card rule to make predictions/explanations while simultaneously working to disconfirm the rule. Assuming X while doubting X? It's kind of like pressing the accelerator and the brake at the same time, mentally. Then again, that's why we need more than one scientist at one. Someone can be out there explaining stuff, on the assumption that the current law is

good, while someone else out there is challenging the current law.

Last but not least, in the last video I ended by pointing out that the way I talked up Q, two videos ago, sounds an awful lot like what I just taught you NOT to do.

I told you how Q was going to go great. That was me indulging in confirmation bias. Rather than looking for ways that Q might fail, I just thought of some rule for how it succeeds.

In this video I'm now going reverse course and do the thing I said to do in the last video, not the thing I did in the one before. I'm going to test the rule by trying to break it.

Here's the rule: **if you take Q, -> you will get smarter**.

In short: this module might be worth your time.

How might the hypothesis turn out to be **wrong**?

Let me answer that by criticizing some more things I said two videos ago.

The university is made of … questions! I said that. That was my hypothesis

Is that true? Or can we disconfirm it?

Well, at the very least we could have the decency to formulate alternative hypotheses before simply marrying the first one we meet.

The university is made of theories, or experiments, or hypotheses, or—I dunno—big ideas. The university is made of people who know a thing or two. Add up the people, that's a lot of things. All these have some plausibility and, be it noted, didn't say 'questions'.

Here's a kind of off-the-wall hypothesis:

the university is a market in which individuals are working to maximize their personal utility—their profit—by trading intellectual goods. Which are sometimes good questions. Lucky we've got an economist on our

team, if it turns out the philosophy of science and knowledge is just a sub-branch of economics.

Let me just say: I don't think that idea will work. But it's certainly fair that economists could provide insight into some market-like mechanisms that operate in and around the university. The university is a bureaucracy, so anyone who studies how large organizations work might have something valuable to chip in. Social science generally. Management and business.

How might the proponent of Q fight back against these rival key concepts that might be made the keystones of some story about how the University works?

Every hypothesis is a question. Every question is an experiment, waiting to be performed. A question's just a theory you haven't met!

These sorts of statements sound potentially insightful, and they keep Q at the center of things, but they've also got a slogan-y quality. There's a fine line between a hypothesis and something you hang on your wall to inspire you. Maybe with kittens.

Question is a big concept. It's vague. It's ambiguous. We talked about that. That means: anything that sounds good about the university probably has something to do with questions. But that isn't really a good proof that questioning is The Key to the kingdom of knowledge, or even to the organizational structure of the university. In short, maybe studying questioning won't cause you to understand the university. Not especially.

On that note, let me move on to another hypothesis I advanced two videos ago: Q is going to give you a leg up, intellectually. Wherever you go around this place, questioning is valued. After we're done with you, you'll be better at that.

But wait: is that even a thing? Being a good questioner? Well, why shouldn't it be?

Suppose you want to ask good questions about physics. Which would you study: physics? Or questioning?

Suppose you want to ask good questions about poetry. Which would you study: poetry? Or questioning?

I'll bet you see where I'm going with this.

But here's an obvious reply.

Look, no one thinks studying questioning is going to be literally a substitute for studying physics, in the asking-good-questions-about-physics department. But it does seem plausible that studying questioning could give the person who studies physics AND questioning a marginal edge. Learning the fine art of asking good questions could give you a slight edge wherever you go. If there's a skill that helps you just a little bit, everywhere you go, that could be worth it.

Is being a good questioner valuable everywhere?

Suppose you make a list of great physicists. (Feel free to pause the video, go to Wikipedia and actually do it, if you want.) What was it that made them great? They were good at math in school? They worked long hours in the lab when everyone else was out partying? They were good at asking the right questions? All that sounds pretty plausible. Let's take the last item. They were good at asking good questions.

I expect, if you indeed go to Wikipedia and collect a bunch of famous physicists, read their bios, you will see that what made them famous is indeed that, somehow, they ended up working on the right questions. It's not enough to get results. You need important results, which means seeking answers to the right questions.

But is knowing how to ask the right question a skill you can acquire?

This kind of relates to my third sense of question, if you recall. Knowing what you don't know. Knowing how to ask good questions is the fine art of knowing what you don't know, and knowing what to do about it.

But is that even an art, let alone a science?

How can you know which things you don't know are the things you should? Out of all the infinite things you don't know, which is the one for you.

OK, that was confusing. But you know what we do when we're confused? We try to kick the furniture to pieces. That's the grown-up way. That is, we work to disconfirm. Let's try to model how, maybe, being good at asking questions is NOT a thing. Not a skill, not an innate talent. It's luck—or nothing. Ergo, it's not something any module is going to teach.

Let me try to make this vivid with an example. Let me give you Holbo's candidate for the best damn question about physics anyone ever asked. The philosopher Plato—of t-shirt fame—had a famous academy. This is in the mid-300's BCE. So: long time ago. In his academy he had students of astronomy and, so the story goes, he set them a research project - a question:

what is a mathematical expression for the motions of the wanderers?

Wanderers?

Next video.