Focus on the meaning behind the details

Research is hard to communicate because you know the material much better than the audience. This creates an “expert blind spot”: it’s hard to remember what it’s like not to know something. You see a constellation while your audience struggles with seeing many random stars. They need you to connect the dots and tell them what’s important.

A key skill is to convert details into the meaning behind them. This necessarily involves using audience-appropriate language and omitting some information in order to prioritize the big picture.

Research can fit into a storytelling template

We can map research onto common storytelling elements to create a research story:

- **Storytelling component**
  - Clear stakes
  - Difficult obstacles
  - Exciting solution
  - Outcome: obstacles resolved

- **Research story**
  - Problem you’re trying to solve
  - Why it’s hard
  - Your approach
  - Research results

**Example: a soccer game**

Argentina played the last game in Group C

Brazil maintained the majority of the possession

The Argentinian center forward was able to gather it for a 1v1 with the keeper

This was the decisive game

Brazil seemed to be in control

Argentina took a risk that paid off

**Example: a research story**

It would take you 20 years to read the articles we publish online every day. The only way we’ll be able to **harness this information overload** is if our computers can help us extract the key information – but even **state-of-the-art software can interpret only the simplest English statements**. As a first step toward more sophisticated interpretation, I’m building a system to extract one of the most common and useful types of information: **statements about cause and effect** (e.g., “smoking leads to cancer”). To teach the system what such expressions look like, I am first building a collection of documents in which humans have manually flagged and analyzed cause-and-effect language. From these documents, the system will learn to extract different kinds of cause-and-effect language, **ultimately allowing us to see at a glance the key arguments being made**.

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Finding the stakes

A key insight from packaging research as a story is to start with the stakes: What’s the problem? Why did anything have to be done at all? Several common strategies are well-suited to research:

Long-term impact

Where is this going in 20 years? What would wild success look like?

Why do you care?

Sometimes it’s worth remembering why we got into research in the first place. Who inspired you to pursue this topic? How did you first decide to dedicate your life to it? Excitement is contagious.

[Goal], but [obstacle]

Link your work to a big-picture problem through a series of parallel sentences. Start by stating a big goal, and the obstacle in the way. Solving that obstacle becomes the new goal, which is prevented by a smaller, more detailed obstacle.

Continue recursively until you reach your research problem. Then connect the results to resolving the original obstacle.

Where you start in this chain depends on the audience.

Negative space

Often the best way to show what is unknown is to start with what is known, and then reveal the gap, contradiction, or incompleteness.

For example, Einsteinian physics describes large scale phenomena very well, quantum mechanics describes small phenomena very well, but these theories are incompatible. What describes everything?

Recursive [goal] but [obstacle] in Radiolab

People didn’t know how to feed a growing population

We couldn’t grow enough food because plants need nitrogen

There’s plenty of nitrogen in the air, but not in a usable form

It’s not usable because nitrogen clings tightly to itself

but Haber figured out how to move nitrogen to ammonia

That discovery allowed the world to have 7 billion people.

[goal] but [obstacle] in Porter 2011, NEJM

Killing cancer cells usually hurts the surrounding tissue.

Specifically targeting cancer cells is hard because cancer cells disguise their immune receptors.

Previous attempts to inject new T-cells have failed because they are too short-lived.

Here we report a new method to add persistent T-cells.

This resulted in delayed development of leukemia tumors.