

Storytelling in Scientific Talks

Crafting and Refining a Narrative for Better Communication



The Bard, John Martin, 1817

Storytelling is an ancient and effective communication strategy

- Narrative arcs are recognizable frameworks
- Keep your audiences engaged and energized throughout the talk
- Makes your science memorable



The Story Teller, Amrita Sher-Gil, 1937



Explicitly define your parameters and goal

Title: Storytelling in Scientific Talks: Drafting and Refining a Narrative for Better Communication

Time: 45 minutes, 5 minutes for questions

Audience: CCB students + postdocs who want to improve their communication skills for scientific talks

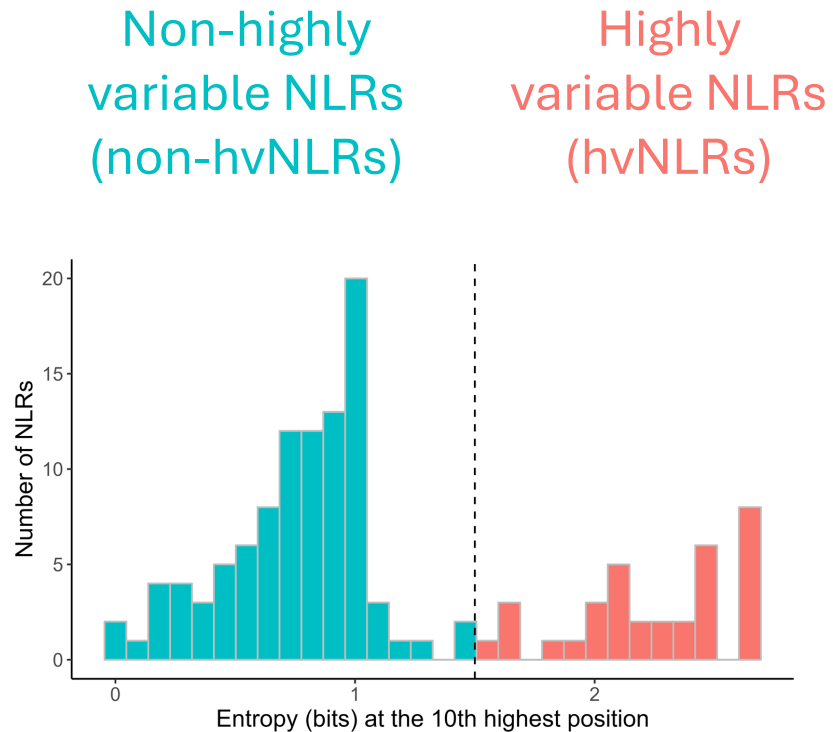
Background: have probably given talks before, maybe have important talks soon, have seen a lot of good and bad talks, technical science across CCB disciplines

Goal: introduce storytelling as a helpful tool and framework

Method: hybrid seminar + workshop to get people thinking about applications to their own work ASAP

Define indispensable data and the context it requires

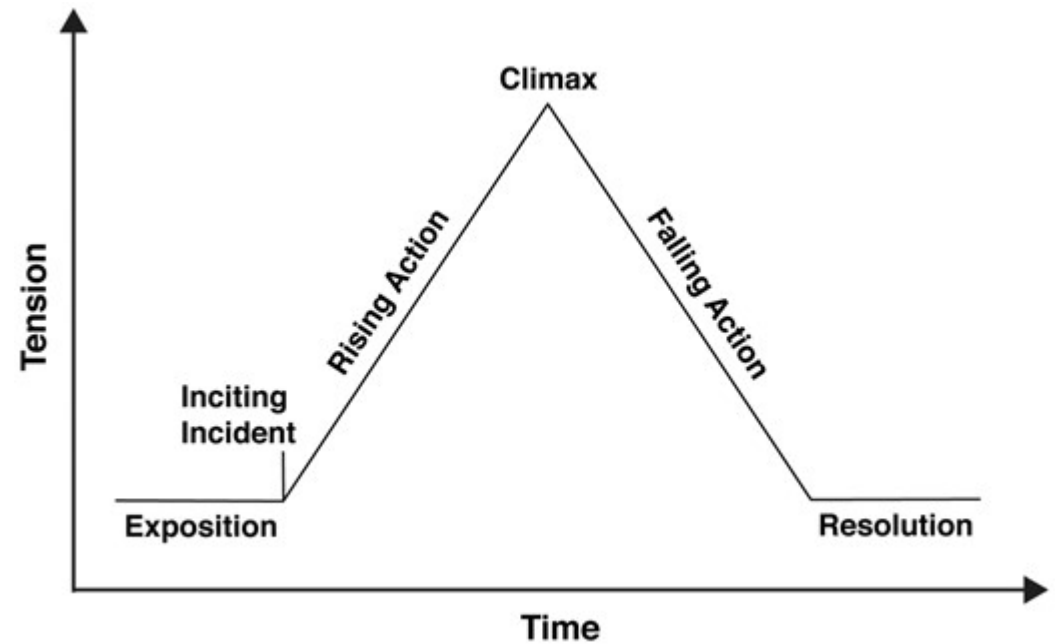
Bimodal distribution of Arabidopsis NLRs



- What an NLR is
- Why do we care about NLRs
- What Entropy is
- Why we choose to use Entropy
- Why is the data bimodal and why we chose to bin

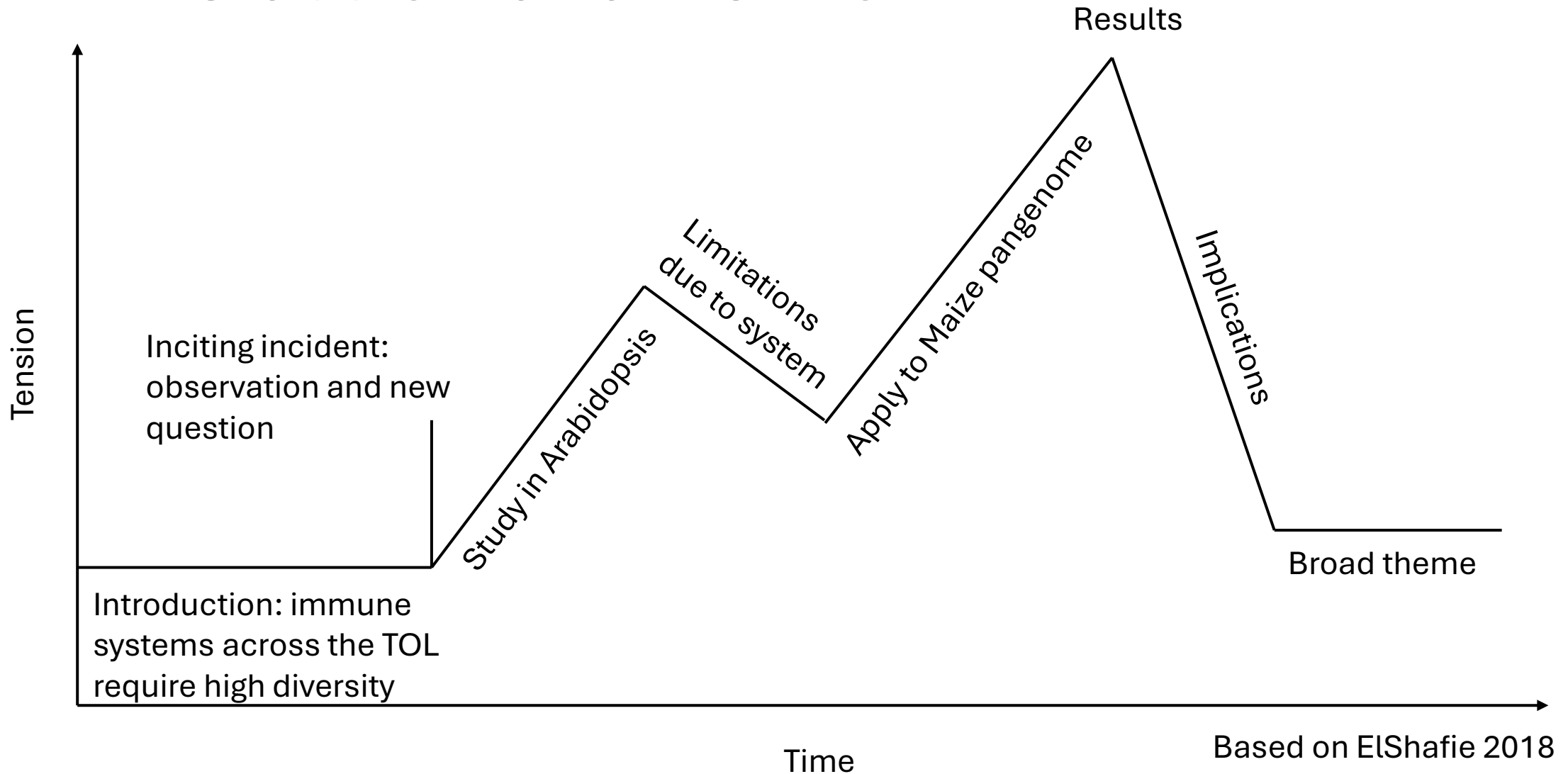
Find your narrative arc

- Center your resolution on your goal and work backwards
- Play with protagonists
- Capture attention with the inciting incident; keep it with obstacles, twists, rising stakes
- Finish with your resolution, unifying with a broad theme and achieving your goal



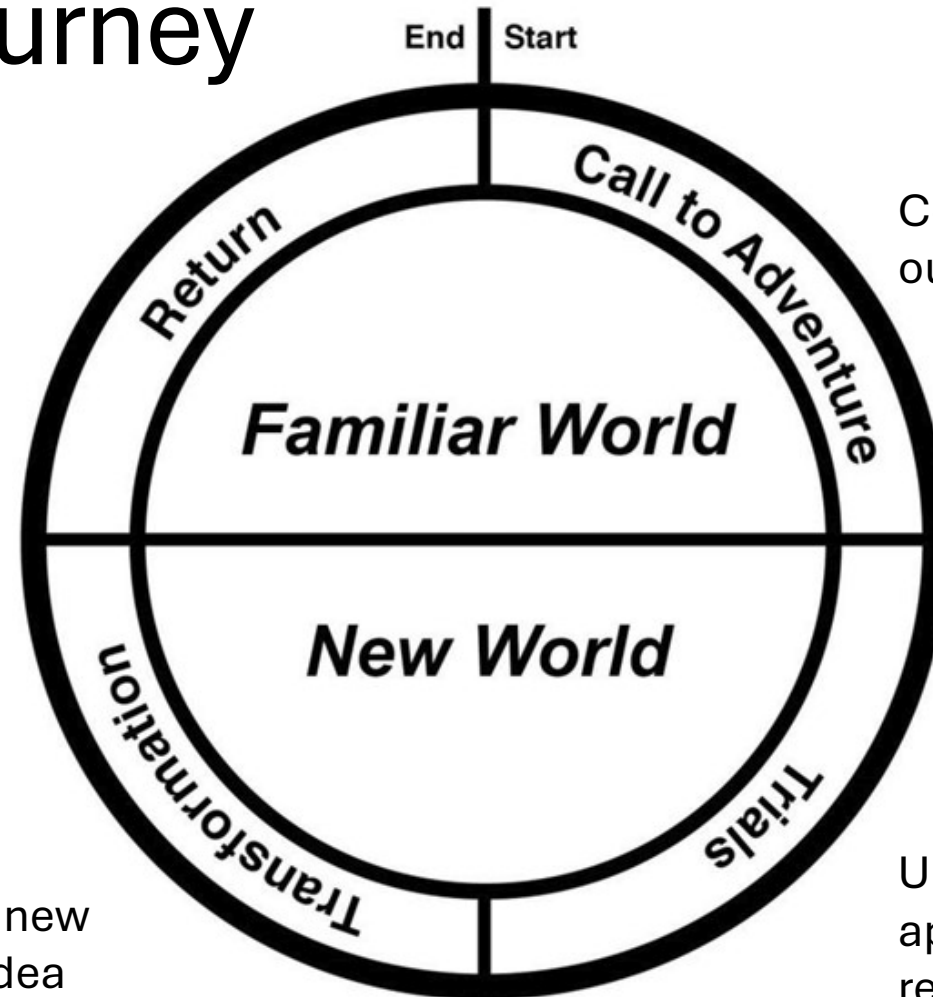
ElShafie 2018, based on Freytag 1900

Ex: Classic Narrative Arc



Ex: Hero's Journey

Better understanding of the system, refine tool



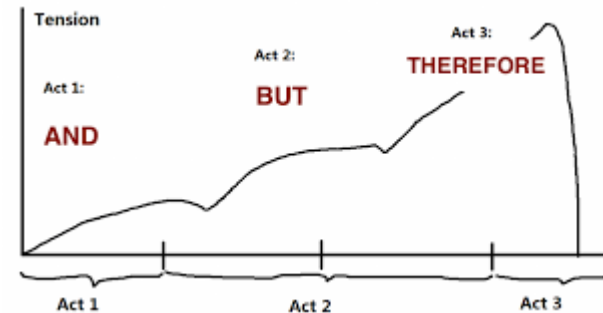
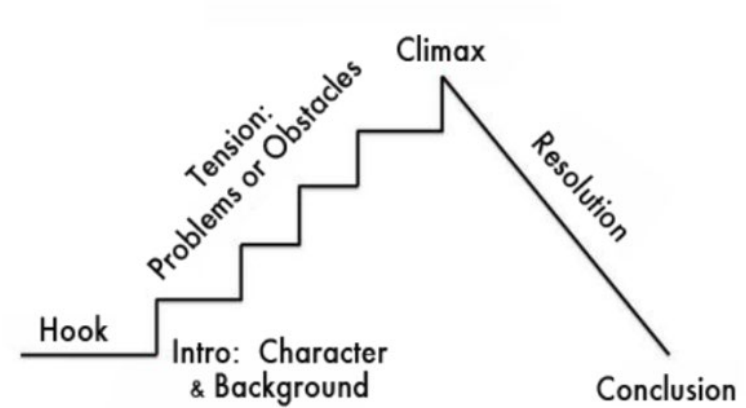
Collaborator asked to apply our tool to a new question

Optimization, generalization, new interpretations, silver bullet idea

Unexpected difficulties in application, confusing results, negative data

Other Common Narrative Structures

- Result-problem-result-problem
- Mystery
- Call to action
- And-but-therefore
 - Fact 1 and Fact 2, but conflict one. Therefore, resolution



Develop your own narrative arc

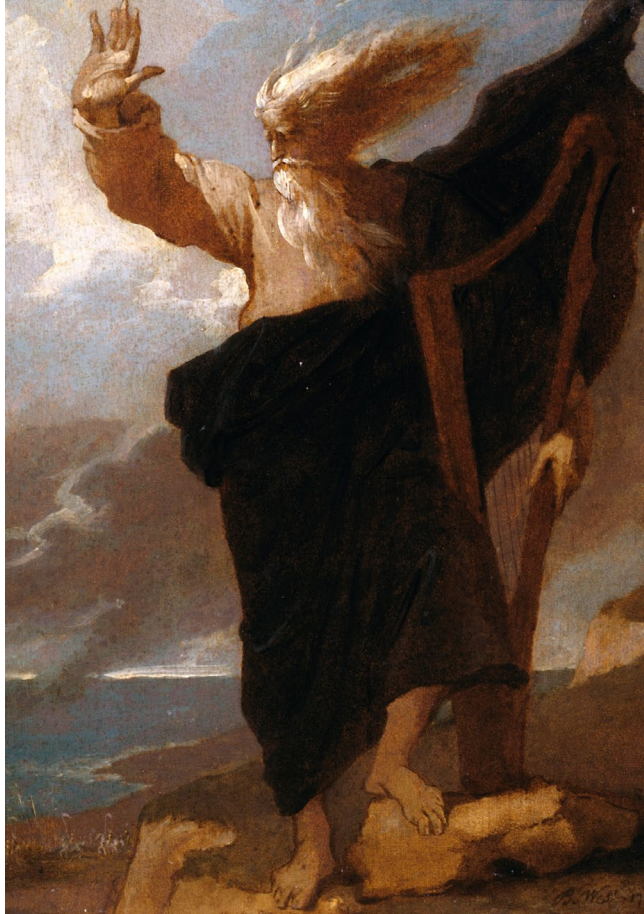
- Who is your protagonist?
- Which arc fits your goal and scientific story?
- How can you organize your indispensable data into the arc?



“A good story cannot be devised. It has to be distilled.”

- Raymond Chandler

Become the bard



The Bard, Benjamin West, 1778

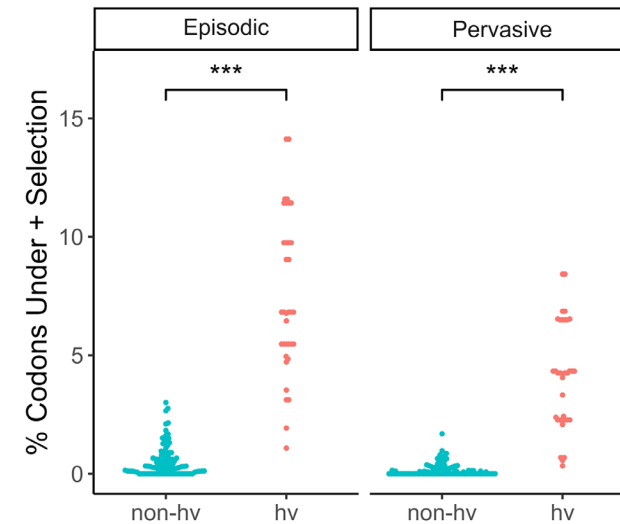
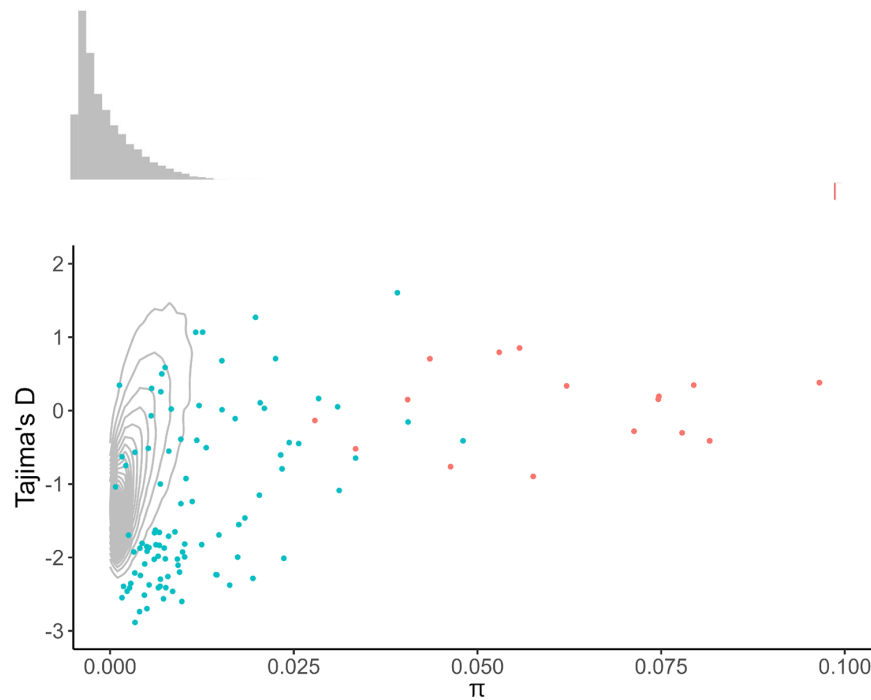
You are the audience's guide through your story and your science

Subtlety is not effective, repetition is



Use the tools at your disposal to guide the audience

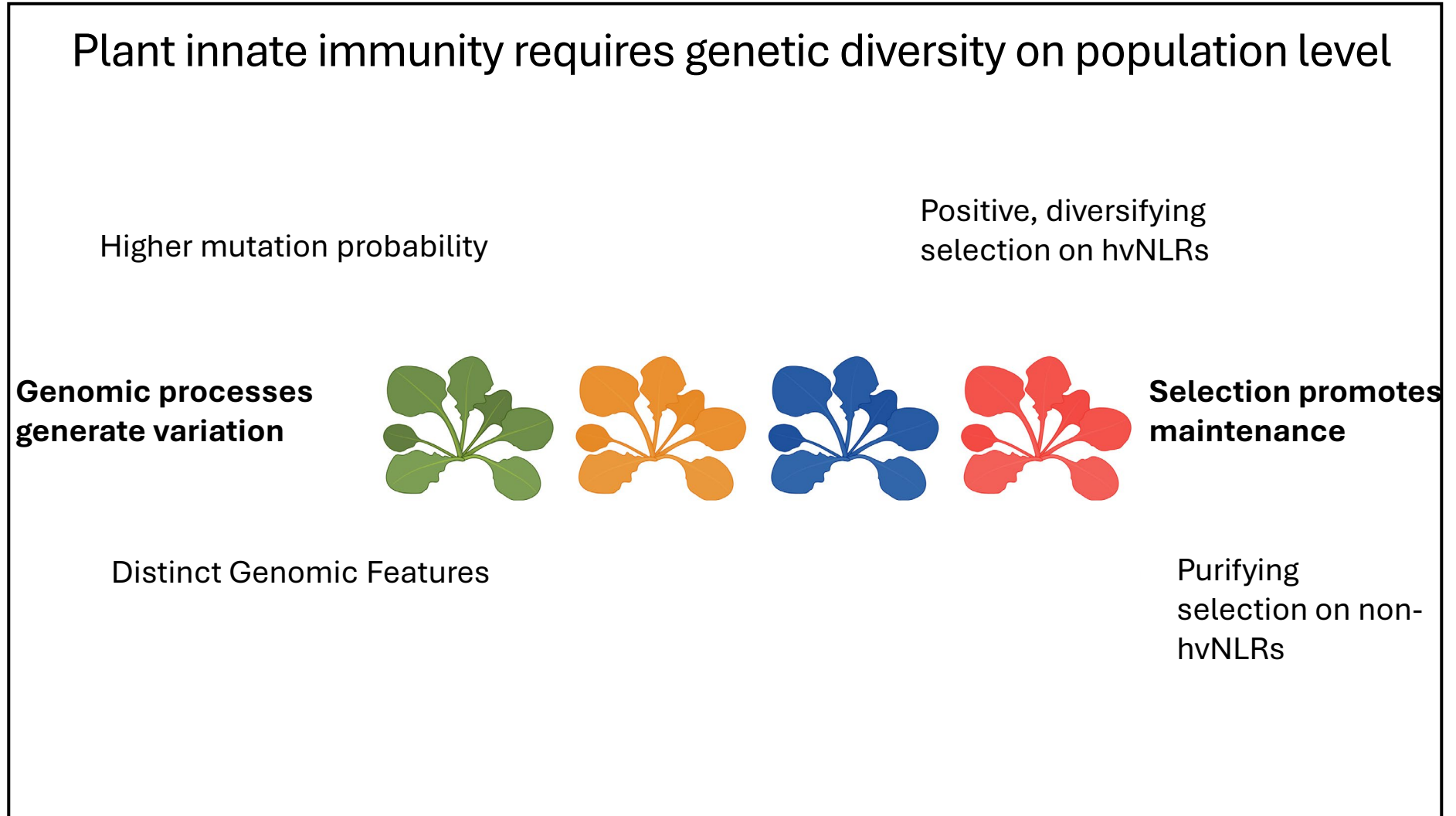
Non-hvNLRs are under purifying selection;
hvNLRs are under positive, diversifying selection



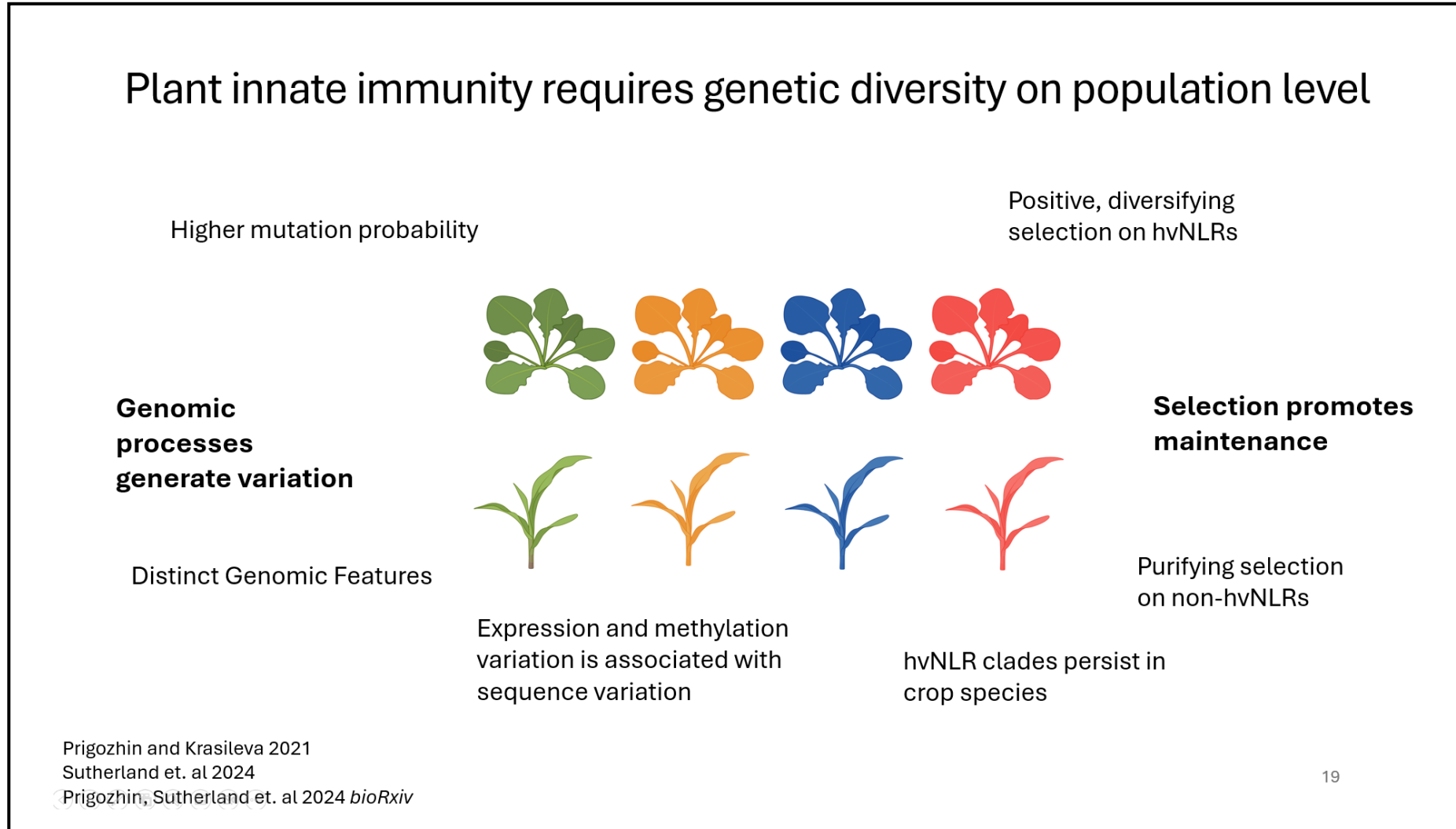
Sutherland et. al 2024



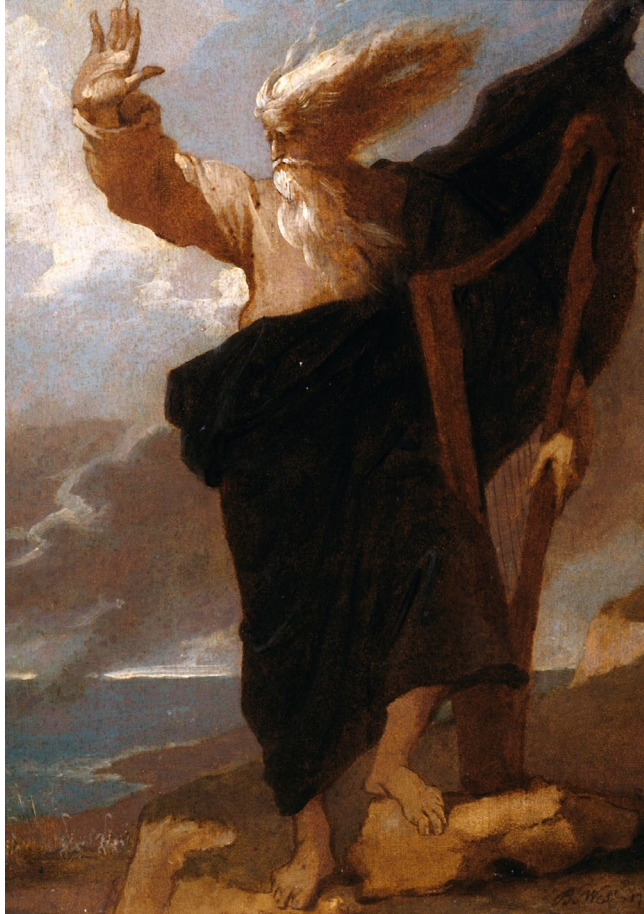
Homing slides re-orient audiences and pick up stragglers



Encourage good questions by ending on a summary slide



Become the bard



The Bard, Benjamin West, 1778

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Subtlety is not effective, repetition is

Project credibility

Lead with confidence, this is your story!

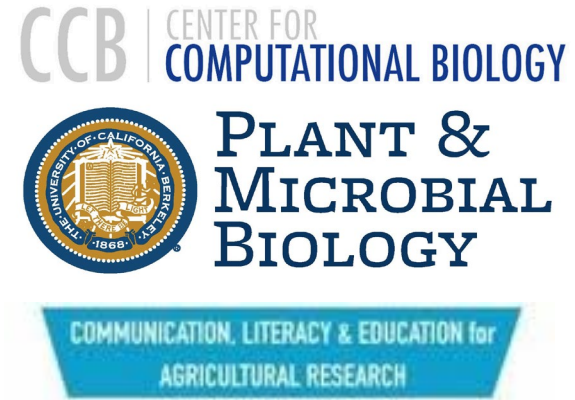
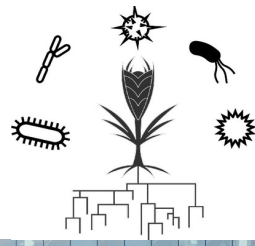
Every talk is a job talk and every talk is a practice talk

- Do a postmortem on your next talk
- There are good and bad talks all around you



Jeune femme écrivant, Pierre Bonnard, 1908

Krasileva Laboratory





Storytelling in Scientific Talks

- Define your goal
- Organize indispensable data into a narrative
- Practice, distill, iterate
- Lead your audience with confidence
- Enjoy the benefits of communicating effectively!