



Version Control

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Outline:

1. My background
2. Automated version control
3. Setting up git
4. Creating a repository
5. Tracking changes
6. Collaborating
7. More resources

Version Control

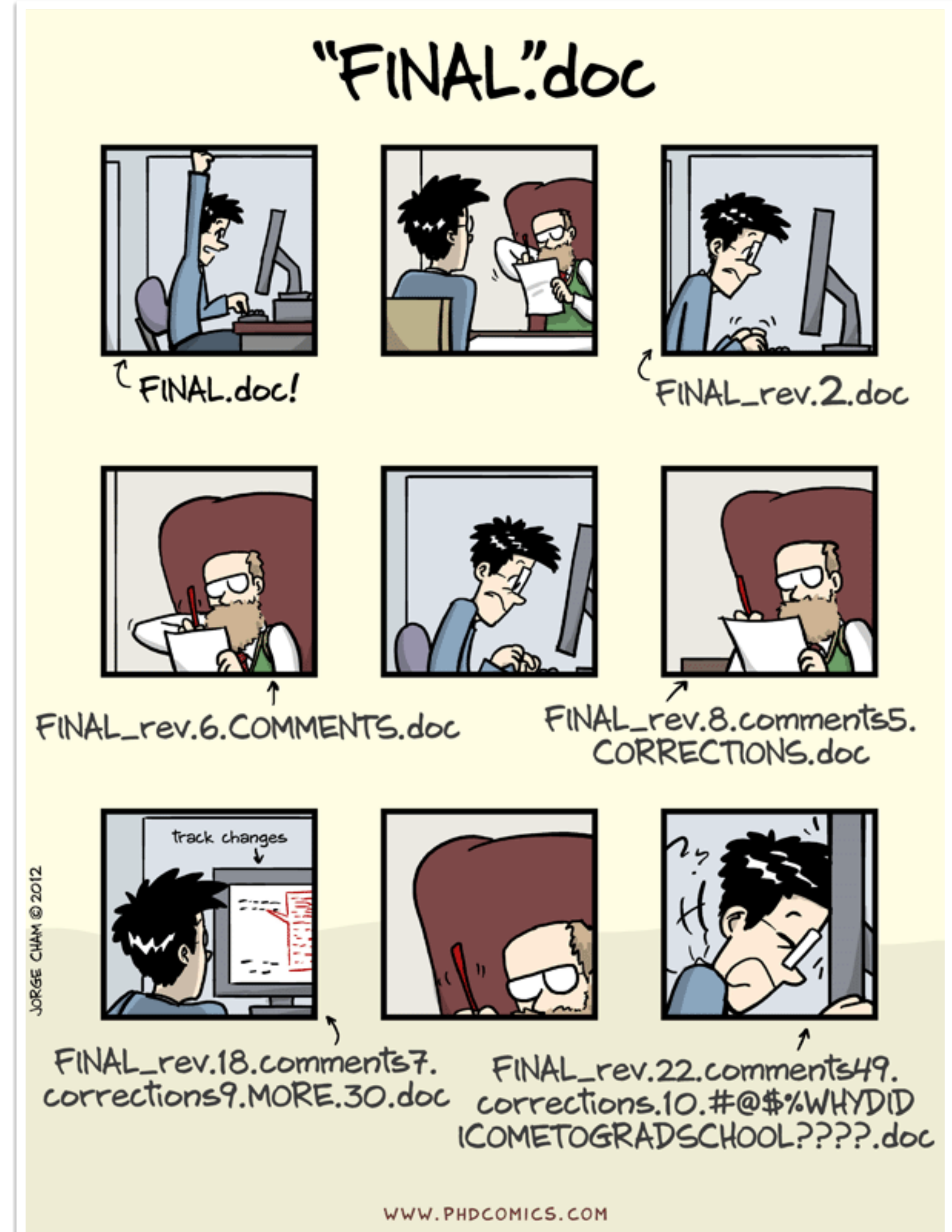
What's hard about this method of tracking changes?

Multiple nearly identical versions

Difficult to identify the final (or original)

Collaboration is cumbersome

Learning objective: Understand benefits of version control and (high-level) how it works



Version control records
changes all along
the way

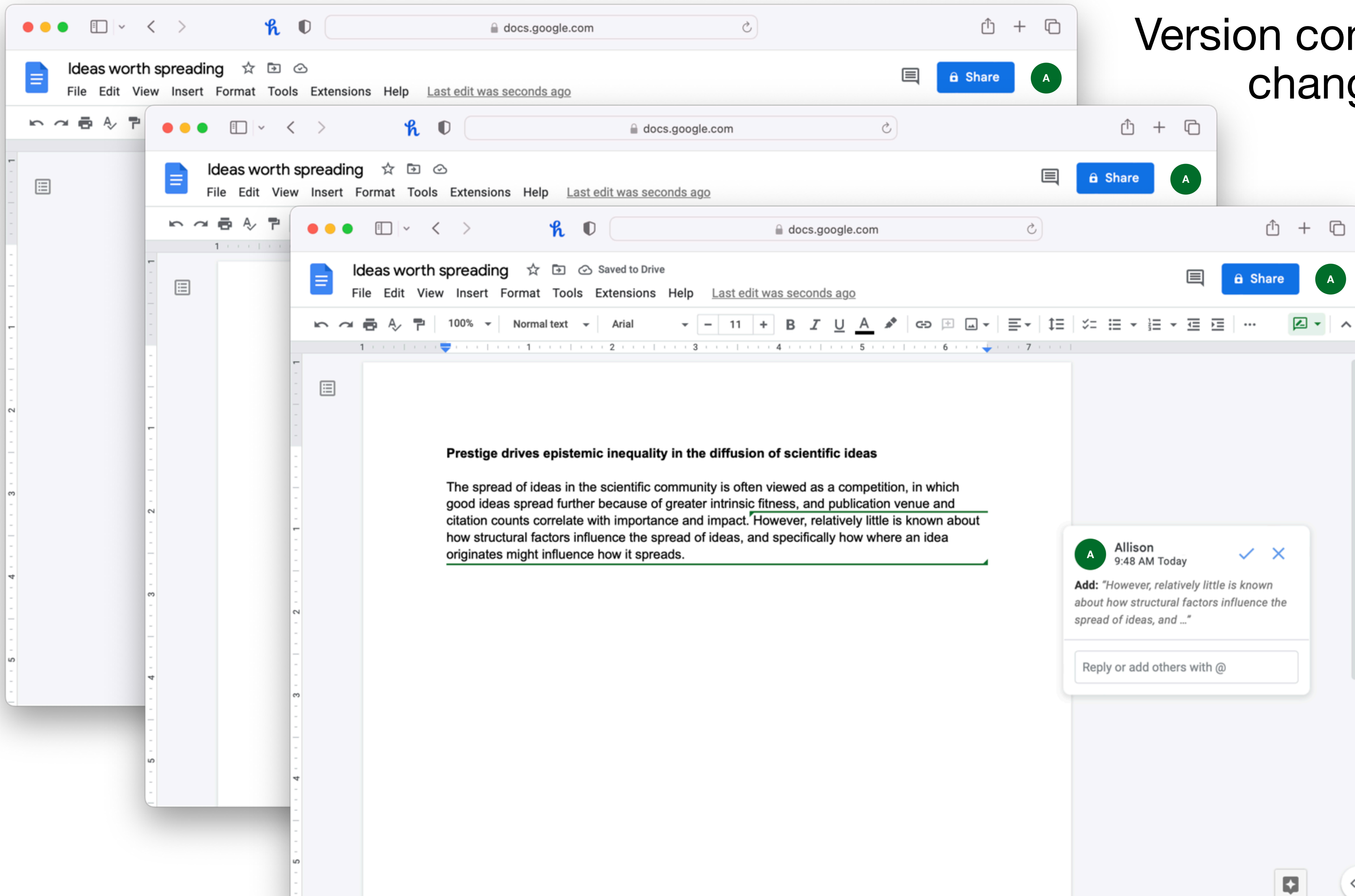
The image displays a stack of four overlapping Google Docs browser windows, all open to the document titled "Ideas worth spreading". The windows are slightly offset to show the progression of the document's state. The topmost window shows a comment by Allison at 9:49 AM: "Add: 'Here, we investigate the role of faculty hiring networks, which embody the set of researcher transit...'"

The document content, visible in the top window, is as follows:

Prestige drives epistemic inequality in the diffusion of scientific ideas

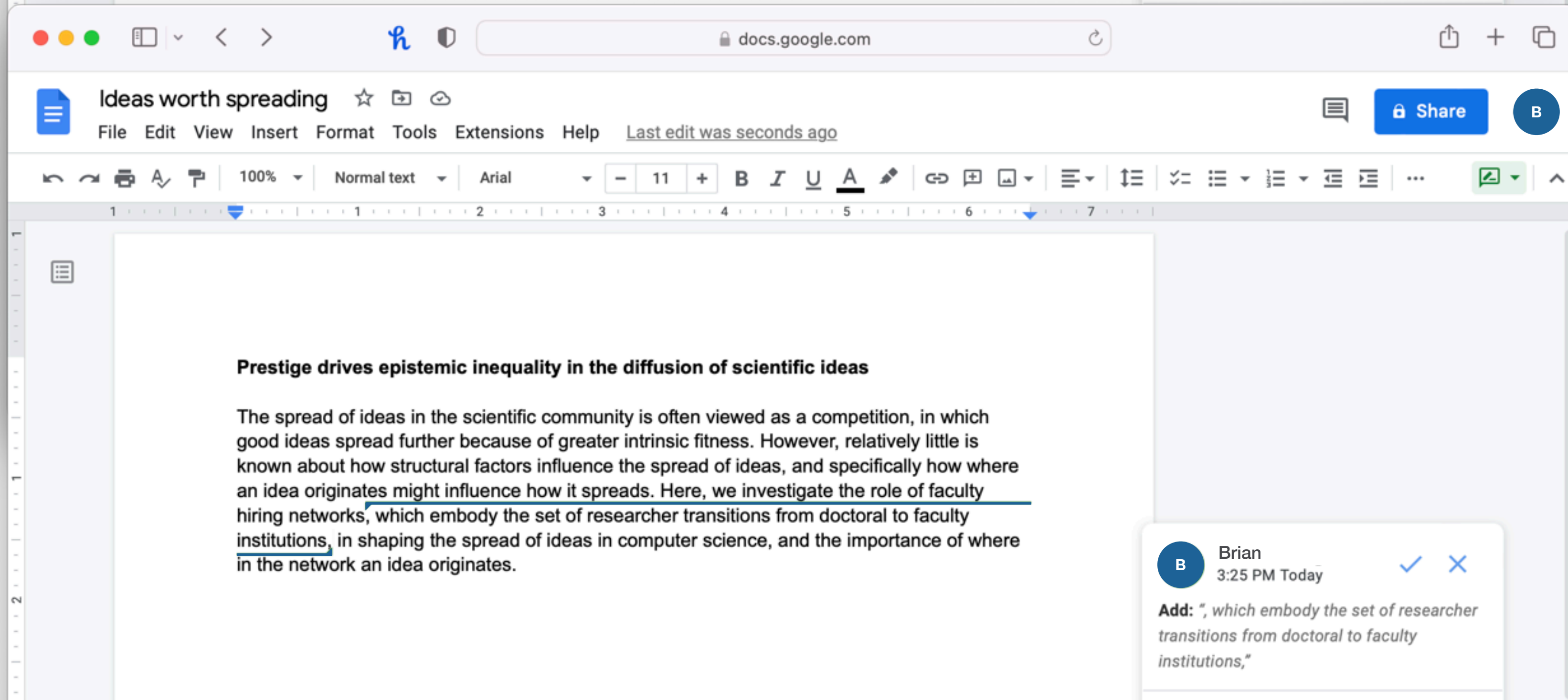
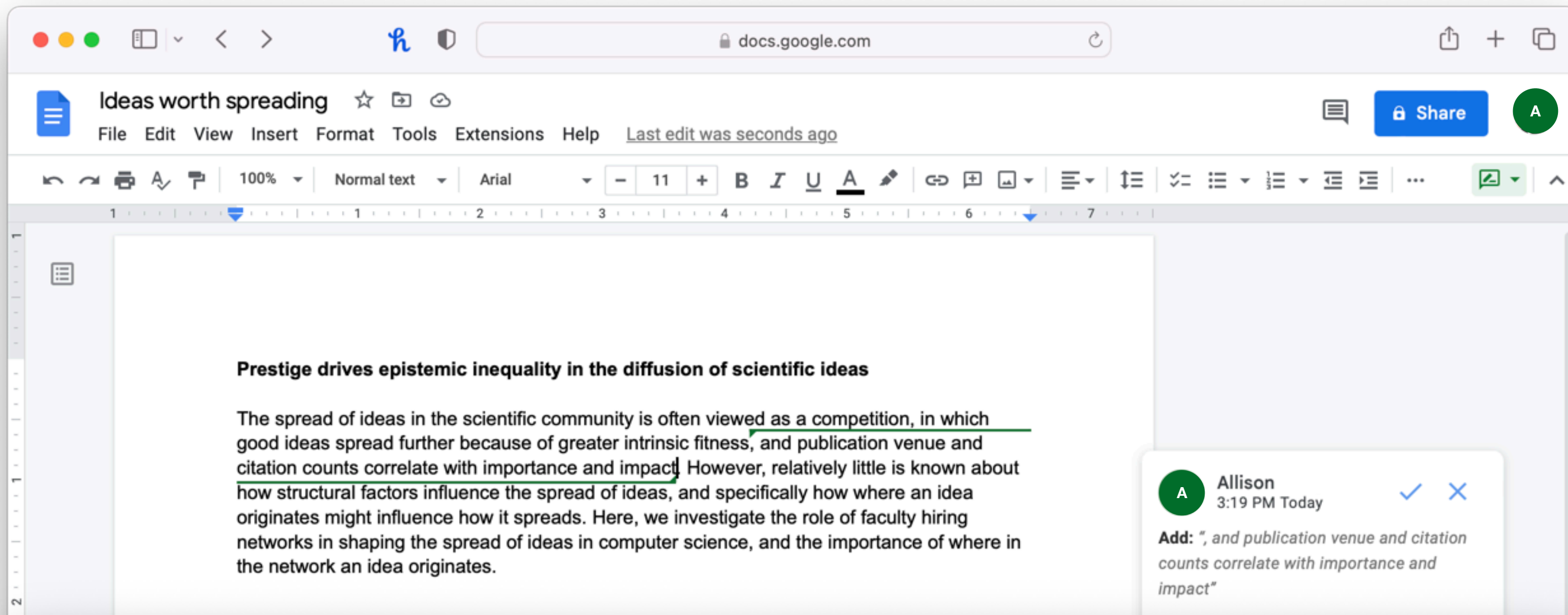
The spread of ideas in the scientific community is often viewed as a competition, in which good ideas spread further because of greater intrinsic fitness, and publication venue and citation counts correlate with importance and impact. However, relatively little is known about how structural factors influence the spread of ideas, and specifically how where an idea originates might influence how it spreads. Here, we investigate the role of faculty hiring networks, which embody the set of researcher transitions from doctoral to faculty institutions, in shaping the spread of ideas in computer science, and the importance of where in the network an idea originates.

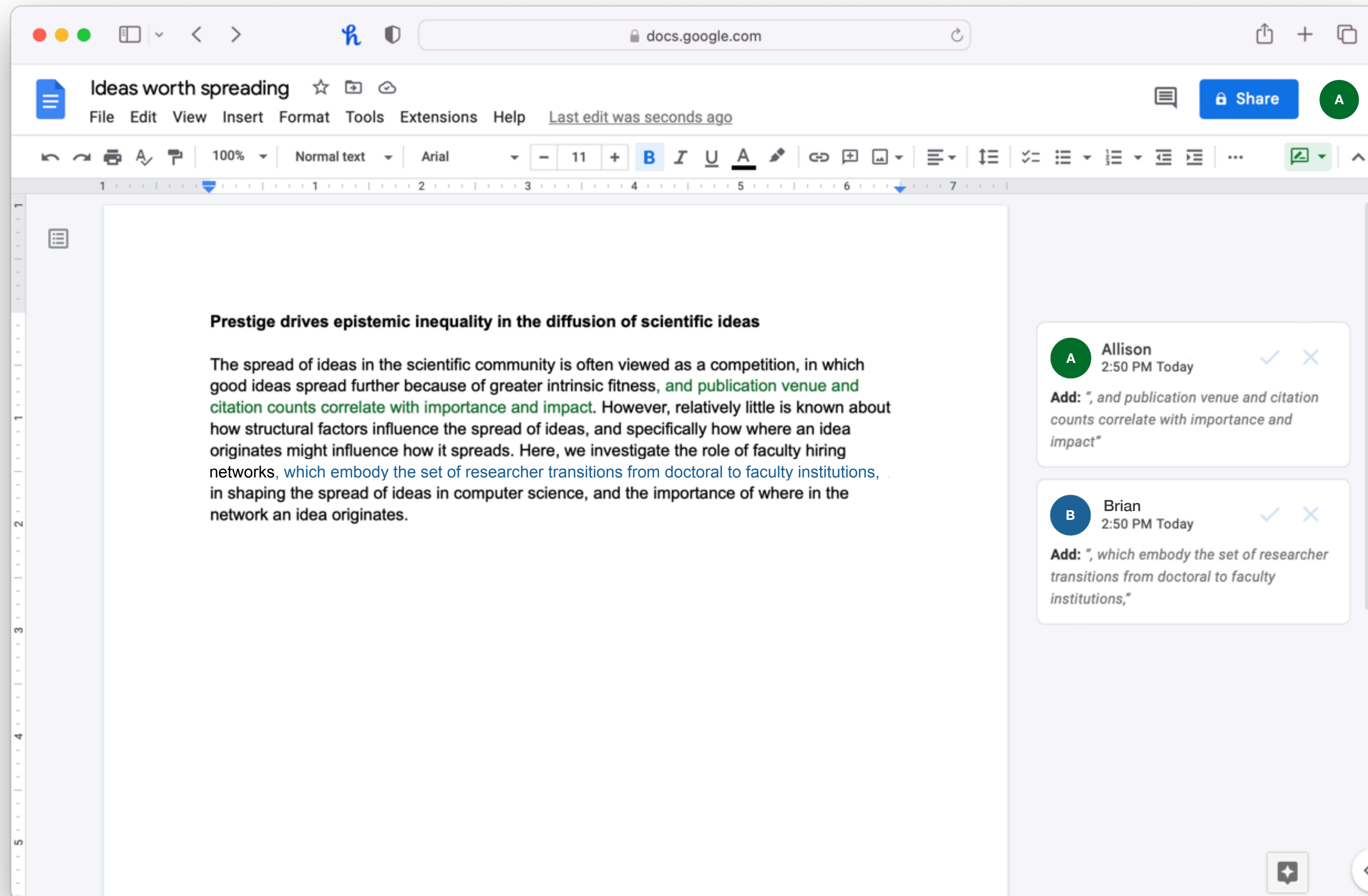
Version control records
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Collaborators can
make their changes
independently





Version control records
changes all along
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Collaborators can
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And as long as changes
don't conflict, it's easy
to merge them into
the same document

Version control definitions & takeaways

Version control is a tool that tracks changes (think unlimited undo)

With **git**, each change is called a **commit**

Complete history of commits for a particular project make up a **repository**

Repositories are synced across computers for parallel collaboration

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https://github.com/allisonmorgan/tech_toolups_git/

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Thank you!

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Videos and reference manual:

<https://git-scm.com/>

Getting started with GitHub:

<https://docs.github.com/en/get-started>

Curriculum for learning Git:

<https://swcarpentry.github.io/git-novice/>

Today's materials:

https://github.com/allisonmorgan/tech_toolups_git/