

ParEvo as a tool and a
process to explore
future pathways
for governing biological research

Overview

1. What I had hoped and expected ParEvo to be able to do
2. What we did and what happened
3. Reflections on ParEvo – a tool for exploring contested futures and complicated presents.

The Problem Space

- Governing biological research is complex and multifaceted
- “**Biosecurity**” refers to the notion of *“keeping pathogens safe from people.”* “**Biosafety**” means *“keeping people safe from pathogens.”*
- Multiple international organisations and treaties, sometimes with overlapping mandates
- A lack of progress in adapting to contemporary challenges.
- International disagreements, bureaucratic and practical limitations, stalling of new approaches

Guiding Objectives

*(or my projected
theory of change)*

- Create a process to explore problems and opportunities, as identified by expert stakeholders
- Gain a better understanding of how expert stakeholders in the field see the limits of what is possible (and how) and desirable (and why)
- Begin understanding how ParEvo can function as an “*experiment in governance*” – and how it might shift attitudes, understandings and practices.
- Explore and highlight the *non-inevitability* of future developments

The Participants

- 11 Participants. All established and mid-to-late career experts in biosecurity, biosafety and bioethics
- Participants were selected on basis of seniority and participation in policy and governance fora. Employed by governments, universities and defence organizations. Identified through networking
- Mixture of technical/scientific expertise and policy expertise
- Majority were US or UK citizens, with 1 Canadian citizen and 1 Australian. 3 women, 8 men
- Motivations mixed: Experimental approach, interest and frustration

The Seed Story

- “Open possibilities” and macro scale
- Significant catalyst event, but no detail on projects, process (or goals or limits)
- Some suggestions towards potential actors & possible levels of interaction

In July of 2021, the leaders of the G7 states gathered in Germany for their annual summit. Their discussions focused on the need to overcome the ongoing COVID-19 pandemic, and to prepare for future public health emergencies. A number of statements and communique were published following the summit.

Alongside statements of commitment to enhancing multilateral cooperation on disease surveillance and early warning systems, the assembled leaders also noted that they would be prioritising the task of renewing and enhancing existing mechanisms for the governance of biological technology and research. A further commitment to these statements was advanced in a communique issued at the beginning of November 2021, in the run up to the delayed Meeting of States Parties of the BTWC.

The statement initially prompted mixed responses. Some leaders within the EU and US were enthusiastic about the possibility of enhanced international cooperation, while some diplomats questioned who exactly would take the lead on developing shared standards or overseeing compliance.

In the days immediately following the statement, many experts welcomed the commitment to rethinking the ways that institutions and governments viewed their interactions with life science research, yet there were some who remained concerned about the possible geo-political complexities of a G7 led reform of global governance of biological research in response to the COVID-19 pandemic.

What follows below are stories of what happened over the next four years, as experienced by various countries, organisations and groups. Starting with events in the six months immediately following the November 2021 communique....

The exercise: Overview

Welcome to ParEvo!

Future Pathways for Governing Biological Research

Update: The 8th iteration has now been completed and participants have all now given their evaluations of the desirability and likelihood of each surviving storyline. Three more activities are now scheduled offline: (a) a survey of all participants, (b) Focus group discussions with participants, (c) one-to-one interviews with participants. For any further information: contact [Tom Hobson tch46@cam.ac.uk](mailto:Tom.Hobson.tch46@cam.ac.uk)

Thank you for your participation in this exercise. Below you will see our evolving storylines. You are asked to select a storyline to add to, laying out what you imagine might happen in the six months following these developments.

Please read the emerging storylines. These storylines were recently generated by the participants in this multi-stage study, including yourself.

Select the storyline you most want to extend. You can add one new contribution to any of the existing storylines. It doesn't matter who wrote what. But do pay attention to continuity between the contents of the existing storyline and the content of the contribution you want to add to it. So long as there is some continuity you still have freedom to take the storyline in new directions.

Add the new paragraph, using the text box below.

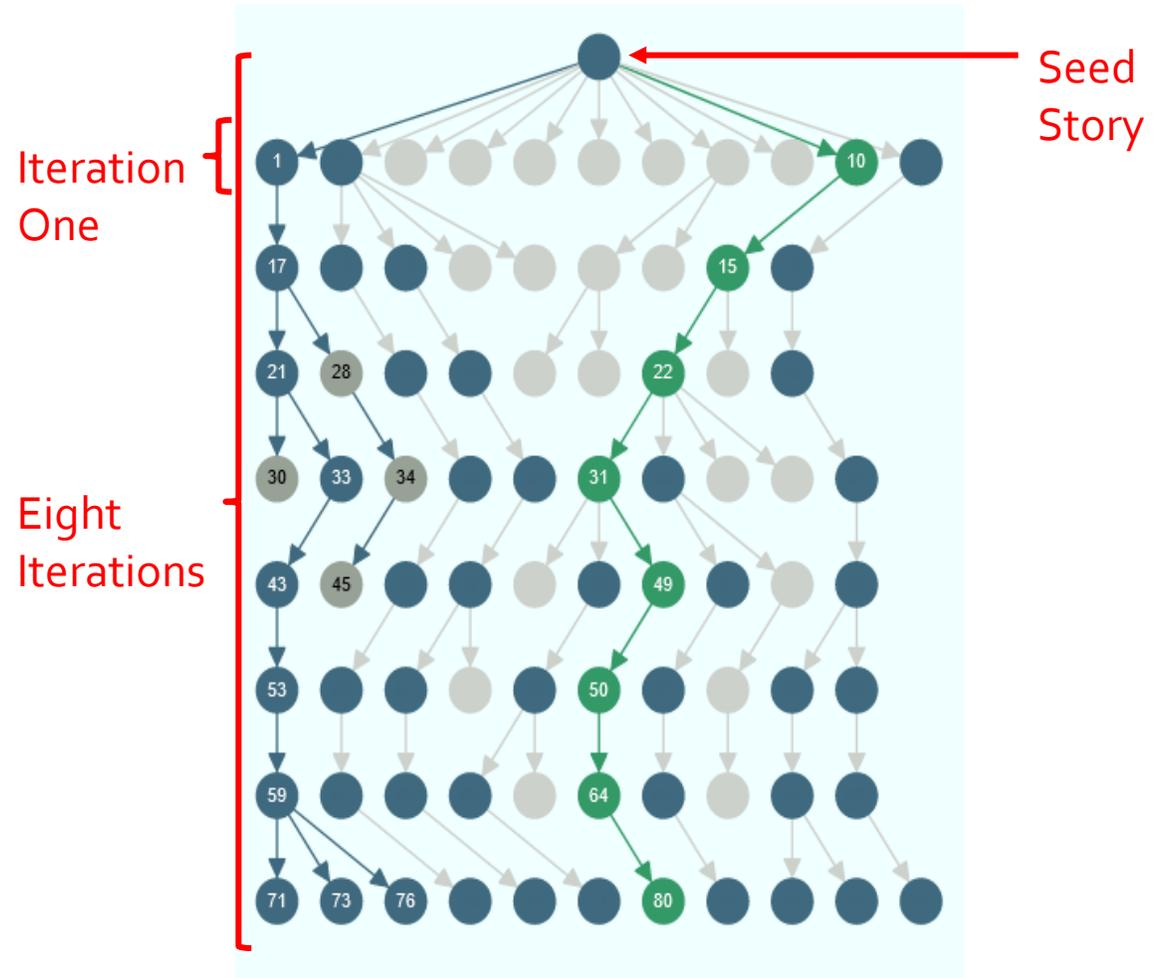
This contribution should describe what you think might have happened next, sometime in the second half of 2025.

Search

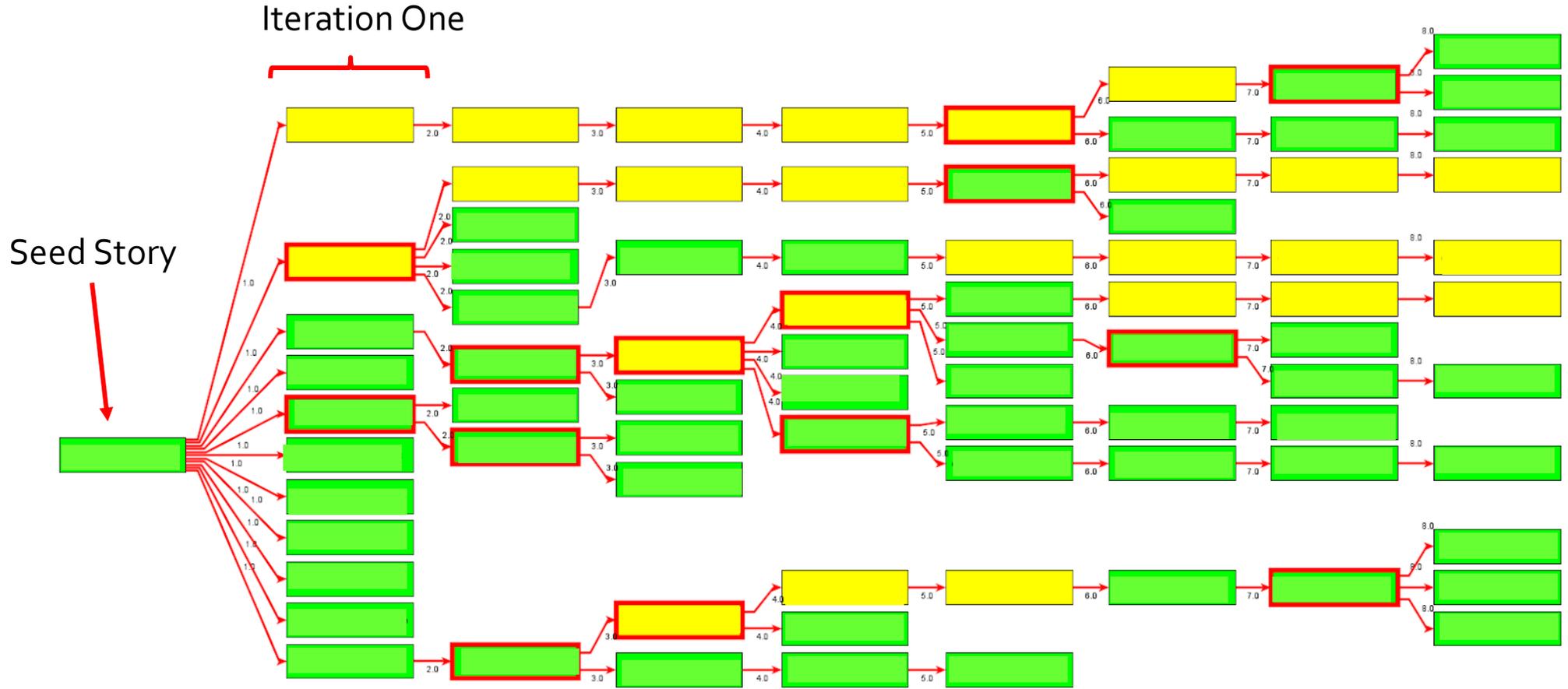
Storyline ending #71

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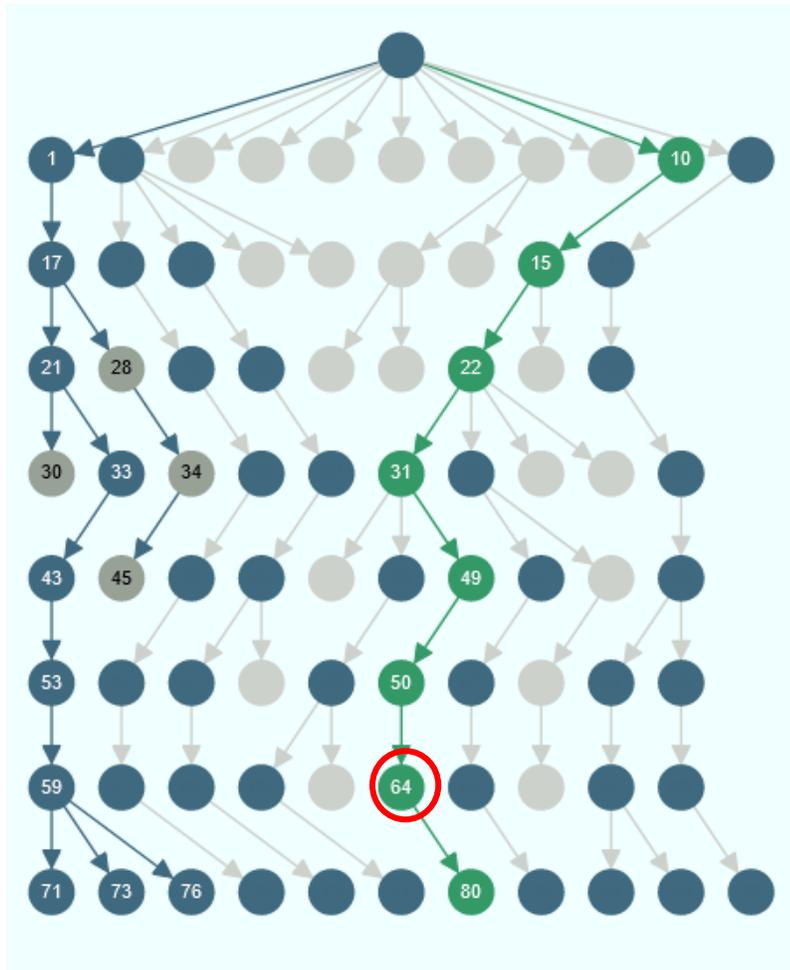


Participants contributions over time



Yellow nodes = adjacent contributions by same participant

Red boundary nodes = contributions that generated multiple new branches



What kind of content did the storylines contain?

- Storylines tended to be characterized by some “back and forth” between bigger changes and periods of stasis
- Participants proposed changes through existing mechanisms and through new (imagined) institutions
- Storylines mainly stayed within existing realm of possibility in terms of governance and political solutions
- Biggest determinants throughout were often exogenous factors and external shocks
 - *(These dictated both change and stasis)*

Actors, expertise and themes

64 The United States capitalized on the momentum of the Pandora Accords by hosting a Global Biosecurity Summit for world leaders, scientists, and biotech company leaders with the goal of creating a new international mechanism to ensure the safe, secure, and responsible research involving potential pandemic pathogens (PPP), including orthopoxviruses, influenza, coronaviruses, and Henipaviruses. Intense diplomacy before the summit between the US, China, Russia, and the EU smoothed the way for the creation of a new international organization, the Global Biorisk Management Agency (GBMA). The GBMA was charged with overseeing national implementation of the Pandora Accords, and approving research on PPPs, including biosafety, biosecurity, and dual-use considerations. Membership in the GBMA was open to all countries who met specific criteria for national biorisk management measures, such as whole-of-government biosafety and biosecurity systems. The oversight provided by GBMA helped reassure the public, politicians, and investors that the risks inherent in advances in the life sciences could be safely managed.

External events, exogenous shocks and action

22 The debate between those who favored and opposed new governance mechanisms for life sciences research grew increasingly polarized in early 2023. Then, on June 21, 2023, the Singaporean government announced its first outbreak of COVID-19 in almost a year. On June 22, Singapore announced that the outbreak was not caused by SARS-CoV-2 as initially thought, but by a novel coronavirus. Epidemiological investigation revealed that the epicenter of the outbreak was a conference center that had recently hosted an international virology conference. The index case was a professor from Indonesia who specialized in understanding why some coronaviruses posed a greater zoonotic threat than others. Genomic analysis revealed that the coronavirus in the Singapore outbreak was an engineered recombinant strain. The Indonesia government then announced that the professor had been conducting "gain of function" experiments with coronaviruses in a BSL-3 lab. By the end of June, Singapore and Indonesia reported additional cases of the new disease, dubbed COVID-23.

36 Further additional cases of COVID-23 were reported in Singapore and Indonesia during July. In Singapore, migrant worker dormitories were again found to be sites of a disproportionate number of their positive cases. International media attention focused on COVID-23 being an engineered recombinant strain. Alarmist headlines and tweets also noted that the conference had been over 200 scientists from more than 40 countries across all continents. By end August 2023 positive cases had been reported in a number of countries. Public fear turned towards anger and during September calls were made by parliamentarians and senators for a moratorium on all 'GOF' experiments. A planned IAP meeting in early November 2023 to discuss the results of the panels on alternative governance models pivoted to also discuss GOF research. The meeting report, released in December, noted a clear division on the potential benefits and risks of GOF experiments as well as continued division on the need for alternative governance models.

Characteristics of Contributions

1. Subject matter expertise – knowledge of technical and biological matters
2. Subject matter expertise – knowledge of institutional and governance matters
3. Subject matter expertise – knowledge of diplomacy and global governance
4. Worldviews & Assumptions – the limits of cooperation?
5. Worldviews & Assumptions – the primacy of state self-interest?

Types of Futures

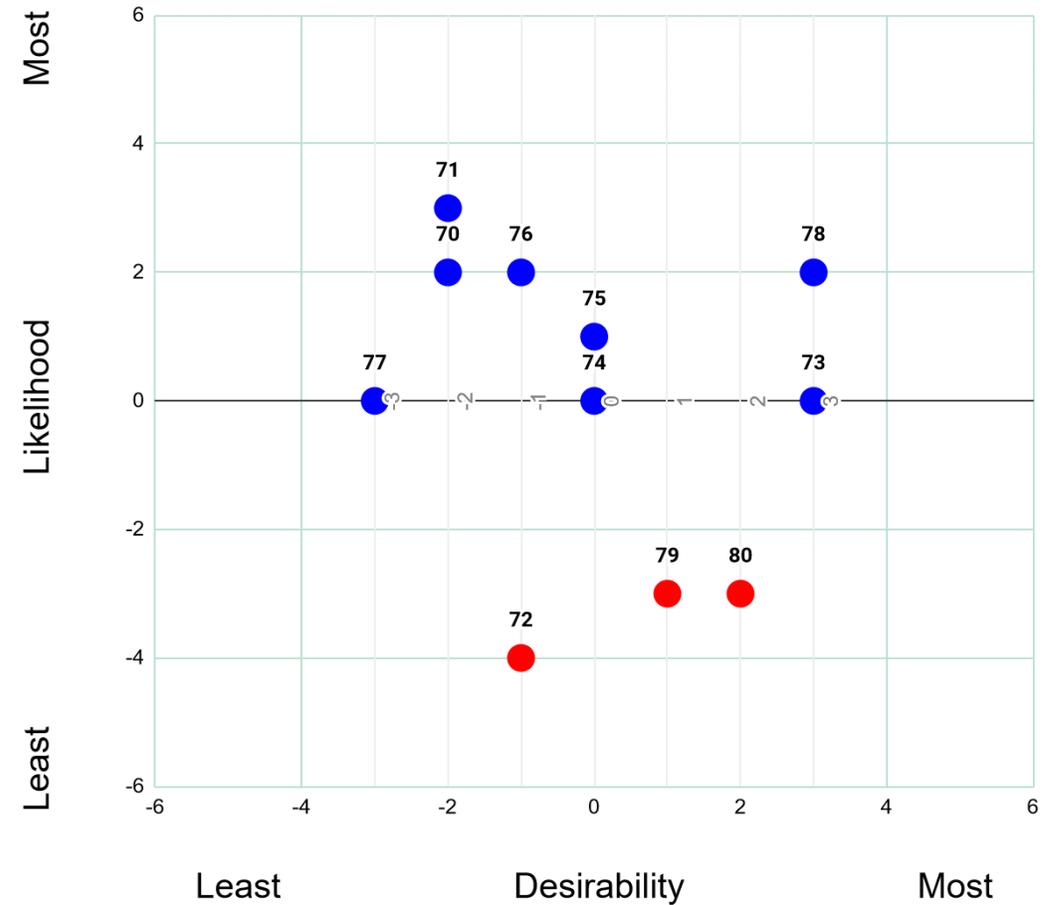
- Paradigmatic shift in how problems in biosecurity are understood and should be addressed
 - recasting of the BWC
 - formation of new international governing bodies
- Proposed shifts in the governance of life science research
 - Restrictions on GOF research
 - Increased accountability for lab leaks and incentives to report
- Geopolitics
 - Misinformation campaigns and sabotage
 - Assassination of scientists
 - Strong China/US narratives

Modes of Analysis

1. Interaction analysis
2. Likelihood & Desirability/Optimism & Pessimism
3. Hierarchical Card Sort to investigate issue types/large thematic differences
4. Storyline summarization
5. Inductive text/content coding
6. Interpretative analysis and text searching

- Participant rationale for likelihood and desirability varied widely
- Reflected disciplinary and other preconceptions
- i.e. “some institutional change occurred”
- Versus “no real significant change in how we think about this problem”
- Some focused on governance change
- Others on global situation

ParEvo exercise participants' assessments of storyline Likelihood & Desirability



Utility for participants

- While feedback responses suggest participants thought futures were “pessimistic”
- Identification of novel modes for governance progress
- Identification of failure points
- Reference points to construct “how to get here / how to prevent this” discussions and exercises
- Provides insight into how co-participants understand problems and solutions

After the Exercise...

- Workshop discussions
- One to one interviews
- Ongoing interaction
- Utilizing the storylines as an ongoing exploratory reference point for further work with cohort and with others

- *Contestable and collaborative futures*
- *Shaping policy through experiments in governance*

Measuring Against Objectives

- Create a process to explore problems and opportunities, as identified by expert stakeholders
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