

The Dilemma Game:



Microbial Matters

Rules of the Game:

Dilemmas are played one at a time.

You can play all the dilemmas or select a few for your game.

1. Think through the dilemma and choose your response.
2. Discuss your choice with the group.
3. Keep or adjust your response based on the discussion.

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The original Dilemma Game was developed by Erasmus University Rotterdam.

1. Honesty or Encouragement



Your collaborators [who are also your friends] have prepared an artistic project that has cost them a great deal of time and energy, and they are very proud of it. When you see their presentation, you realize that the project is based on a romanticized view of microbial life and overlooks a substantial body of literature that challenges its underlying assumptions. If you point this out, you risk undermining the entire concept of the project.

Possible responses

- A. Avoid taking on the role of a killjoy, even though this may expose them to harsh criticism in the future.
- B. Express your doubts and offer to help them revise the project, even though this may jeopardize your own duties and deadlines.
- C. Criticize the concept and suggest that the project should remain within an artistic context, as it is not sufficiently grounded in scientific debates.
- D. Suggest that the entire project be stopped or postponed, even though this may complicate the funding arrangements.

2. Science Wars Redux

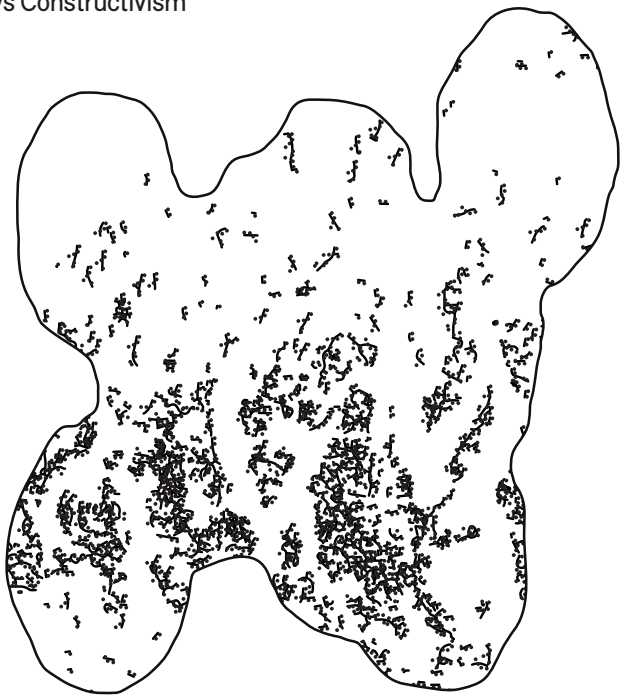


In an interdisciplinary gathering, a scientist colleague is unaware of their own scientism, speaking and acting as if they have epistemic authority over the participants from other disciplines. This makes true dialogue impossible. What do you as a participant from the social sciences, humanities, or arts do?

Possible responses

- A. Ignore their attitude, and try to shift the discussion back to more pluralistic territory.
- B. Meet their energy with the same, even at the risk of the discussion devolving into epistemic turf war.
- C. Make a joke in response, that makes it clear that their approach is inappropriate to the context while avoiding further discussion about it.
- D. Respond calmly by addressing the issue directly and openly, hoping for an enriching discussion about scientism and epistemic pluralism but risking escalation or derailment.

3. Naturalism vs Constructivism



In an interdisciplinary project team, the natural scientists approach microbes as pre-existing entities in the world, and the social scientists approach microbes as entities constructed through science, politics, traditional knowledges, and other means. This fundamental incommensurability prevents the team from having a shared object of study, and all but guarantees that results separate along disciplinary lines and do not enter into dialogue. As a social scientist member of the team, what do you do?

Possible responses

- A. Try to acknowledge this incommensurability directly in discussion, with the likelihood of being misunderstood, dismissed, and/or ridiculed by the natural scientists.
- B. Ask the project team leader to facilitate a discussion on this topic, to encourage more mutual understanding about the importance of acknowledging and attending to diverging epistemologies.
- C. Not do anything, preserving your energy to focus on what you have control over: making the best possible social scientific work.
- D. Direct your part of the project to focus on the diverging epistemologies as part of the analysis / research output, investigating the value of the boundary object that allows for divergent understandings.

4. Valuing art as knowledge creation

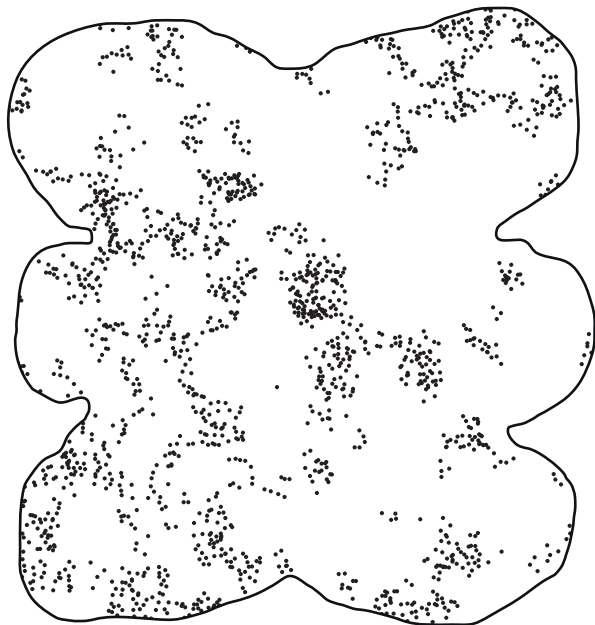


In a workshop among social scientists, natural scientists, and artists, many of the academics have difficulty seeing artistic practice as being able to contribute to research and knowledge creation, and seem only able to understand it as a form of science communication or dissemination. This reproduces epistemic hierarchies between academia and other practices and creates a missed opportunity for mutually transformative encounters. As the workshop organiser, what do you do?

Possible responses

- A. Let the artists fend for themselves, believing the most convincing arguments will come from them directly.
- B. Intervene in the discussion to identify the pattern, at the risk of alienating the academics and/or derailing the planned programme timetable.
- C. Use this experience as a prompt to redesign the workshop, to focus more explicitly on how the arts can facilitate new forms of transdisciplinary collaboration and knowledge creation, even though it won't change anything about this time.
- D. Encourage the artists to lean into their approach in the workshop, showing their value rather than trying to convince through telling.

5. What Counts as Evidence?

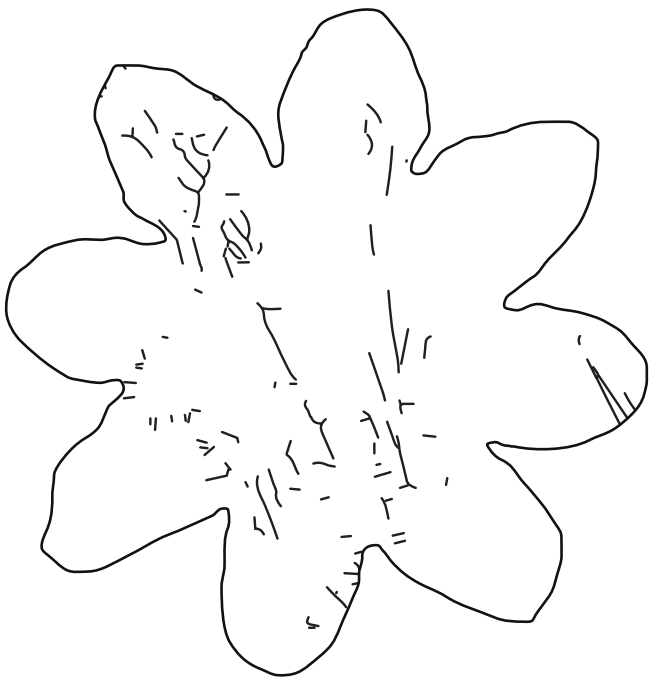


Your consortium has spent six months studying microbial life in urban soils. The microbiologists have sequencing data showing patterns in microbial diversity, while the ethnographers have interviews showing that local gardeners understand soil health through different forms of observation and experience. The social scientists want to include both forms of knowledge equally in the main publication, but some team members argue that different types of evidence should play different roles in a scientific paper. The team must decide how different forms of knowledge should be represented in the project's outputs.

Possible responses

- A. Present experimentally validated findings as the main results, with qualitative insights as context.
- B. Present scientific and qualitative findings side by side without ranking them.
- C. Explain how different disciplines define and evaluate evidence.
- D. Produce different outputs for different audiences and purposes.

6. Whose Goals Come First?



The project on antimicrobial resistance in Africa is approaching its final year. The microbiologists need additional laboratory experiments to complete a high-impact paper. The artists need time and budget to develop an exhibition for an international audience, and the social scientists want to conduct follow-up interviews after the exhibition opens. The remaining budget only allows one of these activities to be fully funded.

Possible responses

- A. Prioritize laboratory experiments because they may strengthen future research opportunities.
- B. Divide resources equally among the different project activities.
- C. Redirect resources toward the activity with the greatest expected policy impact.
- D. Allocate remaining funds to community-based interventions related to AMR prevention.

7. Collaboration or Critique?

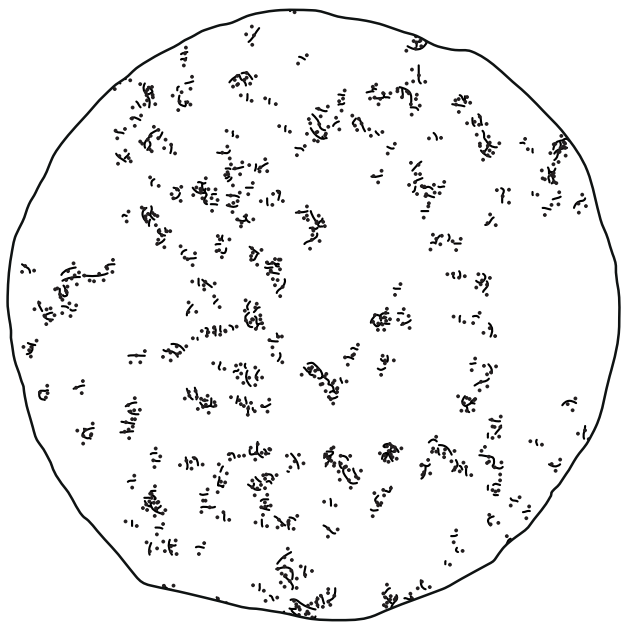


The social scientist writes a paper arguing that laboratory research practices unintentionally reinforce problematic assumptions about hygiene and cleanliness. Several microbiologists feel criticized and worry that publishing the paper under the project banner could damage relationships within the team. The consortium must decide how to handle internal critique.

Possible responses

- A. Revise the paper to reduce tensions within the collaboration.
- B. Publish the critique independently from the consortium.
- C. Publish it jointly while inviting responses from other team members.
- D. Treat critical reflection as an essential outcome of the collaboration.

8. Showing the Microbes

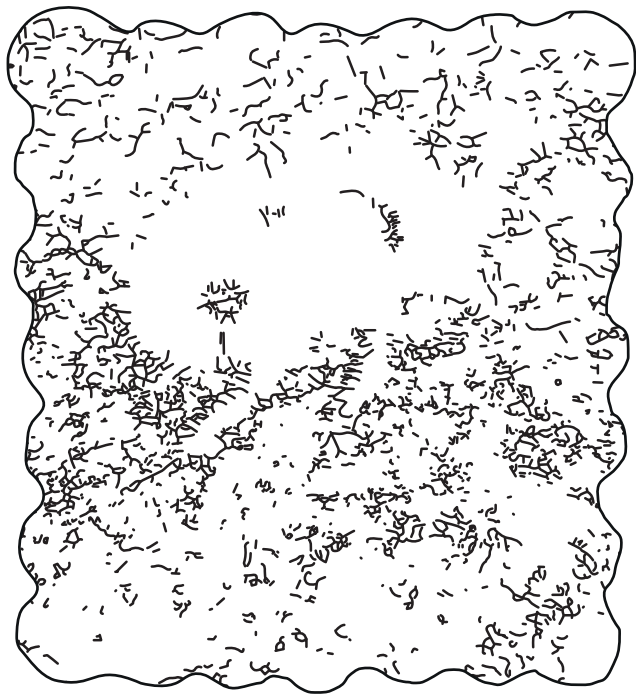


The artist creates an installation in which microbes appear as agential collaborators with humans. The microbiologists appreciate the creativity but worry visitors may misunderstand microbial behaviour and attribute intentions that microbes do not possess. The exhibition opens in three weeks.

Possible responses

- A. Keep the installation unchanged, emphasizing artistic interpretation over literal representation.
- B. Revise the installation collaboratively to address multiple perspectives.
- C. Keep the installation but add interpretive materials exploring different ways of understanding microbes.
- D. Present artistic and scientific perspectives side by side, without privileging either as the definitive account.

9. Invisible Contributions

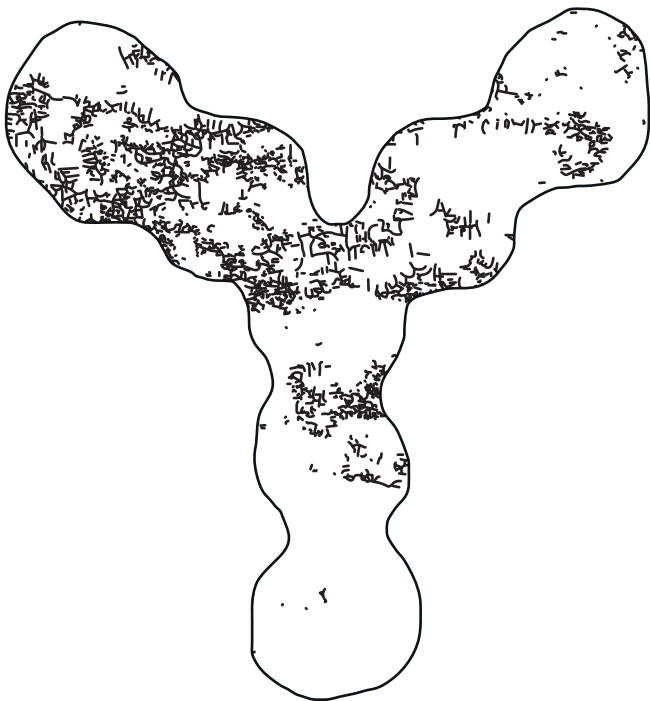


The project's annual report highlights new laboratory discoveries, while the artist's workshops and ethnographers, community engagement receive only brief mentions. Some team members feel their contributions are being treated as outreach rather than as knowledge production. The project leader must revise the report.

Possible responses

- A. Focus primarily on scientific achievements because funders expect measurable research outcomes.
- B. Give equal prominence to all forms of contribution.
- C. Explain how different disciplines contributed to creating knowledge.
- D. Produce different reports highlighting different types of project outcomes.

10. Planning versus Exploration

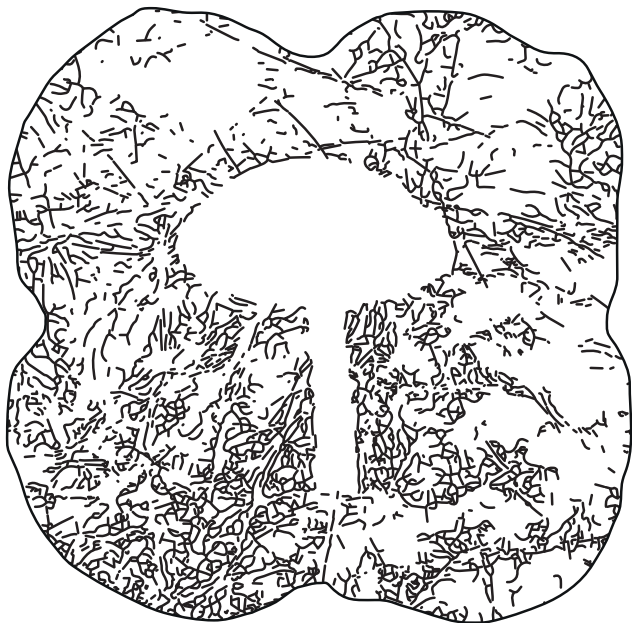


Halfway through the project, unexpected conversations with community participants reveal that local fermentation practices are more significant than the original research questions anticipated. The artist and anthropologist want to change direction, but the microbiologists worry this will jeopardize agreed milestones and deliverables. The steering committee must decide whether to adapt the project.

Possible responses

- A. Continue with the original research plan.
- B. Redesign the project around the emerging findings.
- C. Allocate resources between planned activities and new directions.
- D. Request approval from the funder for a revised project plan.

11. Advocacy or Neutrality?



The team discovers evidence suggesting that antimicrobial resistance disproportionately affects marginalized communities in the study region. Some researchers want the project to publicly advocate for policy change, while others argue that researchers should present evidence without taking political positions, especially when working in another country. A public press conference has already been scheduled.

Possible responses

- A. Present findings without policy recommendations.
- B. Publicly advocate for specific policy changes.
- C. Present several policy options without endorsing one.
- D. Invite community representatives to help frame the public message.

12. Granting or Not Granting Agency to Microbes?



A project on the human microbiome argues that microbes should be understood as active participants in shaping human health. Some researchers worry that giving microbes “agency” is only a metaphor and could confuse audiences. Others argue that recognizing microbial agency challenges human-centred approaches to health and ecology. The team must decide how to phrase the idea that microbes participate in collective life.

Possible responses

- A. Use microbial agency only as a metaphor for public engagement.
- B. Present microbes as active partners within ecological and biological systems.
- C. Avoid the language of agency and focus on measurable microbial effects.
- D. Invite audiences to debate what forms of agency microbes might have.

13. Following the Unexpected or Keeping the Course

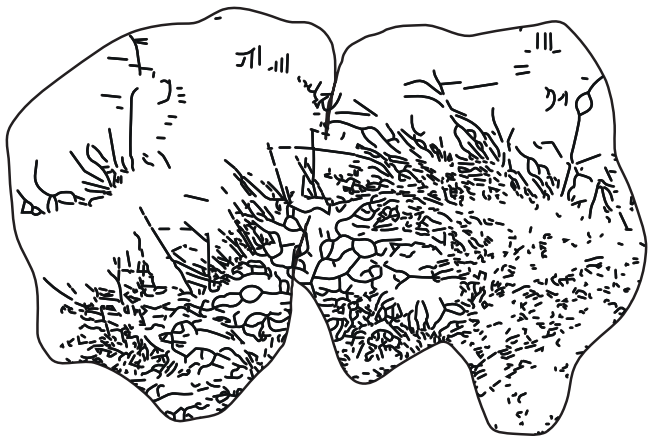


A long-term collaboration with farmers reveals that local fermentation practices produce microbial ecosystems that challenge existing scientific assumptions. The researchers now have a choice: continue generating data using established methods or redesign the project around the knowledge emerging from these practices. Changing direction may produce richer understanding but could make the project harder to evaluate using conventional scientific criteria.

Possible responses

- A. Continue with the original research design to meet agreed objectives and maintain comparability with planned research.
- B. Expand the current project scope to incorporate the emerging questions and perspectives.
- C. Develop a separate follow-up project to explore the unexpected findings in greater depth.
- D. Reconsider the project's underlying assumptions, even if this challenges conventional measures of success and may not be recognized by funders.

14. Experimenting on Ourselves?



An interdisciplinary microbiome research team studies how microbial exposures influence human health. The researchers consider conducting self-experiments, and possibly involving family members, in which they intentionally modify their microbiomes through diet, microbial supplements, or environmental exposure to generate preliminary insights. Some team members are interested in the embodied and experiential dimensions of the experiment, while others question whether personal experiences can produce meaningful knowledge and whether involving close relations creates ethical concerns around consent and responsibility. The team must decide whether and how self-experimentation can contribute to legitimate interdisciplinary knowledge.

Possible responses

- A. Conduct self-experimentation with researchers and their family members, treating intimate embodied experiences as a legitimate source of exploratory knowledge.
- B. Conduct self-experimentation only with researchers themselves, excluding family members to reduce concerns about consent, vulnerability, and personal relationships.
- C. Avoid self-experimentation altogether, relying only on established research designs involving recruited participants and formal protocols.
- D. Develop a methodological reflection on unavoidable self-experimentation, arguing that researchers are always entangled with their objects of study and that the key question is how such involvement is controlled, documented, and acknowledged in official research outputs.