Reflection Questions for Frame Reflection Lab: Views of Science

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For the original of this file and more information about the Frame Reflection Lab tool visit: https://vu.nl/en/about-vu/more-about/frame-reflection-lab-tool-athena-institute

In order to increase the impact of the Frame Reflection workshop, we highly recommend complementing them with reflection exercises prior to and/or after the workshop. The reflection exercises that you use should align with your learning goals and help embed the workshop into your context.

Based on our experiences with over 250 participants - including Bachelor's, Master's and PhD students - we recommend making reflection exercises as concrete and specific as possible, and give participants clear handles on the length of their answers. We have drafted these reflection questions that can serve as inspiration for designing your own reflection approach.

Questions prior to the Frame Reflection Lab workshop:

- What do you consider good scientific knowledge? Why?
- How do you think scientific knowledge should be generated in order to be robust?
- How do you think science can or should contribute to societal issues? Why?
- How do you think scientific knowledge should be generated to contribute to societal issues? Who should collaborate in doing so, and how should this collaboration be shaped?

Questions after the Frame Reflection Workshop:

About positioning, views of science, values and assumptions:

- With which of the characters (Anthony, Ellen, Jane, and Marc) did your dialogue group mates (including yourself) align each the most and why? Highlight two assumptions that you discussed during the group exercise (see the figure in the bottom of the Essay A assignment) to motivate your answer. You may use these assumptions to highlight differences or commonalities in your views, but please avoid term-dropping here, so if you mention for example 'objectivity', please also explain what you mean by that, e.g. based on how science is taught to you in your Bachelor education. See the figure below again as reference.
- How does your view relate to the views of Anthony, Ellen, Jane, and Marc? Rank from 1 to 4 who of them you feel most (1) and least (4) similar to. And

explain in a few sentences why. What do you think causes these "preferences"?
- What did you take from the group discussion about views on good scientific knowledge and the papers that you read and discussed from each other's fields? What surprised you? To what extent did you and your team members agree? What caused differences of opinion/ views? And how did you deal with those? What new insights did the discussion yield for you?

About science for societal relevance:

- What did you take from last meeting's group reflection dealing with scientific knowledge for societal issues? To what extent did you and your team members have different views or opinions? What do you think caused these differences? And how did you deal with them? How was your own view or opinion affected by the discussion?

About collaboration:

- Think back of the exercise that you did with the videos during the first lecture! (± 100 words) Think back of one moment in your group work, in which one of the above elicited differences or commonalities in views came up the most and became somehow problematic or challenging. Describe the happening (e.g. a discussion, conversation, stress moment, eureka moment, etc.) and try to explain where and why the differences or commonalities in assumptions, views of science, and/or views of science communication were at stake.
- How do you think it would go down if Anthony, Ellen, Jane, and Marc collaborated on a project? What would be your advice to them? What can you and your team learn from that advice?
- In this course you have collaborated with teammates from different disciplinary backgrounds. How do their fields and your own relate to the views of science represented by Anthony, Ellen, Jane, and Marc from the Frame Reflection Lab workshop? How did your different views of science affect the collaboration? How did the workshop affect your understanding of your teammates and your collaboration?

Connecting it to an 'Interdisciplinary Journal Club' exercise[1]:

- You've read different papers brought in by your fellow students with different disciplinary backgrounds. What did you think of these papers? How do they differ from each other? What are the implications of these differences? What do they tell you of your team members' views on good scientific knowledge? How do they relate to the views of Anthony, Ellen, Jane, and Marc?

[1] for more information see: Horn, A., Urias, E. & Zweekhorst, M.B.M. Epistemic stability and epistemic adaptability: interdisciplinary knowledge integration competencies for complex sustainability issues. Sustain Sci (2022). https://doi.org/10.1007/s11625-022-01113-2