

Appendix A: Course Outline and Readings

1. Detailed schedule:

Sept	Class	In-class activities	Assignments	Dead-line	Literature	Prep
Sept 10	1. Intro	<p>9-9.30 Introductions</p> <p>9.30-10 'What is real?' exercise</p> <p>10-10.30 What is real, discussion</p> <p>10.30-11.00 Card game</p>			Oberg and Campbell, 2019	<p>Virtual 'what's real' exercise</p> <p>Virtual card game</p>
Sept 16			<p>Pre-class: Write a short reflection: in what way does your definition of 'real' matter for your research, if at all?</p> <p>Pre-class: Read one chapter in Collins and Pinch, identify claims from card game that fit, prepare (group)</p>	12pm		

Sept 17	2. Your perceptio n of what science is	9-9.15 Does it matter how we define 'real'? 11.35-12.00 Reflection and discussion	Post-class: Peer- review of the other presentations		Selected chapters in Colin and Pinch, 2012	
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<p>Sept 23</p>			<p>Pre-class discussion board: List 3-5 topics/issues/ 'things' that you believe most everyone in your field would agree is interesting, relevant and important to study.</p> <p>Are there topics that are:</p> <p>Interesting and relevant but not meaningful?</p> <p>Interesting and meaningful but not relevant?</p> <p>Relevant and meaningful but not interesting?</p> <p>All - Read the introductions in both books</p> <p>Chapter 2 in Elliot</p> <p>'What should we</p>			
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<p>Sept 24</p>	<p>3. What values have a place in science?</p>	<p>9-9.30 Review of responses to interesting, relevant and meaningful</p> <p>9.30-10 The value-free ideal</p> <p>10-10.15 Pause</p> <p>10.15-10.45 How might science be influenced by values and which ones are acceptable</p> <p>10.45-11.15 What does it mean to be objective?</p> <p>11.15-12.00 Prep for case-studies: what</p>			<p>Elliot, 2017; Douglas 2015</p>	
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Oct 1	4. Central values in your research field	<p>9-9.20 Discussion about the podcast</p> <p>9.20-9.40 What are epistemic values?</p> <p>9.40-10.00 What other types of values are there? Start with brainstorm: list 10 things you value.</p> <p>10.00-10.15 Pause</p> <p>10.15-10.45 About value-judgements made in the research process and the inductive gap</p> <p>10.45 -11.30 Case-study selection: break-out groups</p>			Elliot, 2017; Douglas 2015	
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Oct 8		9-10.30 Seminar about reading 10.30-12.00 Work on case-			Fleck 2012	
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<p>Oct 15</p>		<p>9-10.30 Seminar about reading</p> <p>10.30-12.00 Case-studies: methods</p> <p>(note: Second Edition QUALITATIVE INQUIRY & RESEARCH DESIGN Choosing Among Five Approaches. Available as pdf on Academia.edu)</p>	<p>Reflect on the inductive risk (see Elliot)</p> <p>Is it a case of type 1 or type 2 error?</p> <p>Would the potential consequences of being wrong: put people's lives at risk? (cf the l'Aquila case)</p> <p>shift the weight of evidence in a cost- benefit analysis? (cf. the Love Canal case)</p> <p>require a moral judgement (cf. the vaccine case)</p> <p>On the discussion board, provide a short and condensed description of the case you have chosen to analyze followed by a</p>		<p>Jasanoff, 2007</p>	
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Oct 22		9-9.15 What's up the next few weeks 9.15-12 Case-study presentations	Case-study: Aim and Method draft			
Oct 29		9-10.30 On vocabulary 10.30-12.00 Work on case-studies	Respond to questions on discussion board See email document for information		Schön, 2002	
Nov 5		9-9.45 The role of dissent in science 9.45-10.30 The merchants of doubt and illegitimate dissent 10.30-12.00	Up to 30 minutes per person presenting one chapter each.		de Melo Martin and Intemann , 2018, Chapters 1-5	
Nov 12		9—9.45 Boundary work 10.30-12.00 Review other case-study drafts	Respond to questions on the discussion board Case-study drafts		de Melo Martin and Intemann , 2018, Chapters	

Nov 19		9-9 How to handle illegitimate dissent? 10.30-12.00 Oral feedback on peers' case-studies	Respond to questions on the discussion board: Melo Martin and Intemann vs Oreskes and Conway Written peer-feedback on Case-study drafts		Oreskes and Conway, 2010	
Nov 26		Case-study presentations	Final Case-study reports Response to			
Dec 3		Seminar: Implications for my academic practice	Reflection paper			

2. Assessment:

Assignment	Description	%
Active participation	Respond to questions on discussion board, be prepared for class, contribute constructively to in-class discussions	40
Reflection	200 to 500 word long, written in plain	2
Case-study aim and method draft	One page	2
Case-study draft	Max 10 pages	2
Peer-review	Written feedback on other case-study	2
Case-study reports	Max 6000 words	40
Reflection paper	500 to 1000-word reflection on implications of what you have learned in class have for your academic practice	10
Oral presentation	Presentation of case-study	2

3. Readings (in the order discussed in the seminars):

Collins, H. M., & Pinch, T. (1993). *The Golem: What You Should Know About Science*. Cambridge University Press.

De Melo-Martin, I. & Intemann, K. (2018). *The fight against doubt: how to bridge the gap between scientists and the public*. New York, NY: Oxford University Press.

Douglas, H. (2009). *Science, policy, and the value-free ideal*. Pittsburgh, Pa: University of Pittsburgh Press.

Douglas, H. (2017). Science, Values, and Citizens. In M. P. Adams, Z. Biener, U. Feest, & J. A. Sullivan (Eds.), *Eppur si muove: Doing History and Philosophy of Science with Peter Machamer: A Collection of Essays in Honor of Peter Machamer* (pp. 83–96). Springer International Publishing.

Elliott, K. C. (2017). *A tapestry of values: An introduction to values in science*. New York, NY: Oxford University Press. doi:10.1093/acprof:oso/9780190260804.001.0001

Fleck, L. (1979). *Genesis and development of a scientific fact*. London, UK; Chicago, IL: Chicago University Press.

Jasanoff, S. (2003). Technologies of Humility: Citizen Participation in Governing Science. *Minerva*, 41, 223–244. <https://doi.org/10.1023/A:1025557512320>

Katic, G. (2020). The Science Wars. *Cited Podcast*. Retrieved December 5, 2020, from <https://www.citedpodcast.com/podcast/1-the-science-wars/>

Schön, D. A. (1993). Generative metaphor: A perspective on problem-setting in social policy. In A. Ortony (Ed.), *Metaphor and Thought* (2nd ed., pp. 137–163). Cambridge University Press. <https://doi.org/10.1017/CBO9781139173865.011>

Collins, H., Evans, R., Durant, D., & Weinel, M. (2020). *Experts and the Will of the People: Society, Populism and Science*. Palgrave Pivot. <https://doi.org/10.1007/978-3-030-26983-8>