

This semester, we take a systematic dive into concepts of Research Justice. This framework emphasizes that science is done within a social context, and therefore upholds and propagates the many injustices present in society unless active efforts are made to prevent this.

We explore the history of Science as an idea in cultures around the world, and discuss its place in society today. We challenge several key assumptions of contemporary institutional science, such as:

- Can a human investigator be completely objective? What are the consequences of implicit bias? How can it be mitigated?
- Does data always have to be numerical? What if we have not yet devised the appropriate metric for the question at hand?
- How is Diversity different from Equity and Inclusion? How can we create not just diverse, but equitable and inclusive workspaces? How does this affect the quality of Science?
- Can science be apolitical? What are the consequences of acting as though it is?
- What power and privilege do we hold as institutional researchers? How can we use it to craft a more just and equitable society?
- Who gets to participate in the scientific process? What are the limitations of current “outreach” efforts, including Citizen Science?

In addition to peer-reviewed literature from the fields of education studies, neuroscience, sociology and history of science, we draw extensively from articles and blog posts by community organizations that focus on democratizing the scientific process. Using a workshop model, participants will be equipped to build a plan to implement principles of research justice in every aspect of their work.

	Date	Guiding Questions	Suggested Media	Host
1	02/12	<p>What are our goals as a community this semester?</p> <p>How will we create a just and inclusive environment in this group?</p> <p>Situated Knowledge -</p> <p>How does our context impact the scientific questions we ask?</p> <p>Sign up for remaining sessions</p>	<p><u>Watch:</u> Research Justice Webinar (youtube)</p> <p>Science with a capital “S” by Leila McNeill</p> <p>Science Under the Scope: Putting Science in Perspective by Sophie Wang</p> <p>The Consequences of Curiosity by Alexis Takahashi</p>	Mila Chadayammuri
2	02/19	<p>How does the military-industrial complex benefit from astrophysics research?</p> <p>What military applications do we aid with our research?</p> <p>What is the cost in human lives?</p>	<p>Memoirs of a Grant Writer: Uncovering the Military-Academic-Industrial Complex by Alexis Takahashi</p> <p>Institutional Conflicts of Interest in Academic Research by David Resnik</p>	Rebecca Charbonneau
3	02/26	<p>EIJC @ ADRF</p> <p>Panel: Working Together Towards A More Just and Inclusive CfA</p>	Join the ADRF zoom call at 9am!	Participants: Christine Benoit, Daniel Castro, Doug Finkbeiner, Karin Oberg, Bryan Terrazas, Floor Broekgaarden and Harshil Kamdar
4	03/05	<p>What does it mean to “decolonize science”?</p> <p>Whose voices are heard in STEM?</p>	<p>Decolonization is not a Metaphor By Eve Tuck and K. Wayne Yang</p> <p>Decolonizing Astronomy (Or,</p>	Kelly Blumethal + Lynn Carlson

		<p>How can we ethically do astronomy in e.g., Hawai'i (TMT)? Chile (GMT)? Africa (SKA)? India (LIGO-India, GMRT)?</p>	<p>How to Do Things with History) Lecture by Professor of History Prashant Kumar of Haverford College (youtube)</p> <p>How Western Media's False Binary Between "Science" & Indigenous Rights Erases Native People from Citations Needed Podcast</p> <p>Dismantling the divide between Indigenous and Scientific Knowledge by Arun Agrawal</p>	
5	03/12	<p>What counts as data? How do the ways we perceive data influence our interpretations?</p> <p>Data inequalities → we know least about the least represented.</p> <p>What about "data" about department climate? About whether a community wants a telescope? Is the majority opinion the correct metric when a key stakeholder is a marginalised community?</p>	<p>The Golem: What You Should Know About Science Collins & Pinch 1998. Pages 52-57.</p> <p>HCO Climate Survey (pdf)</p> <p>Polling Hawai'ians on TMT</p>	Chen Chen
-	3/19	No EIJC		
6	03/26	<p>Ethics of the peer-review process</p> <p>The case for double-blind review panels, and the issue</p>	<p>Recommendations of the Working Group on Anonymizing Proposal Reviews</p> <p>Word Embeddings Quantify</p>	Igor Chilingarian

		with the anonymous journal review system	100 Years of Gender and Ethnic Stereotypes by Nikhil Garg, Londa Schiebinger, Dan Jurafsky, and James Zou	
7	04/02	Conference travel - how much is really necessary? How much do we spend on travel? What is the carbon footprint? What else could this time and money be used for?	Greening the meeting by Benjamin Lester, Science (2007) A Space Physics Paradox: Why has increased funding been accompanied by decreased effectiveness Executive summary (pages 1-6) Green AI by Schwartz et al (2019)	No meeting - please read at your own leisure!
8	04/09	What is the link between science and science policy? The anthropological framework of four world-views (the general public, bureaucracies, activists and chiefs) - importance of physicists writing op-eds and consulting on policy	Ethics, Physics and Public Policy by Tina Kaarsberg Ethics: The Failure of Positivist Science by Yvonna S. Lincoln, Egon G. Guba The Physics, Biology and Environmental Ethics of Making Mars Habitable by Christopher McKay and Margarita Marinova Containing the Atom: Sociotechnical Imaginaries and Nuclear Power in the United States and South Korea by Sheila Jasanoff	Howard Smith
9	4/16	Guiding questions: How has scientific practice played a role in the invention of the gender binary? How do dominant	3 short slideshows reviewing the main messages of seminal academic books on gender+race theory: 1. A racist history of gender norms in the US (instagram) 2. The invention of the sex	Bryan Terrazas

		<p>ideologies of colonial/imperial powers affect scientific practice?</p> <p>How were the ideas of race and gender co-developed throughout the 19th/20th centuries?</p> <p>How might our present-day practice of astronomy be influenced by ideology relating to the gender binary?</p>	<p>binary (instagram)</p> <p>3. The racist history of the sex binary (instagram)</p> <p>15 min video of Alok speaking in 2019 (youtube)</p>	
10	04/23	<p>What is the deficit model of education? What are our alternatives?</p>	<p>Finding the plot in science storytelling in hopes of enhancing science communication PNAS (2017)</p> <p>How can we use the 'science of stories' to produce persuasive scientific stories? Nature (2017)</p>	<p>SED-Erika W. and Mary D</p> <p>Emily Margolis</p>
11	4/30	<p>What does it mean to be inclusive? What more do we have to do?</p>	<p>Reimagining the STEM pipeline by Stacy-Ann A. Allen-Ramdial & Andrew G. Campbell</p> <p>Diversity and Inclusion are Not Enough by Benjamin D. Reese</p> <p>Tsui, L. Effective Strategies to Increase Diversity in STEM Fields: A Review of the Research Literature. <i>The Journal of Negro Education</i>, 76(4), 555-581 (2007).</p>	<p>Anna Rosen</p>

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		<p>What is the link between science and social justice?</p> <p>What is the role of the university in their community? What role should a university or academic institution have in local activism?</p>	<p>Science and Social Justice in Practice by Free Radicals</p> <p>Teaching Social Justice in the Physics Classroom, part 1 by Moses Rifkin (please also see parts 2-4, linked in the article)</p>	
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