

## LESSON PLAN TEMPLATE:

<b>Name of the class:</b>	Detecting implicit bias in academic papers (part 1) – towards diversifying Open Scholarship	
<b>Suitable context: (e.g., entry-level/ undergraduate/postgraduate)</b>	Undergraduate/postgraduate- suitable to discuss open scholarship, participatory research and the language used to promote inequality within an open scholarship sphere.	
<b>Total time: (e.g., 1 hour, 2 hours, 1 day)</b>	~ 1 hour	
<b>Pre-requisites:</b>	<p>The basic concept of Open Scholarship, especially in relation to inclusivity, participatory research, replicability and reproducibility, and its connection to Neurodiversity. Basic understanding of epistemology.</p> <p>Part 2 of the lesson can be found <a href="#">here</a>.</p>	
<b>Related resources (e.g. slides, assignment materials, lecture recordings, etc)</b>	<ul style="list-style-type: none"> <li>● <i>Interactive materials to be used in class can be accessed <a href="#">here</a>.</i></li> <li>● Lombroso, C. (1903). Left-handedness and left-sidedness. <i>The North American Review</i>, 177(562), 440-444. <a href="https://www.jstor.org/stable/25119452">https://www.jstor.org/stable/25119452</a></li> <li>● Interactive task for Activity 1 based on the above article- <a href="https://msgrose-hodge.github.io/ND/h5p-standalone-1.3.x/demo/content-example-2.html">https://msgrose-hodge.github.io/ND/h5p-standalone-1.3.x/demo/content-example-2.html</a></li> <li>●</li> </ul>	
<b>Learning outcomes:</b>	<ol style="list-style-type: none"> <li>1. To discuss and recognise researchers' implicit bias,</li> <li>2. To recognise its influence on the choice of research methods, results and conclusions</li> <li>3. To reflect on the influence it may have on public perceptions</li> <li>4. To introduce participatory research and discuss its place in open scholarship</li> </ol>	
<b>Time</b>	<b>Activity</b>	<b>Instructor notes</b>

<p>10 minutes</p>	<p><b>Introduce the topic and raise interest.</b></p> <p>Elicit students' knowledge of left-handedness and neurodiversity and public perceptions relating to these using the following questions:</p> <p><i>Are you or do you know anyone who is left-handed? How were left-handed individuals often perceived in the past?</i></p> <p><i>What is neurodiversity? What does it mean to be neurodivergent?</i></p>	<p>Monitor language used and if needed set rules on ableist language.</p> <p>Ask students how much they know about participatory research and open science.</p>
<p>10 minutes</p>	<p><b>Critical Reading</b></p> <p>Materials:</p> <ul style="list-style-type: none"> <li>● Lombroso, C. (1903). Left-handedness and left-sidedness. <i>The North American Review</i>, 177(562), 440-444. <a href="https://www.jstor.org/stable/25119452">https://www.jstor.org/stable/25119452</a></li> <li>● Interactive task for Activity 1 based on the above article- <a href="https://msgrose-hodge.github.io/ND/h5p-standalone-1.3.x/demo/content-example-2.html">https://msgrose-hodge.github.io/ND/h5p-standalone-1.3.x/demo/content-example-2.html</a></li> </ul> <p>Ask students to skim the first 3 pages of the article and identify the author's perceptions of the following groups of people:</p> <p><i>men / women / white people / people of other races / children / left-handed individuals / individuals suffering from mental health problems / individuals with criminal record?</i></p>	<p>This activity focuses on reading skills and students practise critical reading (skimming, scanning and identifying bias)– do make sure they are not reading the whole article. Ask them to skim the first parts and look for passages / expressions that show the author's attitude to the groups of people stated in the instruction.</p> <p>Ask them what they thought of the articles and the worldview presented in it.</p>

	<p>Early finishers can compare fragments they have highlighted in pairs.</p>	
<p>15 mins</p>	<p><b>Discussion</b></p> <p>Instructions and questions for discussion:</p> <p><i>Looking at the article published in The North American Review in 1903, what can you say about the beliefs the author held about the following:</i></p> <p><i>men / women / white people / people of other races / children / left-handed individuals / individuals suffering from mental health problems / individuals with criminal record?</i></p> <p><i>Do you think any of the groups have been involved in the production of this paper?</i></p> <p><i>Do you think this paper would be well-received today?</i></p> <p><i>Can you identify language that would not be used today? Why would it not be used anymore? Political correctness or avoiding discriminatory framing? Do you think terminology matters? Why? / Why not?</i></p>	<p>Discuss how the use of language frames our thoughts and entails implicit bias. Discuss objectivity and discrimination in science. Reflect on how populations have been excluded from science and how this affected the language and used to describe them. Discuss concepts such as “othering”, dehumanising and marginalisation.</p> <p>Allow space for reaction and if they are very negative, reflect on why this article provokes strong emotional reaction.</p> <p>Instructors should ask their students to consider implications of language culture and ask students to discuss the</p>

		<p>implications together. Bring in the Sapir-Whorf hypothesis to connect it to cognitive psychology. Discussion should be on more diverse, critical and inclusive voices within open scholarship, highlighting the ableist language used and its impact on public perceptions and the whole society.</p>
<p>10 minutes</p>	<p><b>Participatory Research</b></p> <p><a href="#">Definition</a></p> <p>Ask students the following questions:</p> <p>Do you think anyone left-handed, non-white or female has been involved in the production of Lambroso's paper or the design of the researcher's studies?</p> <p>What are the dangers of conducting research into communities, cultures, or groups of people that we do not identify with?</p> <p>Can you think of claims that have been made about different groups of people based on conclusions from studies that did not involve members of the researched communities in the design of the studies? Why are there so any instances of science pathologising minorities?</p>	<p>Introduce the idea of participatory research and guide students through the discussion questions.</p> <p>Discuss how participatory research contributes to epistemic diversity and minimises bias.</p> <p>Talk about the importance of including researched populations and their advocates in study designs.</p>

	<p>How can focusing on participatory research contribute to social justice within the Open Scholarship framework?</p>	<p>Talk about avoiding othering people.</p>
<p>10 minutes</p>	<p><b>Post- reading discussion – extension focusing on deficit approaches, pathologising communities</b></p> <p><i>In the 70s, Bakan and colleagues have published a number of highly influential articles that pathologised left handedness. Their claims, which were later revoked (e.g., Bishop, 1990), included that left handedness results from birth trauma and a minor brain damage.</i></p> <p><i>Below is part of an abstract to one of the papers (Bakan, 1971). Read it and underline parts where language that suggests pathology is used. Can you see any ableist language used in this abstract?</i></p> <p>“The frequency of left-handedness is greater in males and in twin births, both of which are also associated with greater birth and infant mortality and, in the case of males, a higher rate of spontaneous abortion. The pre-natal and perinatal periods seem to be more stressful for these groups. Left-handedness is also associated with</p>	<p>When preparing to ask students remember to ask under-represented minorities may be less inclined to share their ideas so try to first invite students representing these populations: Neurodivergent Black, Indigenous and women of colour.</p> <p>Allowing some time to discuss these questions in small groups before starting a class discussion may also allow students representing these groups to feel more confident and therefore encourage their participation.</p>

language disorders such as stuttering, dyslexia, and mental retardation, conditions where central nervous system pathology may be implicated<sup>1</sup>. This suggests that the incidence of left-handedness might be correlated with stressful pre-natal and birth conditions. Such difficulties are most characteristic of primiparous births (longer labour and more use of instruments) and births to older mothers. Thus high risk birth orders would be the first born and the late-born (defined here as fourth or later birth)."

Bakan, P (1971) Handedness and Birth Order. *Nature* 229(195).

<https://doi.org/10.1038/229195a0>

Questions:

*What effect, do you think, this had on the public perceptions of left handedness in the 70s and 80s? And what impact did it have on the population? And the progress of research in the area?*

*Can you think of other areas where implicit bias / pathologising language (has) had a detrimental impact on? What groups of people might have been affected?*

<p>Check understanding and sum up conclusions: ~ 3 minutes</p>	<p>Ask students for comments and reflections. Get them to summarise the main message of this lesson in a few words. How can this be applied to everyday life?</p>	<p>Activity:</p> <p>How does ableist language help/hinder inclusion and diversity? What kind of activities would you do to promote inclusivity, social justice, accessibility, and diversity in open scholarship that encourages accessibility neurodivergent individuals?</p>
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