

2022 Schield NNN (slides) 1

## **Statistical Literacy versus, Critical Thinking**

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[www.StatLit.org/pdf/2022-Schild-NNN-Slides.pdf](http://www.StatLit.org/pdf/2022-Schild-NNN-Slides.pdf)

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## **Critical Thinking versus Statistical Literacy**

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<p>Point of the argument: "Smoking causes lung cancer"</p> <div style="border: 1px solid black; padding: 10px; margin: 10px auto; width: 80%;"> <p style="text-align: center;"><i>Critical Thinking</i></p> <p style="text-align: center;">A more-disputable point needs stronger evidence</p> <div style="background-color: #e0e0e0; padding: 5px; text-align: center; margin: 5px auto; width: 80%;"> <p style="text-align: center;">Statistics as evidence</p> </div> <div style="border: 1px solid black; padding: 5px; text-align: center; margin: 5px auto; width: 80%;"> <p style="text-align: center;">Strength and Relevance of the Statistic(s)</p> </div> </div>	<p>"Smoking–cancer association is very influence-resistant"</p> <div style="border: 1px solid black; padding: 10px; margin: 10px auto; width: 80%;"> <p style="text-align: center;">Point <i>Statistical Literacy</i></p> <p style="text-align: center;">How able is a statistical association to resist types of influence?</p> <div style="background-color: #e0e0e0; padding: 5px; text-align: center; margin: 5px auto; width: 80%;"> <p style="text-align: center;">Statistics are numbers in context Statistics can be influenced</p> </div> <div style="border: 1px solid black; padding: 5px; text-align: center; margin: 5px auto; width: 80%;"> <p style="text-align: center;">Confounding Assembly Randomness Error</p> </div> </div>
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**Association is not causation**  
**Disparity is not discrimination**

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