

Senate Judiciary Committee Testimony for S.259

February 22, 2024

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can scientists attribute the damages
from climate change to particular
emitters?

yes, we now can.

THE COSTS OF EMISSIONS

1.

$$\begin{array}{l} \text{TOTAL LOSS} \\ \text{FROM EMISSIONS} \end{array} = \begin{array}{l} \text{DAMAGE FROM} \\ \text{HISTORICAL EMISSIONS} \end{array}$$

THE COSTS OF EMISSIONS

$$\begin{array}{rcccl} & & 1. & & 2. \\ \text{TOTAL LOSS} & & \text{DAMAGE FROM} & & \text{FUTURE DAMAGE FROM} \\ \text{FROM EMISSIONS} & = & \text{HISTORICAL EMISSIONS} & + & \text{HISTORICAL EMISSIONS} \end{array}$$

THE COSTS OF EMISSIONS

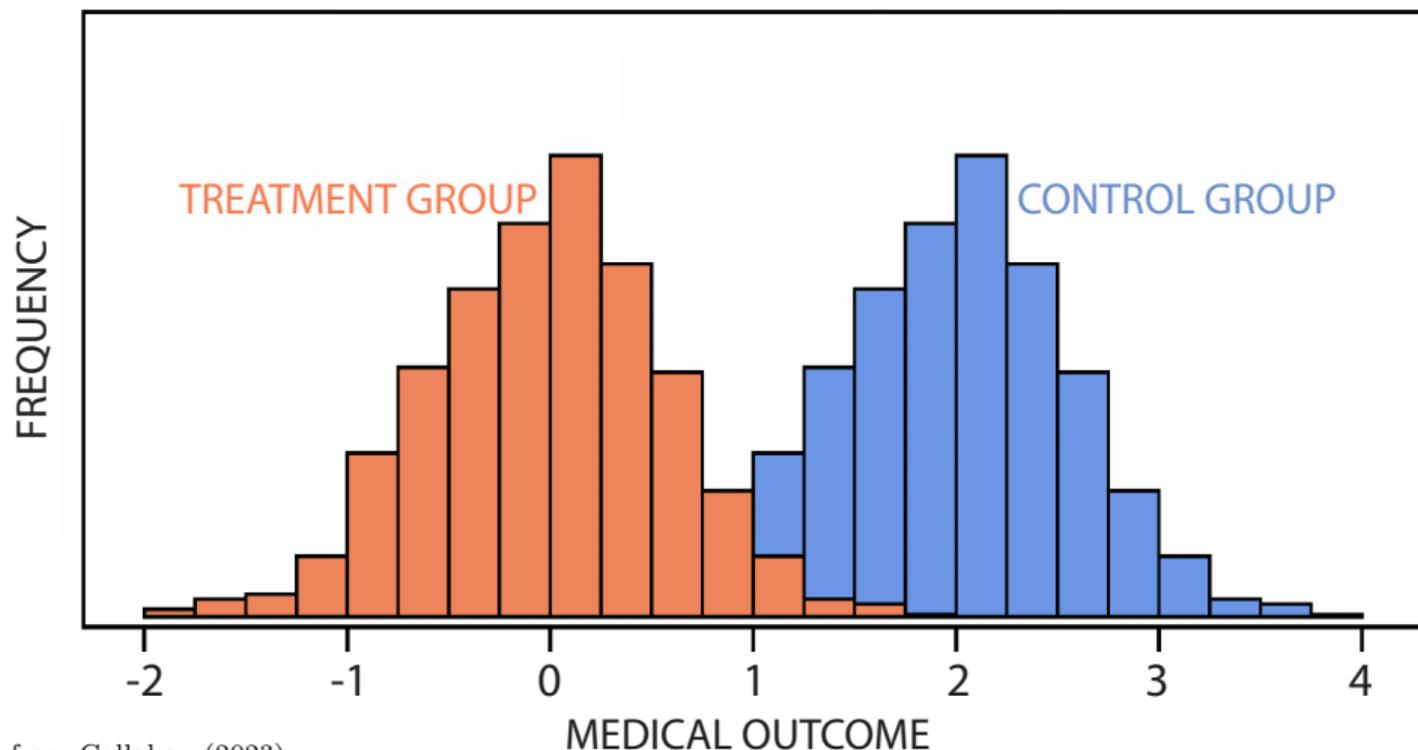
$$\begin{array}{ccccccc} & & 1. & & 2. & & 3. \\ \text{TOTAL LOSS} & & \text{DAMAGE FROM} & & \text{FUTURE DAMAGE FROM} & & \text{FUTURE DAMAGE FROM} \\ \text{FROM EMISSIONS} & = & \text{HISTORICAL EMISSIONS} & + & \text{HISTORICAL EMISSIONS} & + & \text{FUTURE EMISSIONS} \\ & & & & & & \end{array}$$

two general approaches to estimate costs attributable to emitters:

1. use the social cost of carbon
2. use “end-to-end” attribution

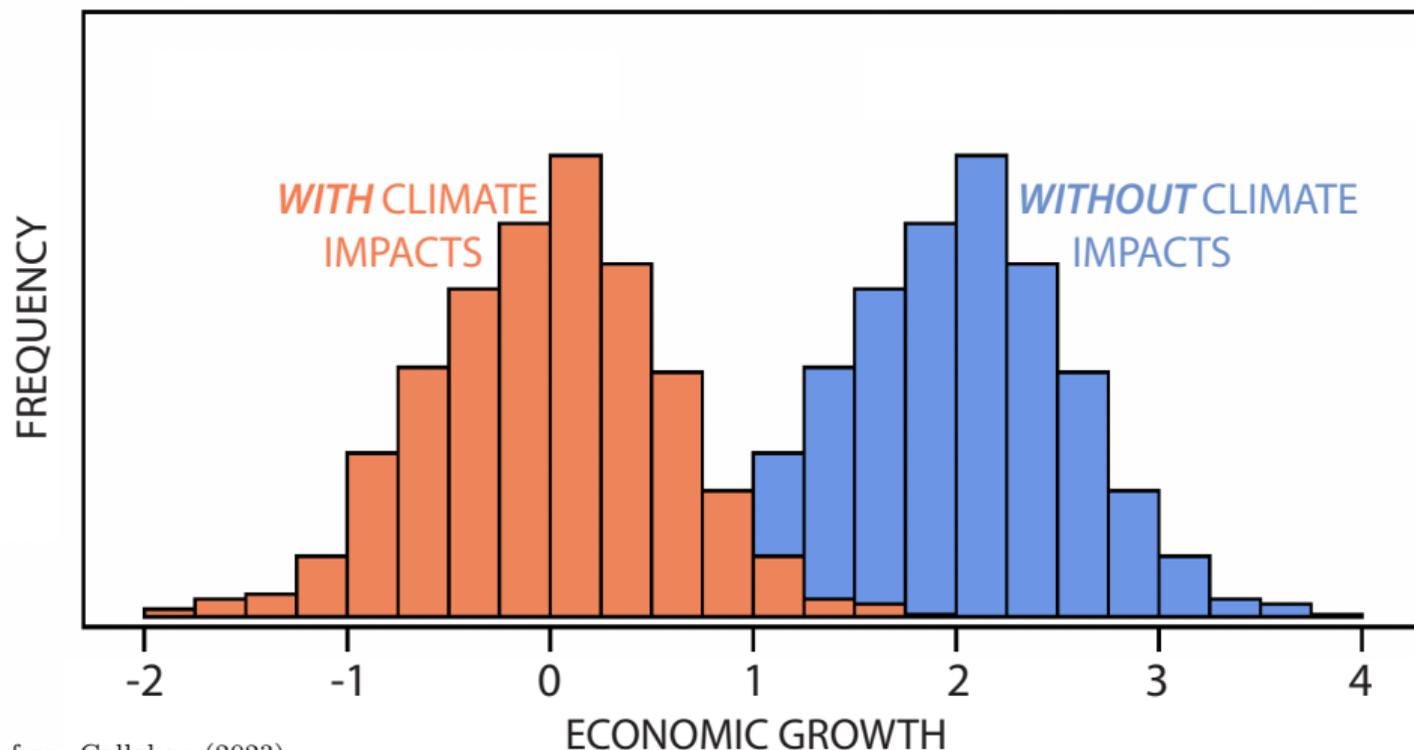
CLIMATE ATTRIBUTION

EXAMPLE MEDICAL TRIAL FOR DRUG EFFICACY

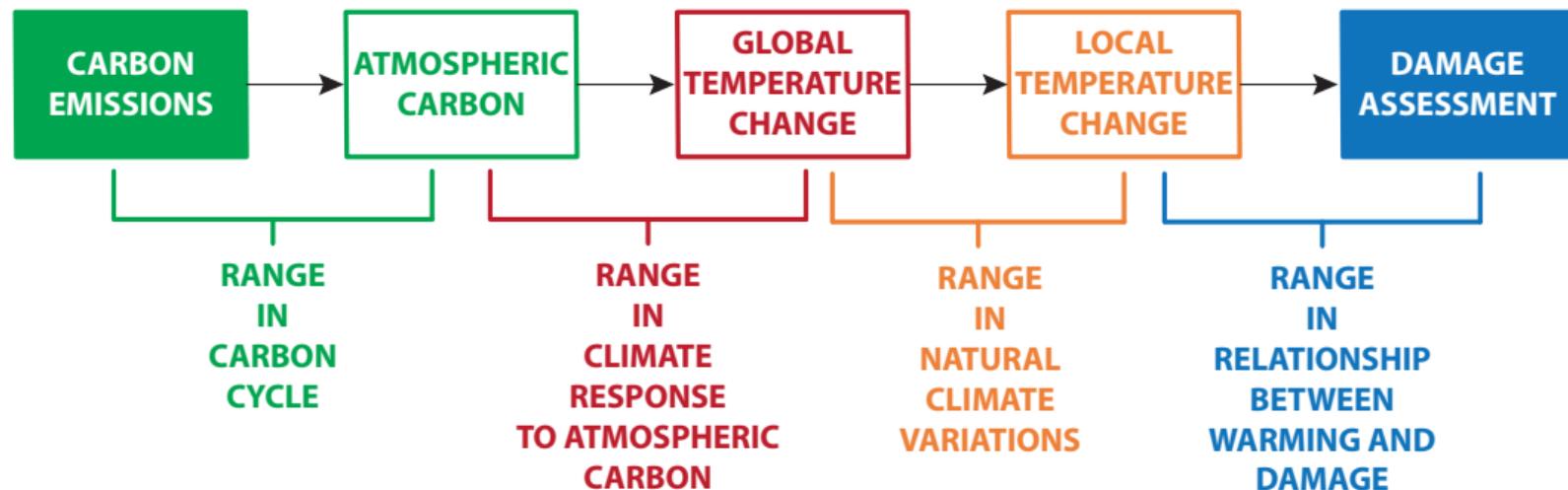


CLIMATE ATTRIBUTION

ECONOMIC GROWTH *WITH* VERSUS *WITHOUT* CLIMATE IMPACTS



END-TO-END ATTRIBUTION



EACH LINK HAS CONSENSUS METHODS

can scientists attribute the damages
from climate change to particular
emitters?

yes, we now can via several approaches.
and our cost estimates are conservative.