

the development of 'end-to-end' climate damage attributions

Environmental Law Institute
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DARTMOUTH | CLIMATE MODELING
& IMPACTS GROUP



COLUMBIA CLIMATE SCHOOL
LAMONT-DOHERTY EARTH OBSERVATORY

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4. such accounting methods are inherently conservative and limited by data

THE COSTS OF EMISSIONS

$$\begin{array}{ccc} & 1. & \\ \text{TOTAL LOSS} & = & \text{DAMAGE FROM} \\ \text{FROM EMISSIONS} & & \text{HISTORICAL EMISSIONS} \end{array}$$

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

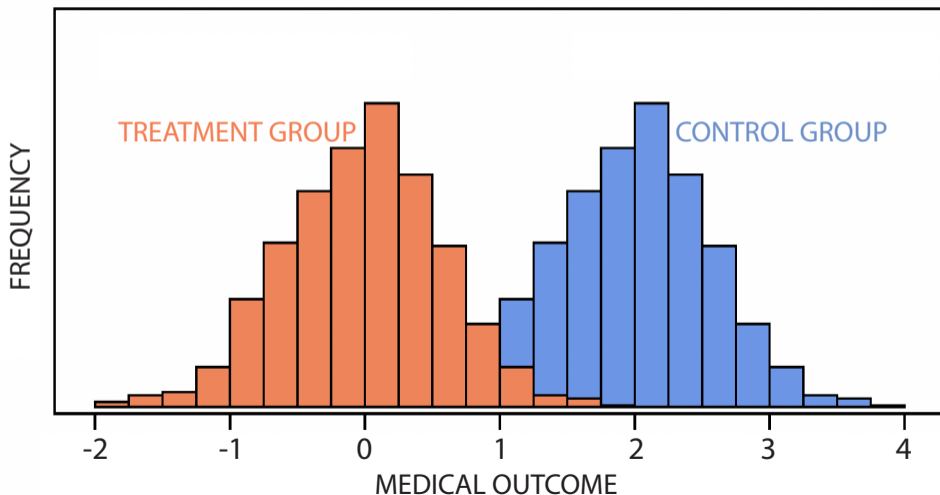
$$\begin{array}{r} \text{TOTAL LOSS} \\ \text{FROM EMISSIONS} \end{array} = \begin{array}{r} 1. \\ \text{DAMAGE FROM} \\ \text{HISTORICAL EMISSIONS} \end{array} + \begin{array}{r} 2. \\ \text{FUTURE DAMAGE FROM} \\ \text{HISTORICAL EMISSIONS} \end{array} + \begin{array}{r} 3. \\ \text{FUTURE DAMAGE FROM}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

there are a number of rational
approaches to estimate costs
attributable to emitters

the one my research has focused on is called
“end-to-end” damage attribution

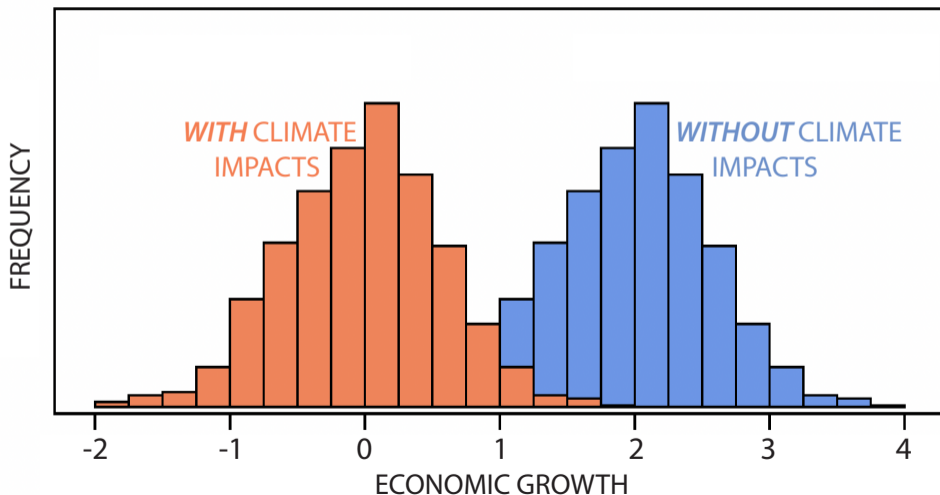
WHAT IS CLIMATE ATTRIBUTION?

EXAMPLE MEDICAL TRIAL FOR DRUG EFFICACY



WHAT IS CLIMATE ATTRIBUTION?

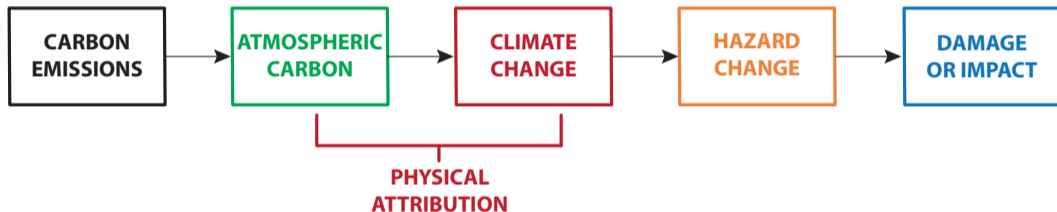
ECONOMIC GROWTH *WITH* VERSUS *WITHOUT* CLIMATE IMPACTS



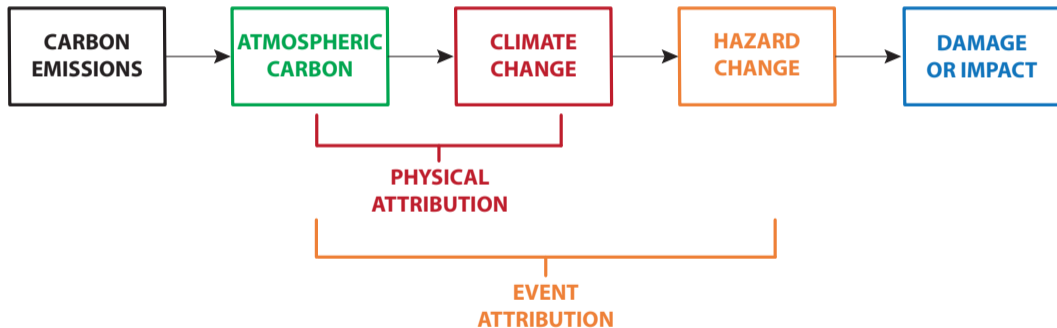
'END-TO-END' CLIMATE DAMAGE ATTRIBUTION



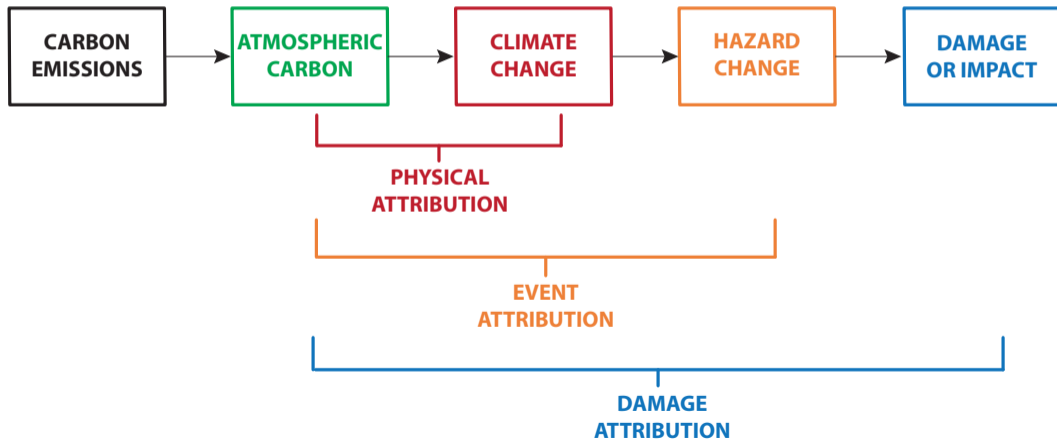
'END-TO-END' CLIMATE DAMAGE ATTRIBUTION



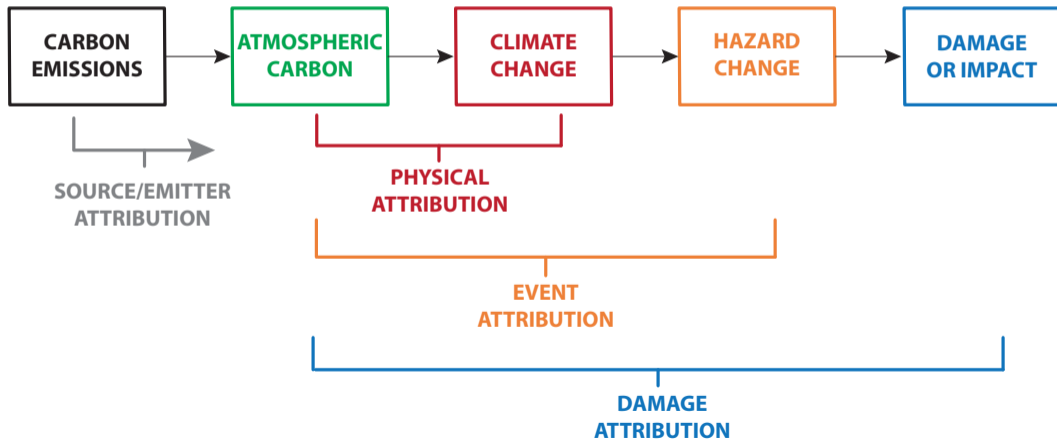
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