Causation and the normative

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Outline

- Existing work on causation and the normative.

- Causal models as representations of causal structure.

- Policy debate: alternative energy.

Causation and the normative

- Say I ask Casper to water my plants while I am on holiday. He forgets, and the plants die.

- It seems right to say that Casper's omission caused the plants' death.

- Why? Well, if Casper had watered the plants, they would have survived.

The Queen

- But the Queen also omitted to water my plants.

- If she had watered my plants, they would have survived.

- The difference seems to be that Casper *promised*.

A popular response

- Causes (and effects) are *deviations from the normal*.

  The heavy rain caused the flood.

  Casper's failure to water my plants caused their death.

  (Hart and Honoré, Menzies, Hitchcock & Knobe)

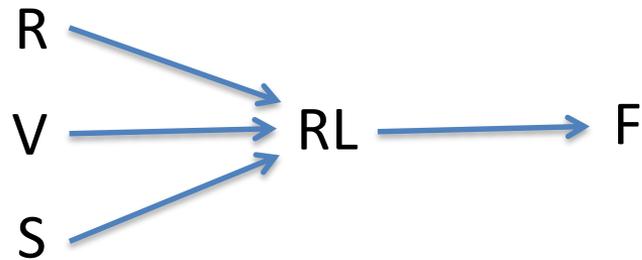# What if we don't agree on the norms?

The 2011 London riots:

The culture of hooliganism caused the riots.

The state of high unemployment caused the riots.

Using causal models to represent causal structure

The causal modelling framework

R

V → RL → F

S

Variables

R: the amount of rainfall in the catchment area

V: the extent to which slopes are covered in vegetation

S: the steepness of the slopes

RL: the river level

F: whether or not there is a flood

Structural equations:

$RL = f(R, V, S, C)$

$F = f(RL)$

Relativity to background circumstances

- Causal models also include a set of background circumstances that are held fixed.

$$I \longrightarrow P$$

Which variables should be held fixed, and therefore included in the background?

The philosophy of causation

Conceptual analysis:

- What is the metaphysics of causation?
- What are the necessary and sufficient conditions of causation?

Interventionist theory:

- How should we go about causal reasoning?
- What is the purpose of the concept of causation?
- How are causal concepts connected to other related concepts?
- What cognitive apparatus are necessary to explain our causal judgements?

Applying causal models to policy debates

Alternative energy

ProCon.org
Explore Pros & Cons of Controversial Issues

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Alternative Energy

Last updated on: 2/22/2017 2:55:16 PM PST

CRITICAL THINKING EXPLAINED
2:46 video from ProCon.org

Can Alternative Energy Effectively Replace Fossil Fuels?

" CITE   **f FACEBOOK**   **🐦 TWITTER**   **g+ GOOGLE+**   **✉ EMAIL**   **🖨 PRINT**

Pro & Con Quotes   **Readers' Comments (136)**

PRO (yes)

Richard Heinberg, MA, Senior Fellow at the Post Carbon Institute, stated the following in his Feb. 22, 2016 article titled "100% Renewable Energy: What We Can Do in 10 Years," published by *Yes! Magazine*:

"It will take at least three decades to completely leave behind fossil fuels. But we can do it...

But the transition will entail costs—not just money and regulation, but also changes in our behavior and expectations. It will probably take at least three or four decades, and will fundamentally change the way we live...

Nearly everyone agrees that the easiest way to kick-start the transition would be to replace coal with solar and wind power for electricity

CON (no)

Robert Lyman, Principal at ENTRANS Policy Research Group, Inc., stated the following in his May 2016 report titled "Why Renewable Energy Cannot Replace Fossil Fuels by 2050," published by Friends of Science:

"Oil provides 95% of the fuel demands of the transportation sector... Every transport mode – cars, trucks, trains, buses, marine vessels, and aircraft – relies almost entirely on petroleum fuels. Only natural gas liquids and, in recent years as the result of regulated fuel mandates, ethanol - have made small inroads in the dominant share held by oil. Further, on the basis of the projections by all major agencies that analyze energy supply and demand trends to 2035 and 2040, this will continue to be the case for the foreseeable future...
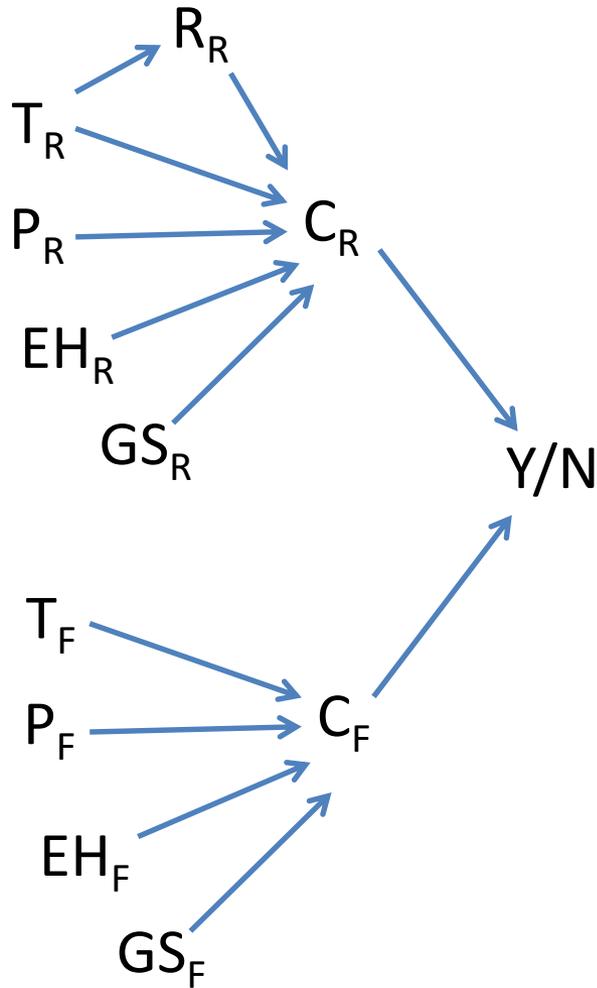
The question

- Can we effectively replace fossil fuels with renewables?

- Is it possible to convert to renewables while maintaining our current standard of living (or with only a small reduction in standard of living)?

- Is it possible to convert to renewables while maintaining our current GDP (or with a reduction in GDP of less than x)?

Can alternative energy replace fossil fuels?

R_R

T_R

P_R

C_R

EH_R

GS_R

Y/N

T_F

P_F

C_F

EH_F

GS_F

Variables

C: cost of renewables/fossil fuels
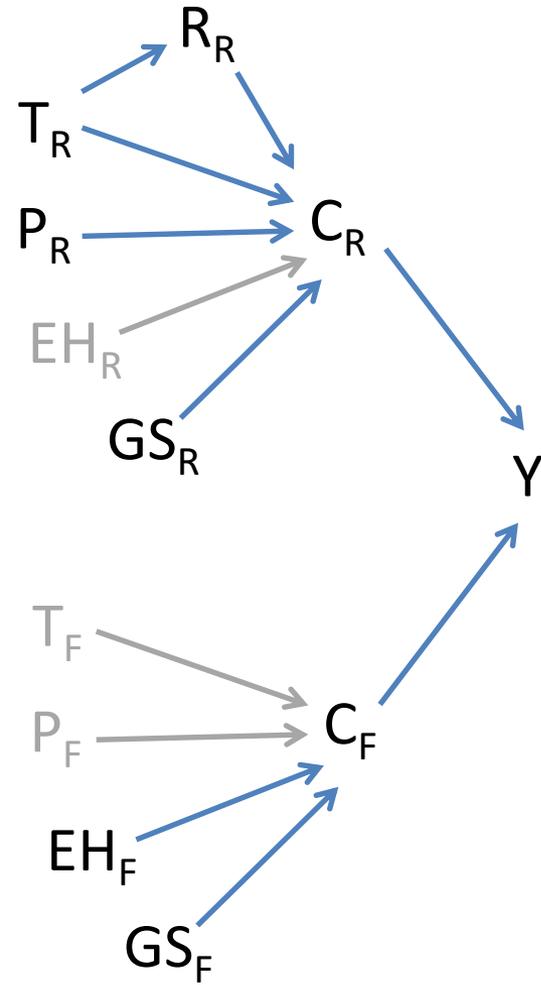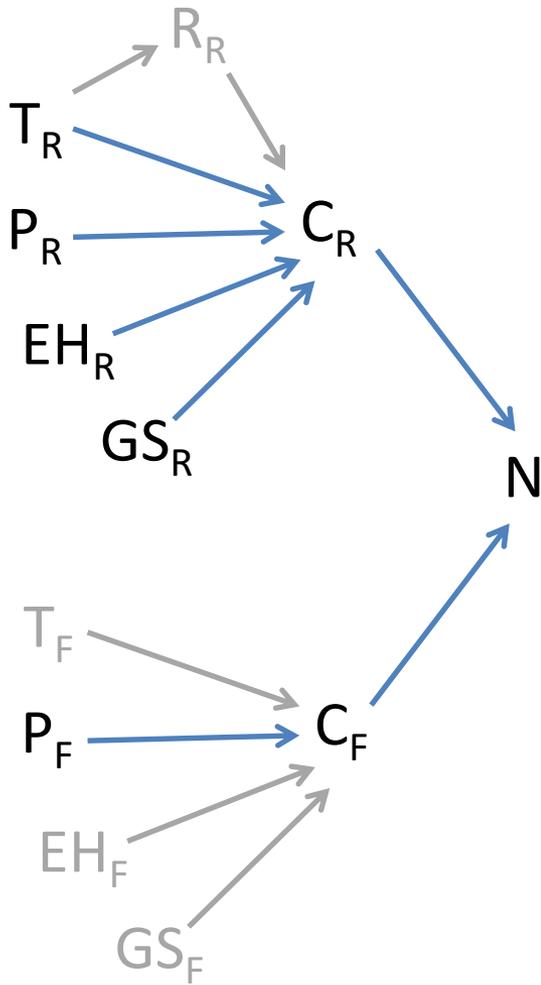
T: state of technology

P: amount of energy produced by renewables/ fossil fuels

R: reliability

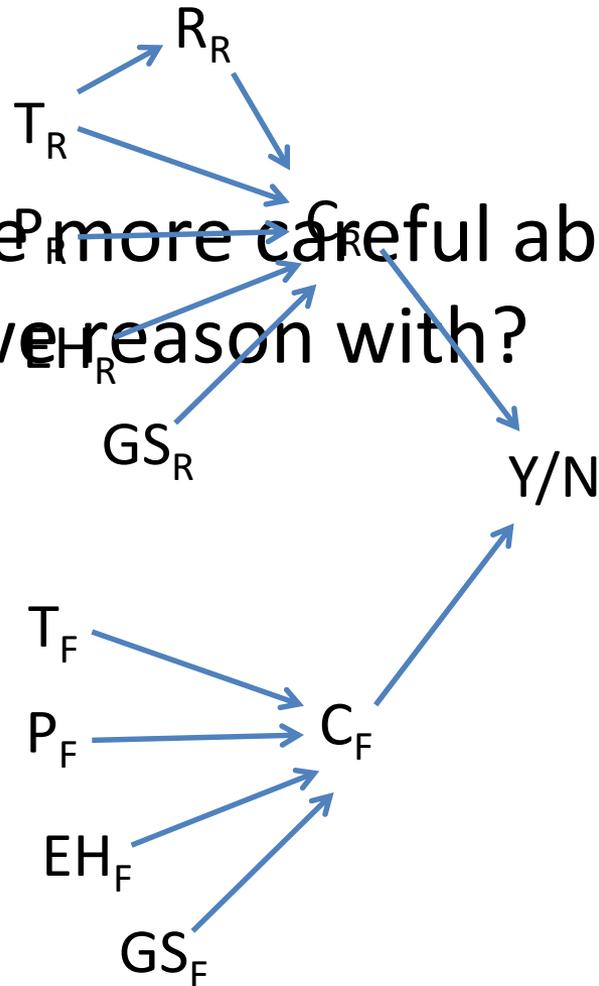EH: how environmental and health costs are incorporated

GS: government subsidies

Models for and against

Can we resolve the disagreement?

- What if we are more careful about the causal models that we reason with?

R_R

T_R

P_R C_R

EH_R

GS_R

Y/N
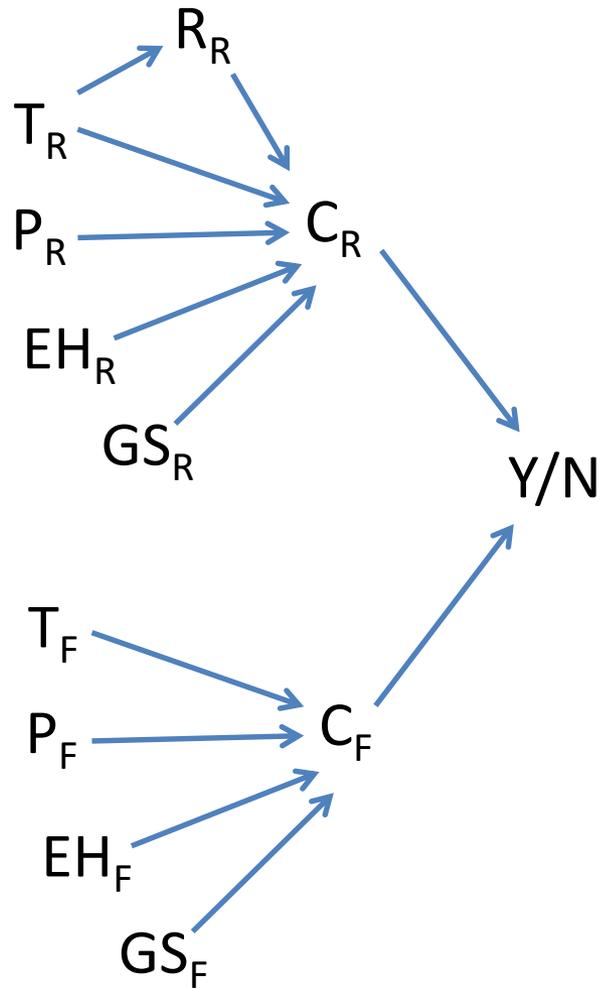
T_F

P_F C_F

EH_F

GS_F

But wait!

The transition will entail costs—not just money and regulation, but also changes in our behaviour and expectations ... a truly all-renewable economy may be very different from the American economy we know today. The renewable economy will likely be slower and more local; it will probably be a conserver economy rather than a consumer economy.

Richard Heinberg, Post Carbon Institute

What if the economy changes?

Back to the concept of actual causation

In general, while the causal structure identifies all of the factors that could be manipulated ... to effect a change in the outcome, the actual causes are the factors that *should* be manipulated. (Hitchcock and Knobe, 2009, 590)

Causal structure and the normative

- Normative commitments influence our understanding of causal structure.
  - In general, we don't consider interventions on variables that we think *should* be held fixed.
  - Normative considerations can also affect which causal structure we think should be instantiated.

Relevance to linguistics

- My explanation of the disagreement has appealed to the idea that (in some sense) we cognitively represent causal structure.

- This implies that there is a gap between the linguistic representation of causation and cognitive representation more generally.

Thank you!