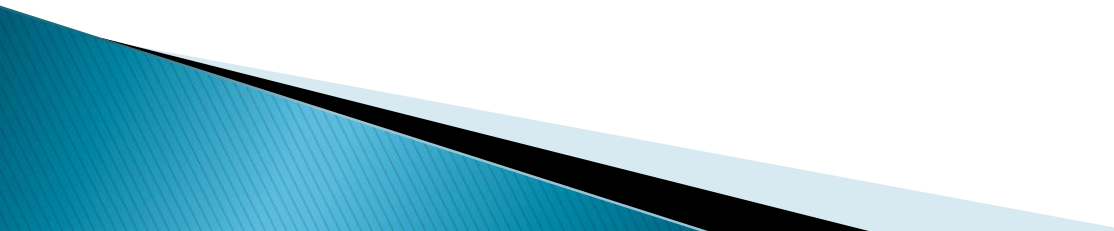


How we undo the past: Counterfactuals thinking about enablers

Suzanne Egan – Mary Immaculate College
Caren Frosch – University of Leicester
Emily Hancock – University of Reading


Overview

- ▶ Counterfactual thinking
 - ▶ Causes versus enablers
 - ▶ Why do people undo enablers?
 - ▶ 2 Experiments
 - ▶ Conclusions
- 

What is counterfactual thinking?

- ▶ An introduction with Sheldon and Amy...
- ▶ The Big Bang Theory (The Zazzy Substitution)
- ▶ <http://www.youtube.com/watch?v=0lpY0Kt4bn8>

Counterfactual thinking

- ▶ Philosophy – possible worlds
 - ▶ Linguistics – subjunctive mood
 - ▶ History – causal arguments, alternate history
 - ▶ Psychology –
 - Learn from past mistakes
 - Shame, regret
 - Blame assignment
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How would you 'undo' 9/11?



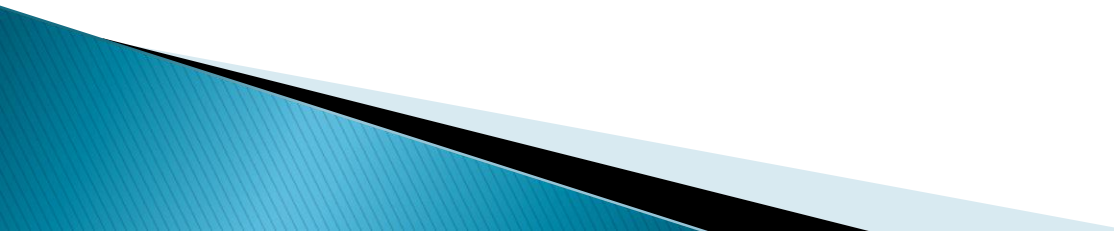
If only...

Causes versus Enablers

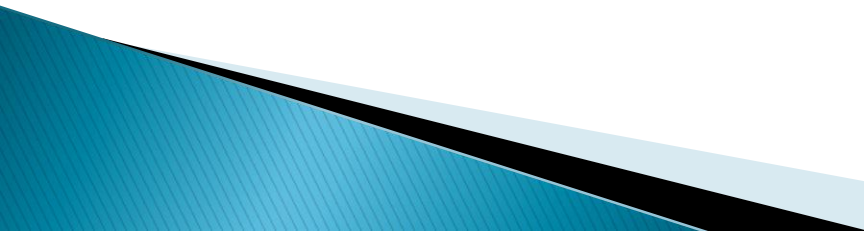
- ▶ When undoing the past people tend to focus on enabling events rather than direct causes
- ▶ *'As everybody who's been associated with the program's said, if we had had this before 9/11, when there were two terrorists in San Diego - two hijackers - had been able to use that program, that capability, against that target, we might well have been able to prevent 9/11'.*

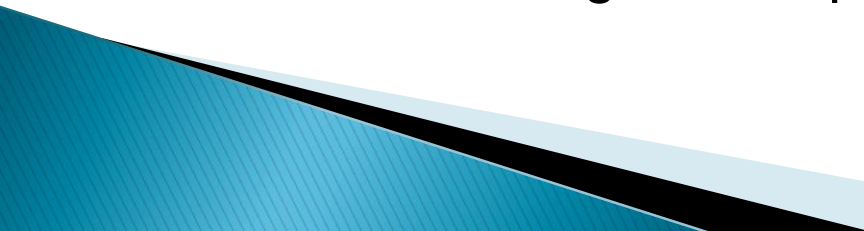
Dick Cheney, June, 2013

Causes versus Enablers

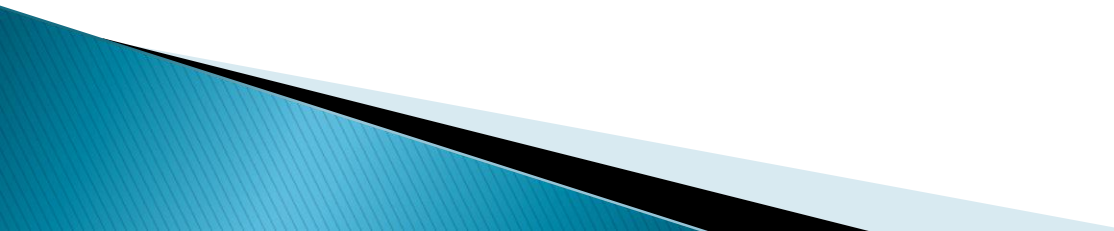
- ▶ Debate about how people distinguish between causes and enablers:
 - ▶ Inconstant versus constant
 - ▶ Out of the ordinary versus ordinary
 - ▶ Sufficient versus necessary
- 

Why is it important to distinguish between them?

- ▶ In a mock court trial about a hypothetical rape case when people were directed to think counterfactually about...
 - ▶ ...the victims actions (e.g., if only she hadn't got in the car with him) they assigned more blame to her and a less severe punishment to the perpetrator.
 - ▶ Opposite effect when directed to think counterfactually about perpetrators actions (e.g., if only he had taken no for an answer)
- 

- ▶ People are sensitive to the distinction between causes and enablers but...
 - ▶ Irish, British and American law do not formally distinguish between causes and enablers
 - ▶ Diverse judgements can be made in cases sometimes putting the blame on the cause and sometimes on the enabler
 - Gun makers blamed for murders committed by criminals
 - Builder who negligently left an open lift shaft unguarded was not the cause of an accident when a young lad deliberately invited a stranger to step inside.
- 

Why do people focus on enablers in their counterfactual thoughts?

- ▶ Exp 1 - Are enablers more controllable than causes?
 - ▶ Exp 2 - Is removing the enabler more likely to 'undo' the outcome than removing the cause?
- 

Exp 1 – Are enablers more controllable than causes?

- ▶ 8 scenarios pretested to ensure controllability and causality of events)
- ▶ Between participants design
- ▶ Tasks
 - Generate an ‘if only’ thought
 - Rating scales: blame, causality, contribution, foreseeability

	A	B	C	D
Cause	✓	✓	✗	✗
Enabler	✓	✗	✗	✓

✓ Controllable ✗ Uncontrollable

Controllable cause and enabler:

Kate took the decision to take the scenic route home rather than her usual route. When Kate came to a junction Steven, who was coming from a different direction, jumped a red light because he was in a hurry and crashed into her.

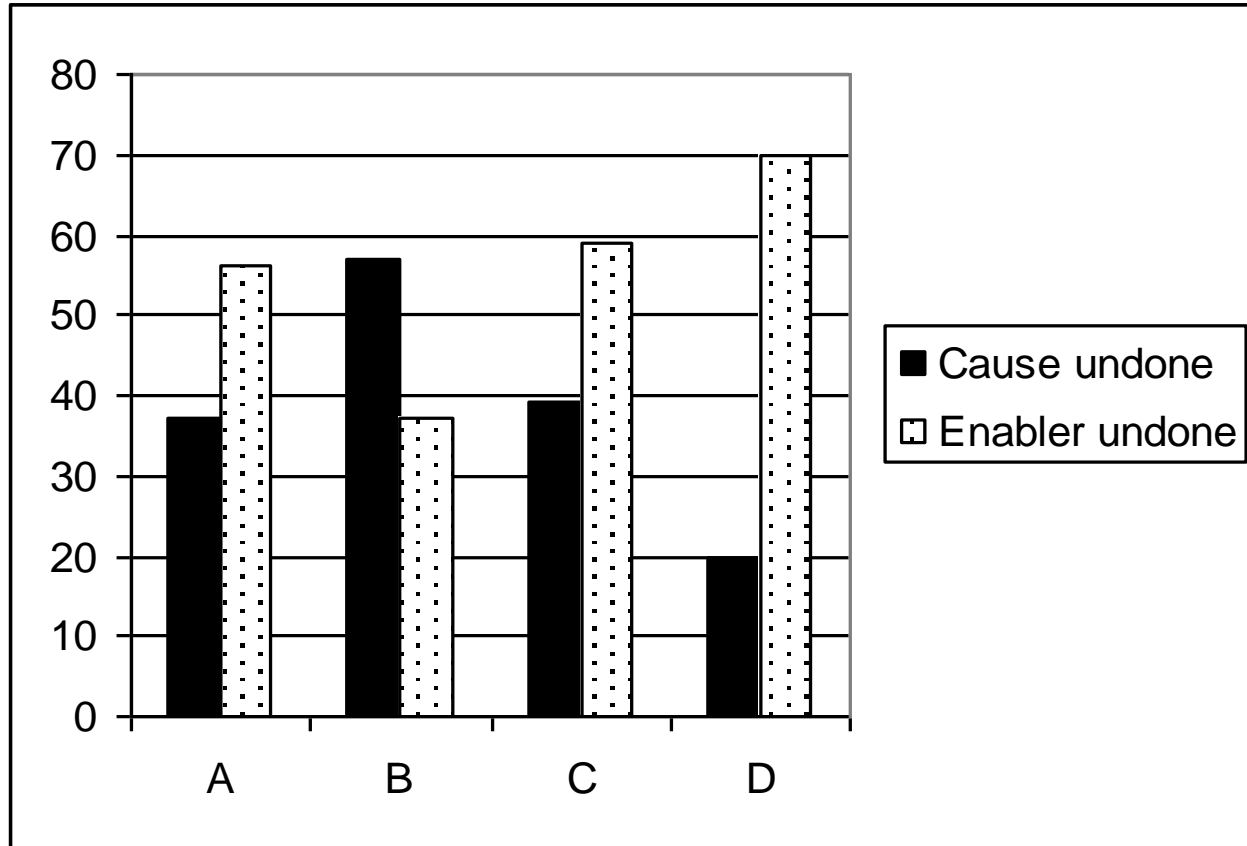
Uncontrollable cause and enabler:

A diversion forced Kate to take the scenic route home rather than her usual route. When Kate came to a junction Steven, who was coming from a different direction, jumped a red light because his brakes failed and crashed into her.

Other scenarios dealt with:

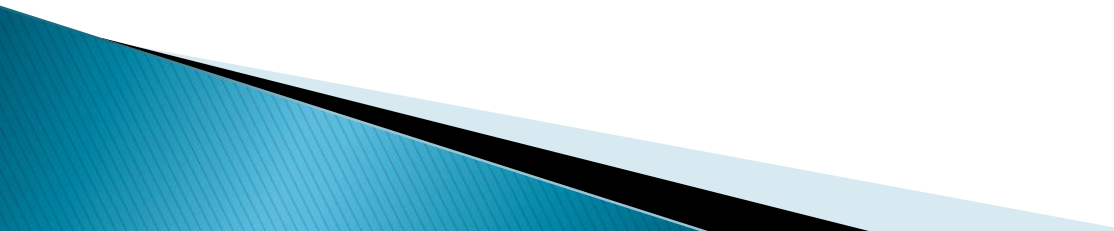
- a loss of computer files
- a house burning down
- getting a parking ticket
- a kitchen flooding
- dyed hair turning green....

Counterfactuals




Cause	✓	✓	✗	✗
Enabler	✓	✗	✗	✓

Results

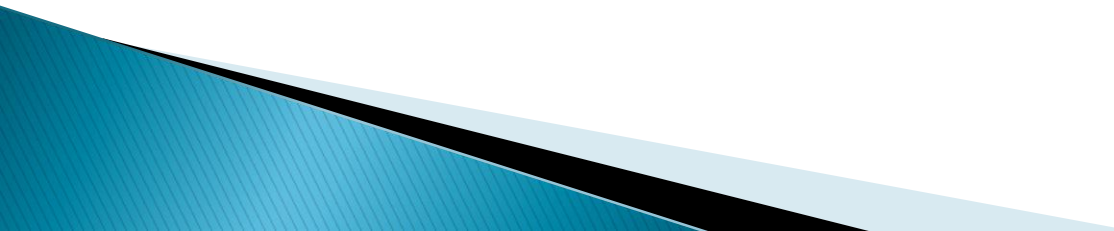
- ▶ Enablers are more mutable than causes
 - ▶ Dissociation between blame ratings and counterfactuals (cf. Mandel & Lehman, 1996)
 - ▶ More blame assigned to causes than enablers
 - ▶ More blame assigned to controllable than uncontrollable events
- 

Explanations for the focus on enablers

- ▶ Is it that enablers are more controllable than causes? No...
 - When causes and enablers are matched for controllability people still prefer to undo enablers.

 - ▶ Is it that enablers tend to occur prior to causes?
But...
 - Enablers do not cause a cause to bring about an effect. Instead enablers work together with a cause to bring about an outcome.
- 

- ▶ Is it that removing the enabler is more likely to 'undo' the outcome than removing the cause?
 - $P(\text{outcome}|\neg\text{enabler}) < P(\text{outcome}|\neg\text{cause})$

 - ▶ Is there something intrinsically more mutable about enablers?
 - Different possibilities associated with causes and enablers (e.g. Goldvarg & Johnson-Laird, 2001)
- 

Alternative Possibilities?

Cause (a spark caused the fire):

Spark and fire

No spark and no fire

No spark and fire (another cause)

Enabler (oxygen enabled the fire):

Oxygen and fire

Oxygen and no fire

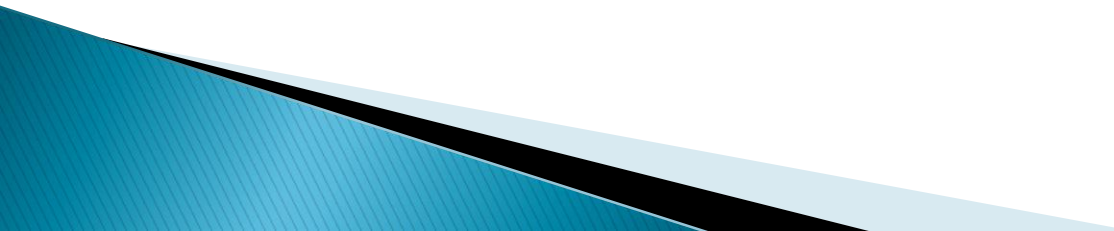
No oxygen and no fire

These possibilities are supported by evidence from reasoning and priming experiments (e.g., Frosch & Byrne, 2006)

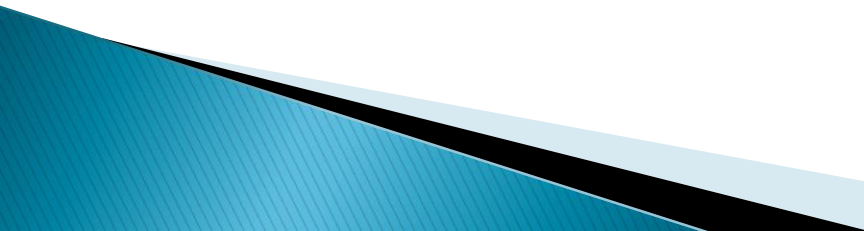
Experiment 2

- ▶ 8 vignettes (all controllable cause & enabler)
- ▶ Measures
 - 3 tasks each for causes and enablers
 - Rating scales (1-10) of likelihood to change outcome if removed
 - Generate alternative causes and enablers
 - Rate each alternative on probability of actually occurring

Results

- ▶ Is removing the enabler more likely to 'undo' the outcome than removing the cause?
 - ▶ Removing the cause (spark) had a higher likelihood of changing the outcome than removing the enabler (oxygen).
 - ▶ Suggests likelihood is not the explanation.
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Results

- ▶ Are the alternatives people generate important?
 - ▶ People could think of more alternative causes (fire, lightening, lighter) than alternative enablers (some other gas that fire can burn in).
 - ▶ If the enabler is removed there are less enablers to take it's place.
 - ▶ No difference in the probability of alternative causes or enablers occurring
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Conclusions

- ▶ People undo more enablers than causes
 - ▶ Controllability and likelihood do not seem to be the explanation
 - ▶ The alternatives people keep in mind appear to play an important role
 - ▶ Understanding *why* people undo enablers may have implications particularly for blame assignment and the legal domain.
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