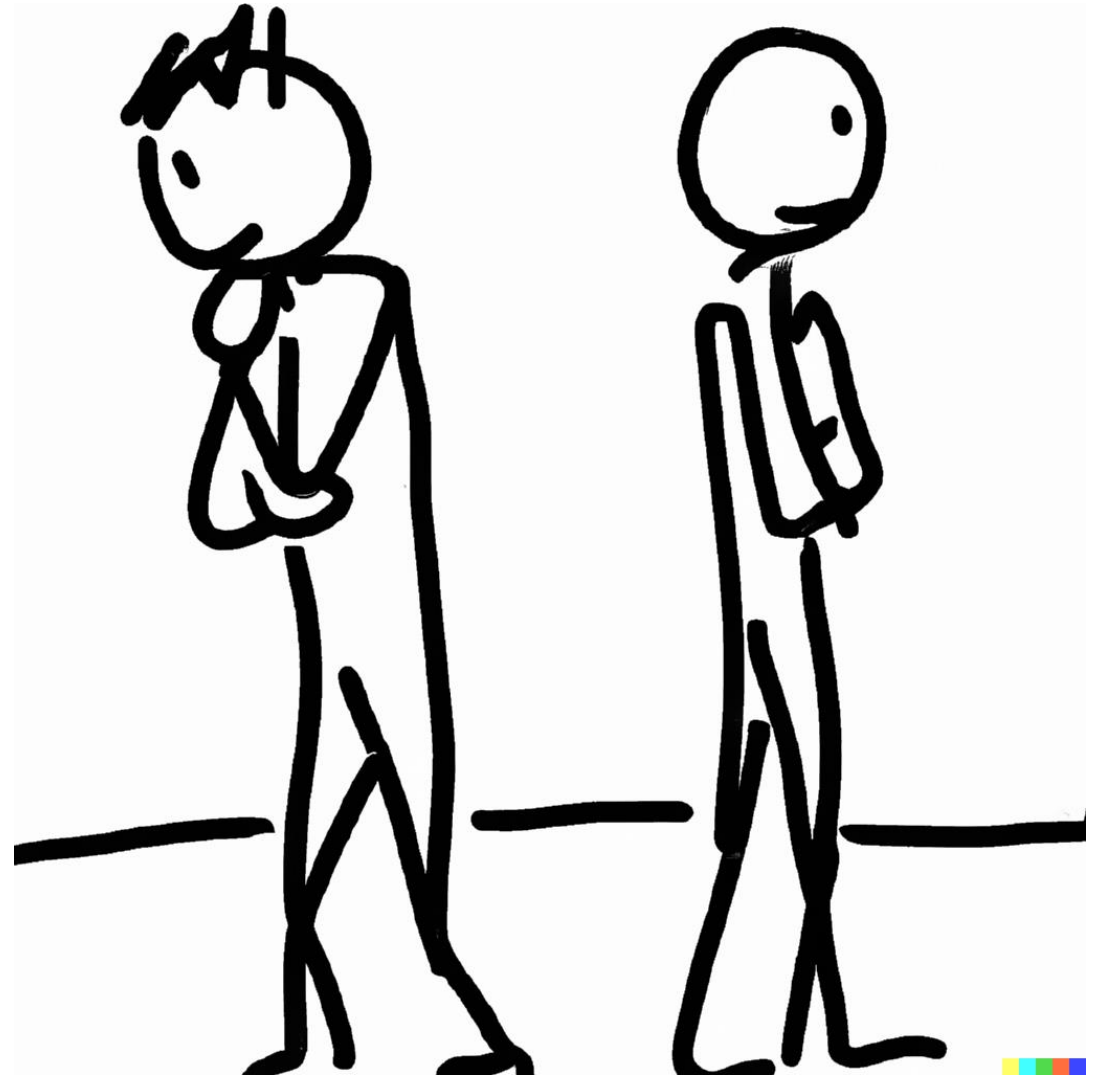


# Rationality

Notes on Behavioural Economics

Jason Collins



# Rationality

economics rationality  $\neq$  lay rationality

# **Completeness**

An agent can always compare any two options

## Completeness

An agent can always compare any two options

For all  $x$  and  $y$ , either  $x \succsim y$  or  $y \succsim x$  (or both).

## Transitivity

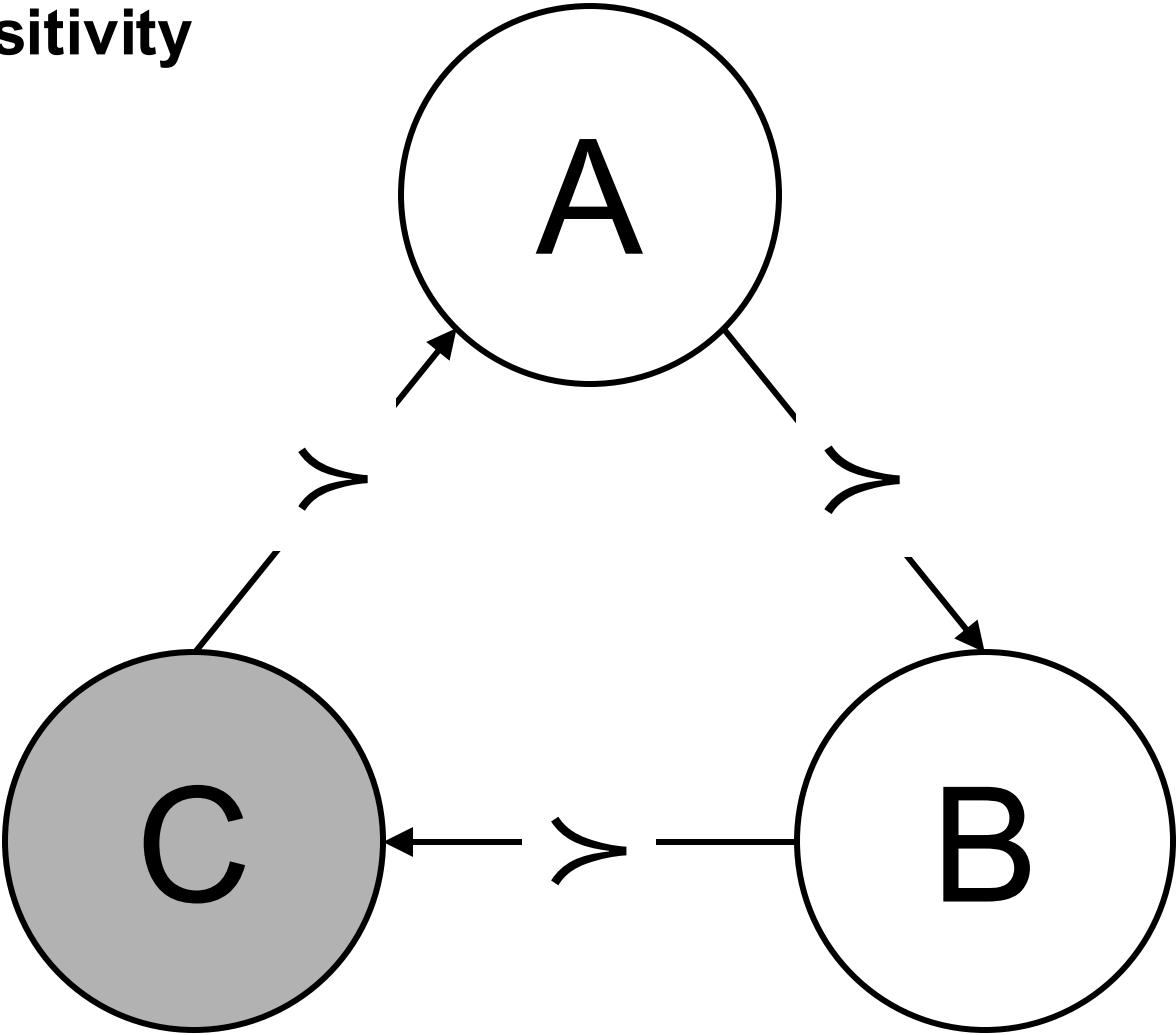
If a person prefers A to B and B to C, they will prefer A to C.

## Transitivity

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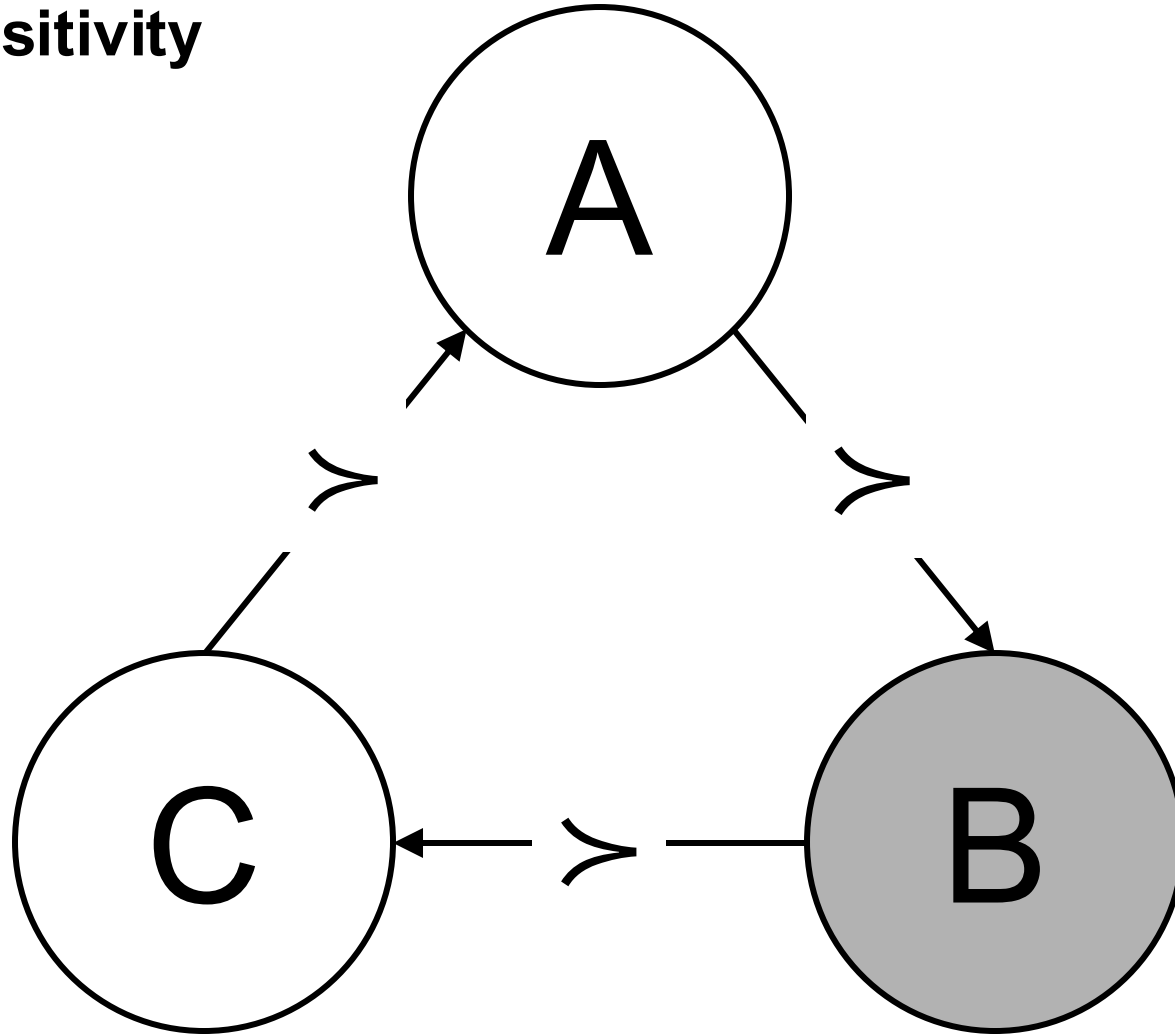
For all  $x$ ,  $y$  and  $z$ , if  $x \succcurlyeq y$  and  $y \succcurlyeq z$ , then  $x \succcurlyeq z$ .

**Transitivity**



**\$20**

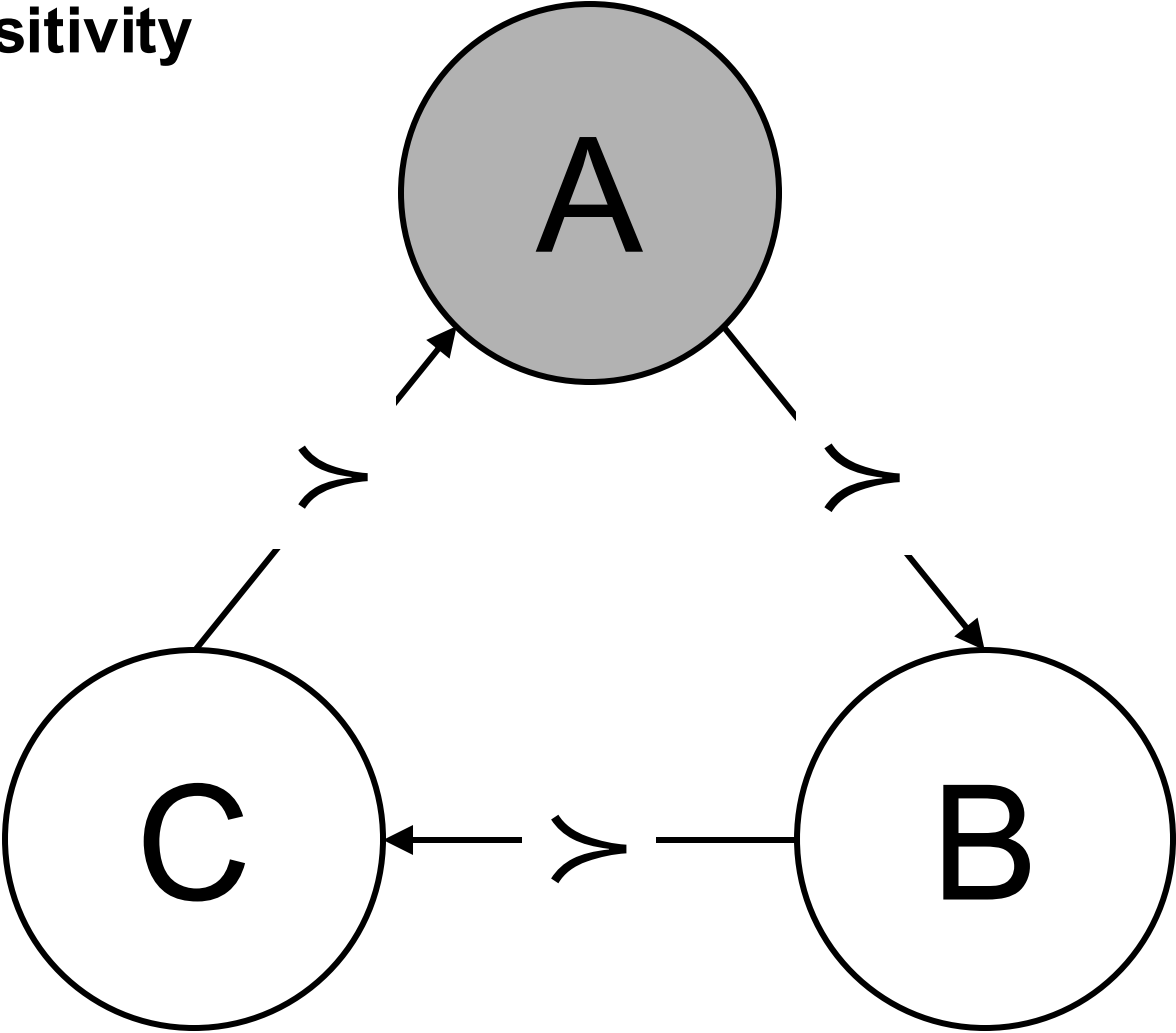
**Transitivity**



**\$19**

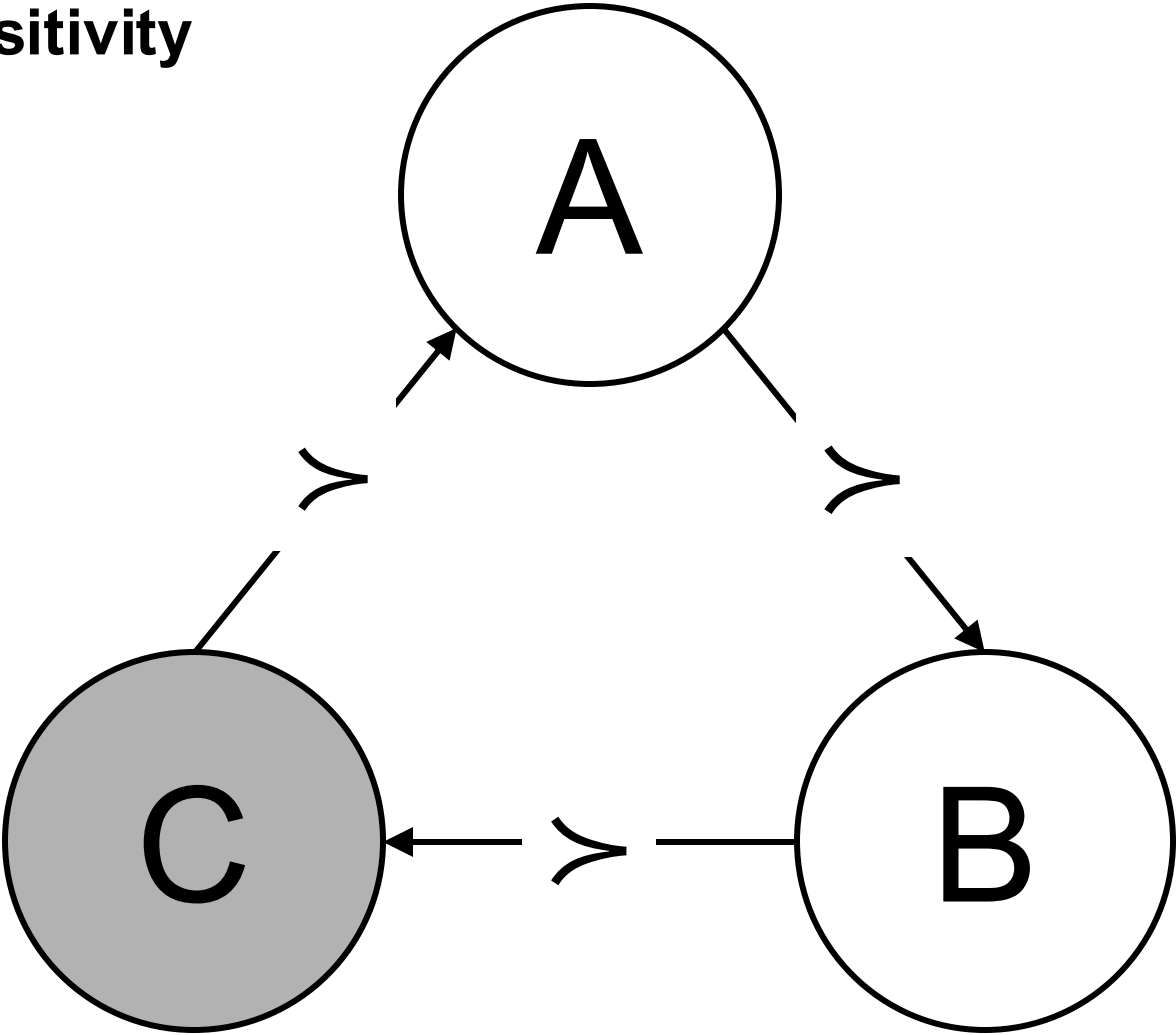


**Transitivity**



**\$18**

**Transitivity**



**\$17**

# Preference ordering

Completeness: One ordering

## **Preference ordering**

Completeness: One ordering

Transitivity: No cycles



## **Independence of irrelevant alternatives**

A new option shouldn't flip how you rank two existing options.

## Independence of irrelevant alternatives

A new option shouldn't flip how you rank two existing options.

If  $x \succ y$  in choice set  $S = \{x, y\}$ , then:

$x \succ y$  in choice set  $T = \{x, y, z\}$

# **Independence of irrelevant alternatives**

Context independent

Simplifies economic models

Avoid manipulation