Causation in Semantics and Grammatical Structure

Week 3: Typology and causativization

Prerna Nadathur

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Causative constructions

A working definition (adapted from Shibatani 1976):

Causative constructions describe *causative situations*, involving two events (cause C and effect E), satisfying two conditions:

a. The relation between C and E is such that . . . the occurrence of E has been realized at time t_2, which is after t_1, the time of C.

> *Effects* **cannot precede** *their causes.*

b. The relation between C and E is such that the occurrence of E is "wholly dependent" on the occurrence of C; the dependency must allow . . . an inference that E would not have taken place at that time if C had not taken place.

> *E is* **counterfactually dependent** *on C*

Causative constructions across languages

Languages have different way of encoding causation:

analytical $\longleftrightarrow$ **morphological** $\longleftrightarrow$ **lexical**

- these categories are not sharply distinguished from one another, but instead represent a *continuum* (Comrie 1989)
- many languages use more than one strategy
  - e.g., Japanese uses both morphological and lexical causatives
  - English uses analytical (periphrastic; *cause, make*) causatives, and either morphological or lexical causatives, depending on the analysis of alternations like

(1) a. The vase broke.

b. Marie broke the vase.

Analytical causatives

Comrie's **prototype** examples:

- the cause and effect (result) parts of the construction can be identified with different verbs
- usually **productive**
  - involve a rule or a derivation that can be applied more or less freely

English periphrastic causatives:

(2) a. Gurung caused the children to dance.
b. Gurung made the children dance.
c. Gurung had the children dance.

- different periphrastic causatives show syntactic differences
- we can combine *cause*, *make*, *have* with many different result descriptions to get new causative situations

Morphological causatives

Typical properties:

- derived morphologically from non-causative verbs (usually by adding an affix)

  (3) Turkish: *öl* = 'die' $\longrightarrow$ *öl-dur* = 'kill'

- productive (apply to a wide range of verbs, not idiosyncratically limited, iterable)

- some languages have apparent 'anticausativizing' affixes:

  (4) Russian:
  lomat = 'break' (tr) $\longrightarrow$ *lomat'sja* = 'break' (intr)

- some languages add morphological material for both:

  (5) Swahili:
  chem-k-a = 'boil' (intr), *chem-sh-a* = 'boil' (tr)

Lexical causatives

- relationships between causatives and inchoatives are not systematic
- often involves **suppletion**

  (6) a. English: *die* (intr), *kill* (tr) $\sim$ 'cause to die'

  b. Russian: *umeret'* = 'die', *ubit'* = 'kill'

  c. Japanese:
  tomar = 'stop' (intr), *tome* = 'stop' (tr)

- apparent morphological relationships are not productive

Mixed strategies

Intermediate types:

- e.g., French *faire*

  (7) *J'ai fait manger les pommes à Paul.*
  'I made Paul eat the apples.'

- looks like an analytical strategy, but *fait manger* acts syntactically like a unit

  (8) *J'ai demandé à Paul de manger les pommes.*
  'I have asked Paul to eat the apples.'

- in (8), unlike in (7), the embedded subject appears between *demander* and *manger*

Mixed strategies

Mixed:

- some languages have both a productive strategy and a lexical option:

  (9) Japanese:

  a. *tomar* = 'stop' (intr)

  b. productive/morphological: *tomar-ase* = 'cause to stop'

  c. lexical: *tome* = 'stop' (tr)

- in these cases, the productive and lexical forms seem to behave slightly differently, both syntactically and semantically

Parameters of variation

Semantic features that languages are sensitive to (Comrie):

1. directness of causation
2. degree of control retained or exhibited by causee
3. permission

Shibatani (1976) adds more:

4. coercive vs. non-coercive causation
5. directive vs. manipulative causation
6. 'ballistic' causation

Direct and indirect causation

> "The distinction between direct and indirect causatives is concerned with the mediacy of the relationship between cause and effect." Comrie (1989, p.172)

- direct causation:
  - difficult to distinguish cause and effect temporally, and thus to view as two events
  - example: bumping a vase with your hand, thus causing it to fall
- indirect causation:
  - temporal and/or spatial separation between cause and effect
  - example: the gunsmith does not repair the sheriff's gun properly, causing him to be defenseless and to get shot

Direct and indirect causation

A common formal distinction:

- analytical/morphological/productive causatives express less direct causation
- lexical causatives express more direct causation

(10) Nivkh: *če-* 'dry' (intr)

a. *Lexical:*

If lep seu-d'
he bread dry

'He dried the bread (using the oven)'

b. *Morphological:*

If lep če -gu -d'
he bread dry CAUSATIVE

'He (unintentionally) let the bread dry'

Causee control

- productive causatives may be non-specific:

  (11) I brought it about that John left.

- but this can vary by verb:

  (12) a. I forced John to leave.

  b. I made John leave.

  c. I got John to leave.

- alternations in case marking:

  (13) Hungarian:

  a. én köhögtettem a gyerek-et.
  I caused-to-cough the child-ACC

  b. én köhögtettem a gyerek-kel.
  I caused-to-cough the child-INSTR

  - accusative, often used for things acted upon: less control
  - instrumental, often also used for 'demoted' passive subjects: more control

Focus: Japanese causatives

Japanese has both morphological and lexical causatives:

- 'Regular' (productive, morphological): affixation with *-(s)ase*

(15) a. Taroo ga hatarak-u
Taroo TOP work-NONPST
'Taroo works.'

b. Hanako ga Taroo o
Hanako TOP Taroo ACC
hatarak-ase-ru.
work-CAUS-NONPST
'Hanako makes Taroo work.'

Japanese causatives

- Irregular lexical causatives:

(16) No stem change:

a. Mado ga hirak-u.
Window TOP open-NONPST.
'The window opens.'

b. Taroo ga mado o hirak-u.
Taroo TOP window ACC open-NONPST.
'Taroo opens the window.'

(17) Suppletion:

a. Kaeru ga sin-da.
Frog TOP die-PAST
'The frog died.'

b. Taroo ga kaeru o koros-i-ta.
Taroo TOP frog ACC kill-PAST
'Taroo killed the frog.'

Review: *kill* and *cause to die*

(18) a. The soup was cool$_{\text{ADJ}}$.

b. The soup cooled$_{\text{INTR}}$.

c. Marie cooled$_{\text{TR}}$ the soup.

(19) a. The sheriff was dead.

b. The sheriff died.

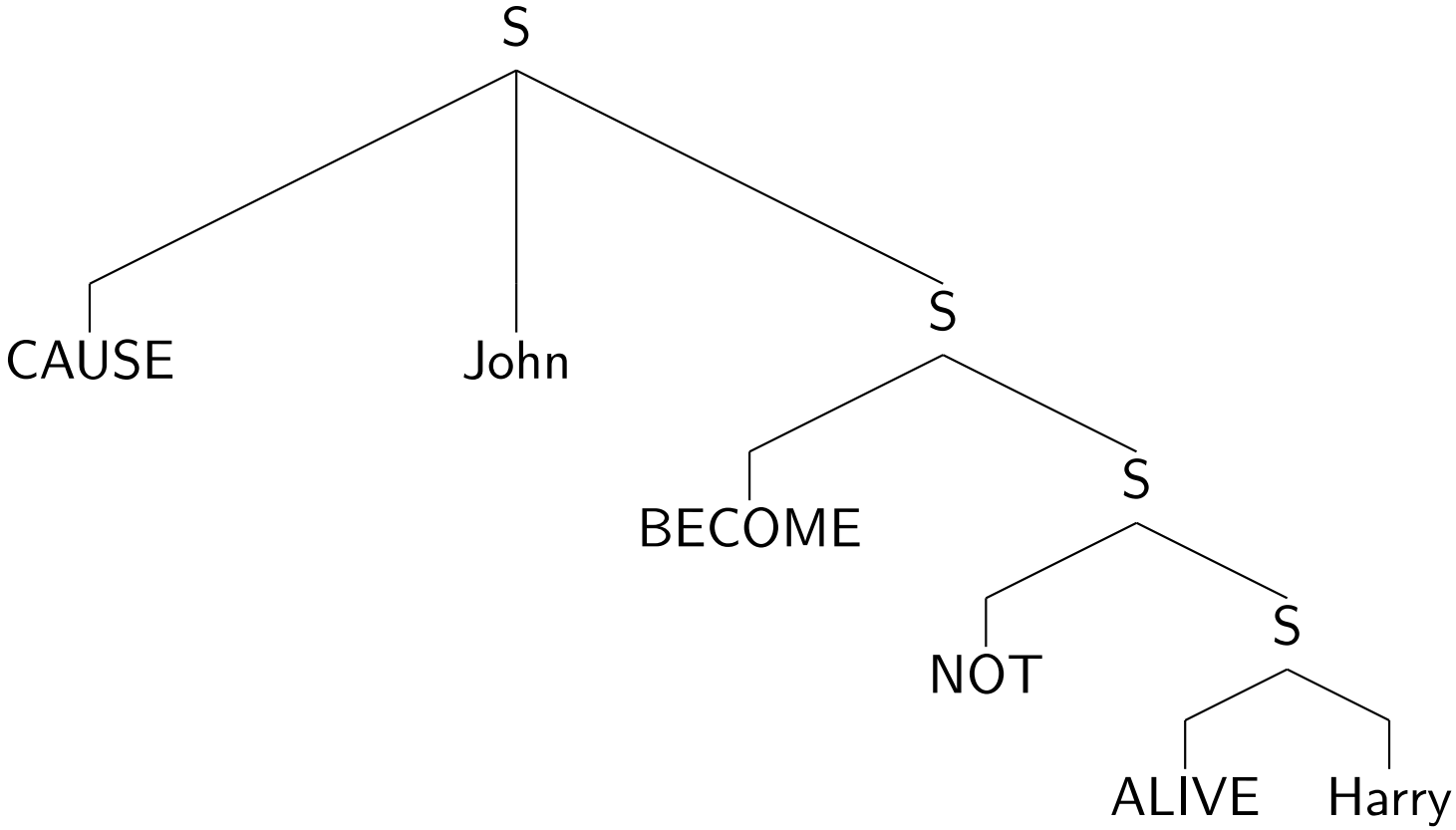
c. Black Bart killed the sheriff.

- Lakoff (1965): derive (18c) from (18b), which is in turn derived from (18a)
- McCawley (1968): derive *kill* in a similar fashion

McCawley's hypothesis

(20) John killed Harry.
John caused Harry to become not alive.

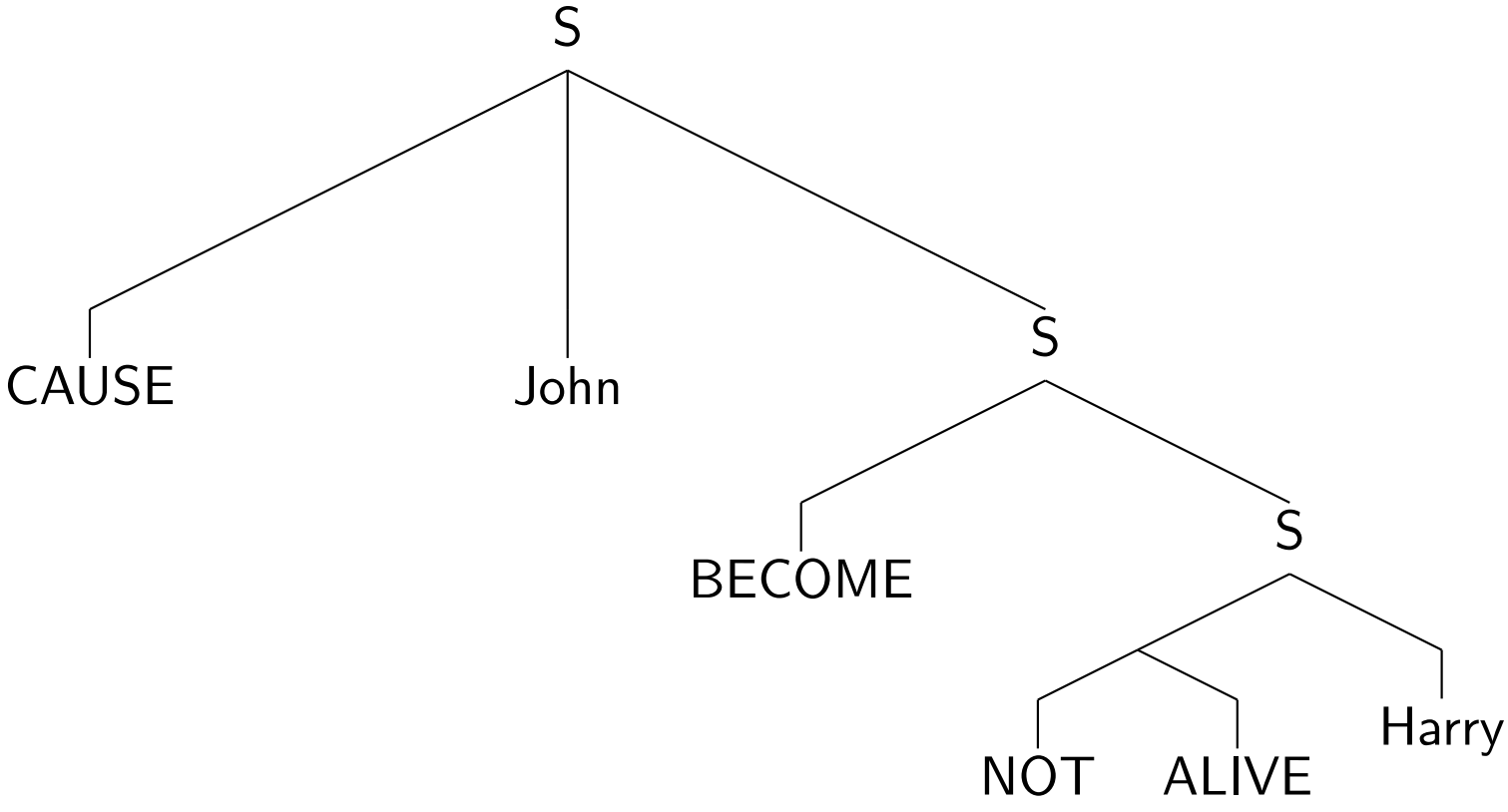
Underlying tree:



McCawley's hypothesis

(21) John killed Harry.
John caused Harry to become not alive.

Predicate raising:

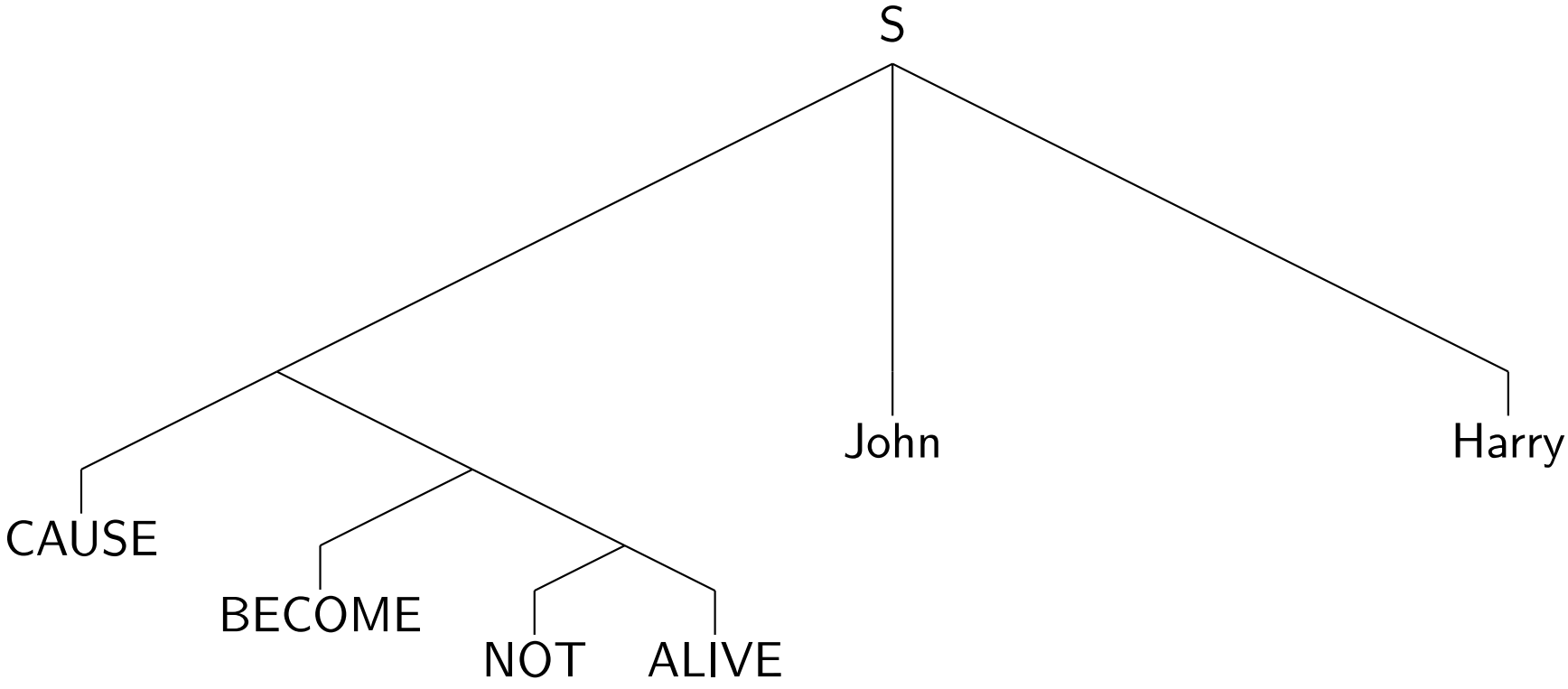


. . . applies twice more . . .

McCawley's hypothesis

(22) John killed Harry.
John caused Harry to become not alive.

Finally:



Crucially: the same underlying structure as the *cause to die* sentence

Lexical vs. productive causatives

Fodor (1970) argued against this derivation:

- there are syntactic and semantic differences between *kill* and *cause to die*
- *do so* replacement, temporal modification, instrumental adverbials

Shibatani (1976): lexical and productive causatives in Japanese show similar contrasts

- productive causatives involve an embedded structure (which is why the causee/embedded event can be targeted)
- lexical causatives are less structurally complex: this correlates with semantic differences as well
- productive causatives in English and Japanese are similar in terms of embedding

1. *Soo suru* test

Equivalent to the *do so* test:

- *sase*-causative creates ambiguity:

  (23) *Taroo ga otooto o tomar-ase-ru to, Ziroo mo* **soo si-ta**.
  'When Taroo made his brother stop, Ziroo did so, too.'

  a. modifying 'macro' situation: Ziroo stopped his (own) brother
  b. embedded: Ziroo himself stopped

- lexical causatives are not ambiguous: only the macro-interpretation is possible

  (24) *Taroo ga otooto o tome-ru to Ziroo mo* **soo si-ta**.
  'When Taro stopped his brother, Ziroo did so, too.'

2. Adverbial modification

This is a similar argument:

(25) I told Hanako to enter the room quietly.

- either: I spoke softly, or she should enter softly

Productive causatives are ambiguous, lexical are not:

(26) Taroo wa Hanako o kyuuni tomar-ase-ta.
Taroo TOP Hanako ACC suddenly stop-CAUS-PAST
'Taroo made Hanako stop suddenly.'

a. main clause: Taroo's causing action was sudden

b. embedded: Hanako's stop was sudden

(27) Taroo wa Hanako o kyuuni tome-ta.
Taroo TOP Hanako ACC suddenly stop-PAST
'Taroo stopped Hanako suddenly.'

a. only: Taroo acted suddenly.

Semantic differences

Productive causatives have variation in **coerciveness**:

- in English: we can modify a causative

  (28) a. I caused John to go by suggesting that he do so.
  b. I caused John to go by forcing him to do so.

- or by selecting a different periphrastic causative (e.g., *make*
- Japanese productive causatives have a case alternation:

  (29) a. Taroo ga Ziroo **o** ik-ase-ta.
  Taroo NOM Ziroo ACC go-CAUS-PST
  'Taroo made Ziroo go.'
  b. Taroo ga Ziroo **ni** ik-ase-ta.
  Taroo NOM Ziroo DAT go-CAUS-PST
  'Taroo got Ziroo to go.'

- related to Comrie's 'causee control' parameter

Directive vs. manipulative causation

- Shibatani: *manipulative* causation involves physically acting on the causee (also coercive and direct)
- Japanese lexical causatives have both interpretations:

(30) a. Boku wa isu o heya ni ire-ta.
1SG TOP chair ACC room LOC put-PST
'I put the chair in the room.'

b. Boku wa Taroo o heya ni ire-ta.
1SG TOP Taroo ACC room LOC put-PST
'I put Taroo in the room.'

- productive causatives are usually directive

(31) *Boku wa isu o/ni heya ni
1SG TOP chair ACC/DAT room LOC
hair-ase-ta.
enter-CAUS-PST
'I made/had the chair enter the room.'

- Exceptions: productive causative can express manipulative causation if there's no lexical causative

Direct vs. indirect causation

Shibatani distinguishes this from the directive/manipulative distinction:

- both directive and manipulative involve the causer acting on or towards the causee (both are a form of direct causation)
- indirect causation involves 'steps'
- lexical causatives rarely express indirect causation
- e.g., for something like feelings, which cannot be manipulated directly, we have only productive causative:

(32) Taroo wa Hanako o kanasim-ase-ta.
Taroo TOP Hanako ACC sad-CAUS-PST
'Taroo made Hanako sad.'

Explaining the alternations

Lexical and productive causatives vary in a number of ways:

- in both Japanese and English, productive causatives seem to have a more complex structure than lexical causatives
- the structure of lexical causatives seems to correlate with a tighter-knit event structure
- corresponding to the direct/indirect distinction
- the distinction isn't absolute

  (33) Context: Bill tampered with the sheriff's gun, causing it to misfire and leading to the sheriff's being shot.

  a. Bill caused the sheriff to die.

  b. ??Bill killed the sheriff.

- (a) is odd if Bill shot the sheriff himself, but

  (34) Bill caused the sheriff to die. / *No, he killed the sheriff.

Conversational implicature

McCawley (1978):

- we can explain the apparent specialization, and the exceptions by assuming that lexical causatives are restricted to direct causation
- if we buy the argument that, e.g., *kill* does not correspond to an embedded structure, then this implicitly postulates a connection between sentential embedding and (conceptual) event structure
- idea: lexical causatives conceptualize causative situations as one complex event, productive causatives involve two events

The basic explanation: the availability of a specialized alternative has consequences for interpretation

(35) a. Some of the students did the homework.
$\rightsquigarrow$ Not all of the students did the homework.

b. Some of the students did the homework; actually, they all did!

Conversational implicature

Since this account is based on the existence of alternatives:

- we predict that, where there is no lexical causative, the indirect causation inference will not arise

(37) a. Bill caused Mary to lose her balance . . . by shoving her

b. . . . by making a loud noise.

- we find the same in Japanese: no lexical alternative for *hameru* (= put on)

(38) Taroo wa Ziroo ni tebukuro o hame-sase-ta.
Taroo TOP Ziroo DAT gloves ACC put-CAUS-PST

a. Taro made Ziroo put the gloves on.

b. Taroo put the gloves on Ziroo.

Open issues

- McCawley also suggests this can explain the conventional/non-conventional activity contrasts in Japanese
- can it explain other distinctions:
  - coercive/non-coercive?
  - permissive/ordinary?
  - directive/manipulative?

Suppose the story so far is right:

- *kill* should not be derived from *cause to die*
- what about *cool* and other causative verbs?
- where does the causative meaning come from in lexical causatives?
- what does it share with *cause* or *-(s)ase*?
- from the beginning: is the counterfactual assumption correct?

Coming up

Rearranging the schedule

- next week: other ways of looking at direct and indirect causation
- check the website tomorrow morning, after 9am, for the reading and some response questions to help guide you