Lecture 17: ECM. Control.

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Outline

① ECM Constructions

② Control Constructions
    Subject Control
    Object Control

③ Idioms and Weather *It*

④ Null-Subjects
    PRO
    PRO_{arb}
    pro

ECM Constructions

ECM Constructions

- Compare the following examples:
  - (1-a) and (2-a) are examples of a Raising infinitive.
  - (1-b) and (2-b) are similar but the embedded subject is allowed to stay inside the embedded clause.
  - What is the difference between seem and appear on one hand and consider and believe on the other?

(1)   a.   John$_i$ seems [____$_i$ to like the cake].
      b.   Sue believed [John to have liked the cake].

(2)   a.   Jill$_i$ appears [____$_i$ to be the best candidate].
      b.   Pat considers [Jill to be the best candidate].

ECM Constructions

Case theory and θ-theory

(3) a.   John$_i$ seems [___$_i$ to like the cake].   (Raising)
     b.   Sue believed [John to have liked the cake].   (ECM)

Similarities:

❶ Both seem and believe assign THEME θ-role to the embedded clause.

❷ John receives (EXP) θ-role from the embedded verb like.

❸ Embedded clauses are infinitival, the embedded T does not assign Case.

Differences:

❶ Believe assigns a θ-role to its subject, seem doesn't.

❷ In ECM embedded subject stays; in Raising it must move for Case reasons.

Question: How does the embedded subject in ECM construction get its Case?

θ-roles

θ-role difference

- θ-role difference between verbs like seem, to be likely and believe, consider is essential:
  - Nobody is doing "seeming" in *John seems to like the cake*.
  - Sue is "believing" in *Sue believed John to have liked the cake*.
- This accounts for the fact that the subject of the embedded clauses with verbs like believe, consider cannot raise to the matrix clause:
  - If it does, it will get θ-roles from two distinct verbs, in violation of the θ-criterion.

The θ-Criterion

- Every θ-role must be assigned to a unique argument; and
- Every argument must receive a unique θ-role.

θ-roles

θ-role difference

- **Also**: the embedded subject is **not** an argument of the matrix verb consider, believe, etc:
    - *Sue believed John to have liked the cake* does **not** imply that *Sue believed John*.
    - *Pat considers Jill to be the best candidate* does **not** imply that *Pat considers Jill* (for job or for anything else!).
- Embedded subject is an argument of the embedded verb and gets a θ-role from it!

- Another evidence for it is that ECM verbs allow expletive embedded subject (which doesn't need a θ-role):
    (4)   a.   Sue believes it to be raining.
           b.   Sue believes it to be obvious that the Earth is flat.

Case on the embedded subject

Case theory and θ-theory

(5) a. John$_i$ seems [___$_i$ to like the cake]. (Raising)
   b. Sue believed [John to have liked the cake]. (ECM)

Case

- How does the embedded subject (*John*) gets Case?
  - Recall that in raising construction, subject of the embedded clause had to raise to the matrix clause to get nominative case.

Mystery of the name ECM

- Verbs like believe and consider can assign accusative case to the subject of the embedded clause: Exceptional Case Marking (ECM).

(6)   Sue considers John to be an idiot.
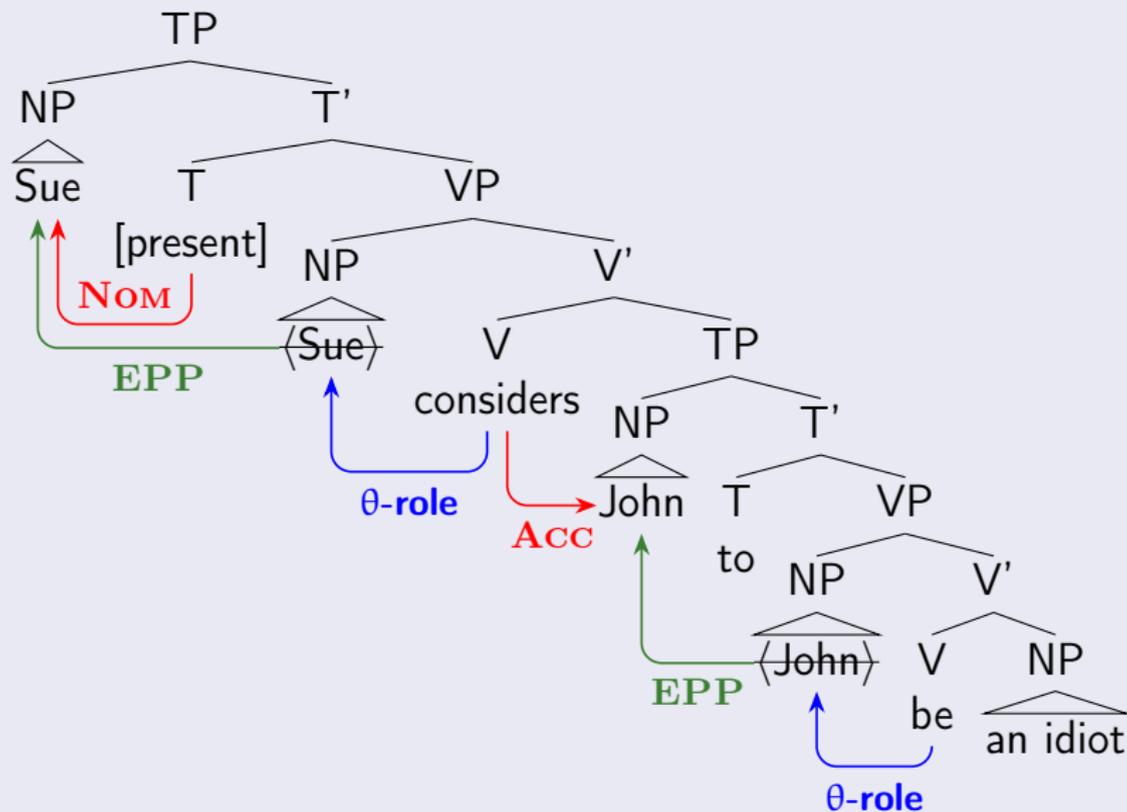
On Exceptional Case Marking

- This type of case marking is called exceptional because NP getting Case is not an argument of the verb that assigns Case.
  - Accusative case is assigned under adjacency: can't have C in the embedded clause — it would prevent case assignment.
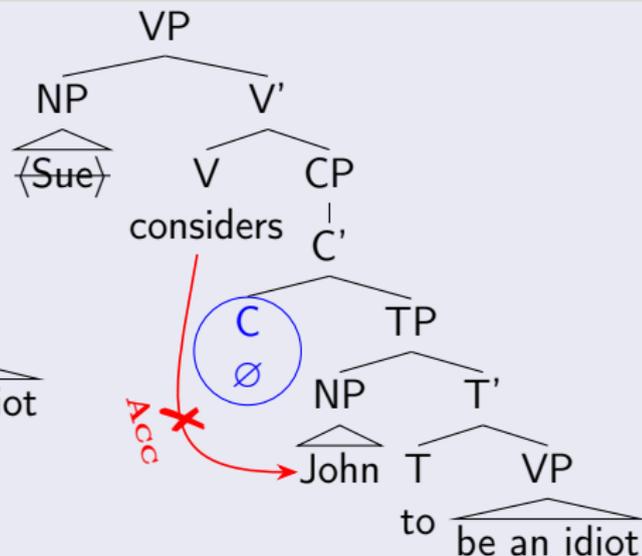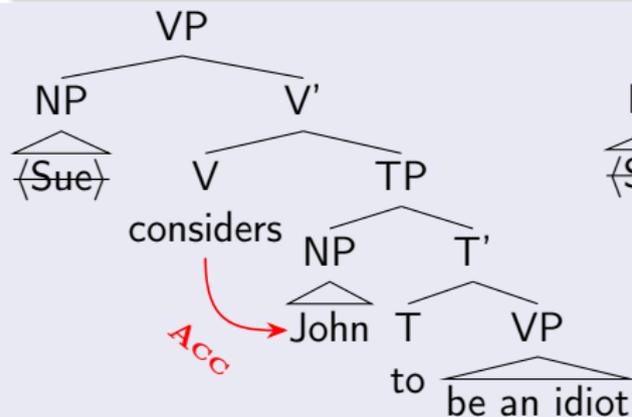
Passive+ECM

- In ECM constructions, the embedded subject gets case from the matrix verb, such as believe or consider.
- What would happen is the matrix verb doesn't assign accusative case anymore, i.e. it is passive?
  - We saw that passives lack accusative case and external θ-role.
- The embedded subject will have to raise: passive form to be believed or to be considered lacks Accusative case and lacks external θ-role — it is exactly like seem and to be likely!
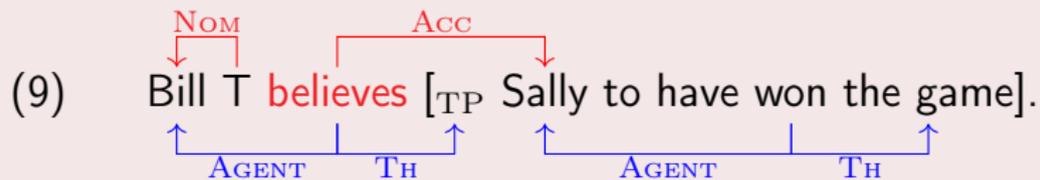
(7)   a.   Sally$_i$ is believed [___$_i$ to have made up her mind].
        b.   The new building$_i$ is predicted [___$_i$ to collapse].

(8)   a.   Sally$_i$ seems [___$_i$ to have made up her mind].
        b.   The new building$_i$ is likely [___$_i$ to collapse].

ECM Constructions: Summary

In Exceptional Case Marking (ECM) constructions:

- There is a class of verbs that are called ECM-verbs: *believe*, *consider*, etc.
- All θ-roles are assigned locally:
    - ECM verbs assign an external θ-role to its subject and an internal θ-role to the non-finite clause.
    - Embedded non-finite verb assigns its full set of θ-roles.
- Such verbs also assign Accusative Case to the embedded subject under adjacency.
    - Usually, accusative case is assigned to arguments only (that's why these constructions are exceptional).
- Such verbs select infinitival TP and not CP: C would block accusative case assignment.

ECM Constructions: Summary

(9)   Bill T believes [$_{TP}$ Sally to have won the game].

NOM   ACC
AGENT   TH   AGENT   TH

Control Constructions

Control constructions

Verbs that allow *for*-complements can often appear without them:

(10)   a.   I want [for Sally to get the job].

         b.   Bill would be happy [for her to win the game].

         c. ??Sue tried [for John to get elected].[a]

(11)   a.   I want [to get the job].

         b.   Bill would be happy [to win the game].

         c.   Sue tried [to get elected].

We may also compare (11) with raising constructions:

(12)   a.   Sally is certain [to get the job].

         b.   Bill seems [to have won the game].

         c.   John is likely [to get elected].

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[a]In some dialects this one is good, in some it's bad. The version without *for* is always good.

Control constructions

(13) Bill T wants [CP for Sally to win the game]. (*for*-ininitive)
Nom
Acc
Agent Th Agent Th

(14) Sally_i is likely [TP ____i to win the game]. (Raising)
Nom
Th Agent Th
Move (EPP)

(15) Bill T believes [TP Sally to have won the game]. (ECM)
Nom
Acc
Agent Th Agent Th

(16) Bill T wants [CP/TP to win the game]. (Subject control)
Nom
Exp Th
Agent Th

Control vs. Raising

Major difference between Raising and Subject control:

- Number of the matrix verb θ-roles.
- Can we assume that in Subject control construction the subject raised to the main clause, like in Raising construction?
    - No! It is a violation of θ Criterion: *Bill* receives 2 θ-roles!
- In Subject Control, *Bill* is also an argument of the main verb.

(17)   Bill$_i$ is likely [$_{TP}$ ___$_i$ to win the game].   (Raising)

(18)   Bill T hopes [$_{CP/TP}$ to win the game].   (Subject control)
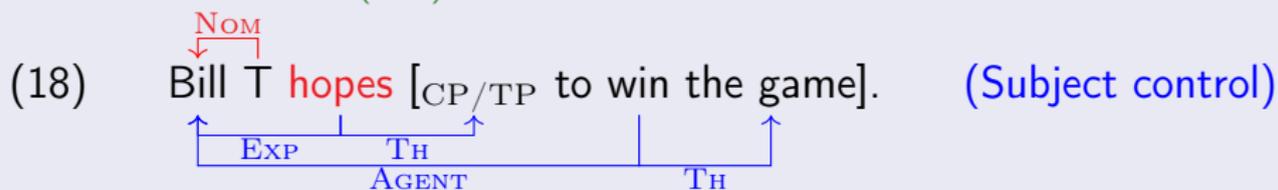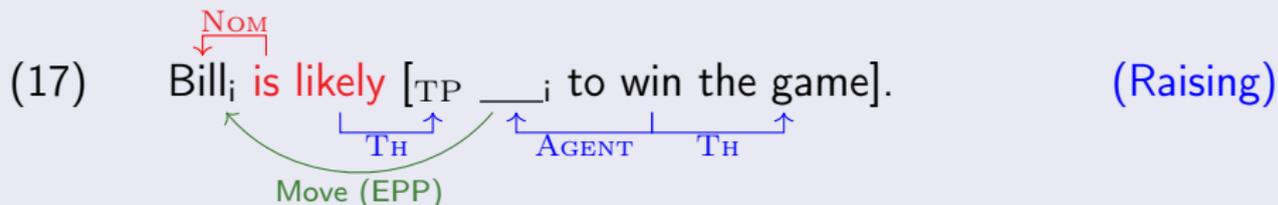
Control vs. Raising

- *To hope* and *to win* must have separate arguments to satisfy:
  - θ-criterion;
  - Locality of selection.

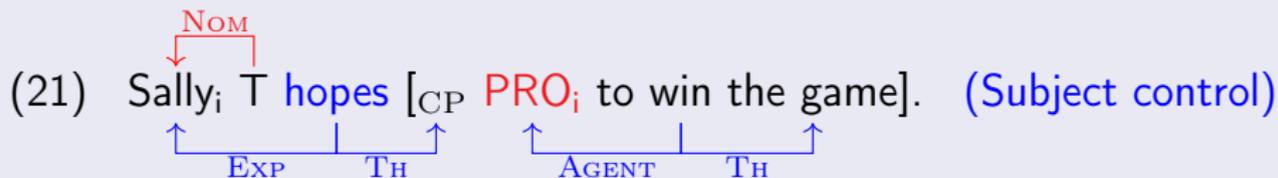(19)   Sally$_i$ hopes that she$_i$ wins the game.   (same meaning)

- Can't have a pronoun in the non-finite clause: ✗Case.

- We assume that there is an unpronounced argument in the embedded clause. It is called PRO: a special phonologically null pronoun.

- The subject of the matrix clause (*Sally*) controls what the PRO refers to: Subject control.

(20) Sally$_i$ T hopes [$_{\text{CP/TP}}$ PRO$_i$ to win the game].

Control vs. Raising

- In Subject control constructions, the embedded clause is a CP
  - Complementizer is empty ∅ if the embedded subject is PRO.
  - Complementizer is *for* if the subject is pronounced.
- What about Case on PRO? Two possibilities:
  - PRO does not need a case: that's why it's special!
  - PRO gets a special case assigned by the infinitival *to*. Pronounced NPs are incompatible with this special case.

(21) Sally$_i$ T hopes [$_{CP}$ PRO$_i$ to win the game]. (Subject control)

Nom · Exp · Th · Agent · Th

(22) ?Bill T wants [$_{CP}$ for Sally to win the game]. (*for*-inifinitive)

Nom · Agent · Th · Acc · Agent · Th

(23)   Sally$_i$ wants [PRO$_i$ to win the game].
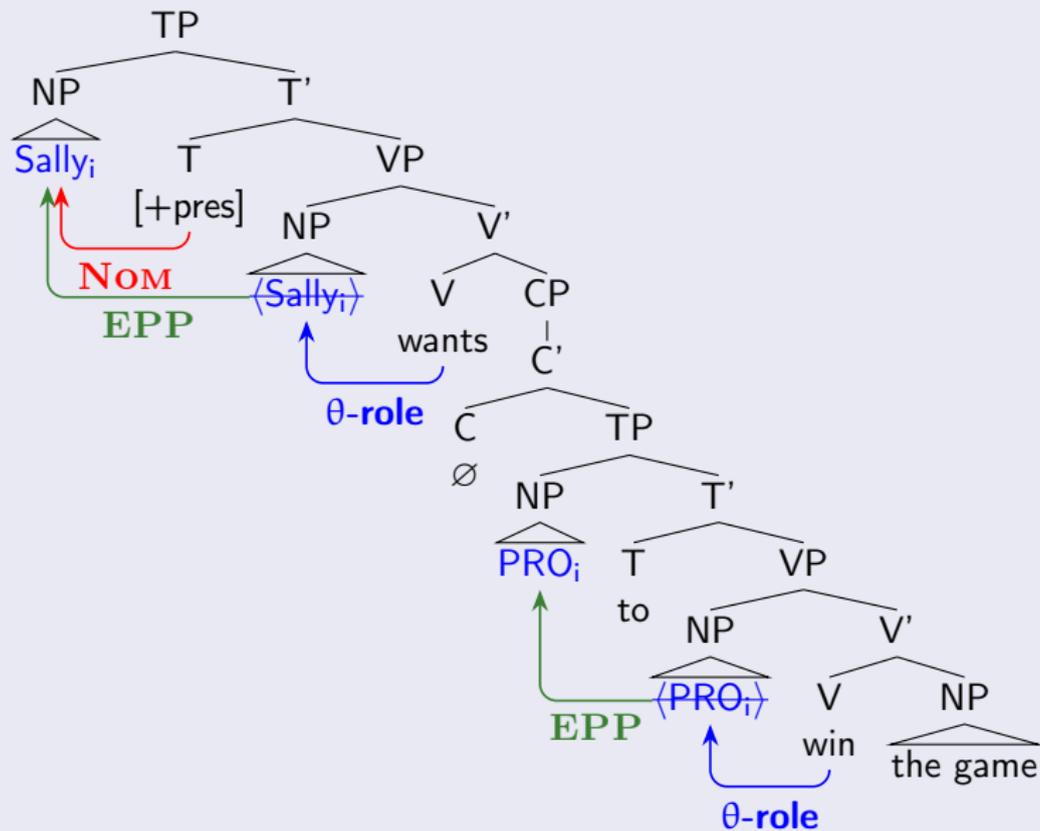
Nature of PRO

Which of the sentences in (25) has the same meaning as (24)?

(24) Only Churchill hoped [PRO to give the speech].

(25) a. Only Churchill hoped [that Churchill would give the speech].
      b. Only Churchill hoped [that he would give the speech].
      c. Only Churchill hoped [that he himself would give the speech].

- First two sentences in (25) are false if there is someone else who hoped that Churchill would give the speech.
- Only (25-c) is the same as (24).
- So, PRO has the same nature as himself/herself.

On CP in Control, Raising, and ECM Constructions

Icelandic

In Icelandic, finite embedded clauses have complementizer að:

(26) María segir að þú hafir lesið bókina.
      Mary$_{NOM}$ says that you$_{NOM}$ have read book.the$_{ACC}$
      'Mary says that you have read the book.'

In control construction, the complementizer að is present:

(27) María lofaði að lesa bókina.
      Mary$_{NOM}$ promised that to.read book.the$_{ACC}$
      'Mary promised to read the book.'

On CP in Control, Raising, and ECM Constructions

Icelandic

But in raising constructions, the complementizer að is impossible:

(28)   a. *María   hafði virst   að   hafa   vaskað upp
           Mary$_{\text{NOM}}$ had   seemed that to.have washed up
           diskana.
           dishes.the$_{\text{ACC}}$
           'Mary had seemed to have washed up the dishes.'
       b. María   hafði virst   ∅ hafa   vaskað upp
           Mary$_{\text{NOM}}$ had   seemed   to.have washed up
           diskana.
           dishes.the$_{\text{ACC}}$
           'Mary had seemed to have washed up the dishes.'

On CP in Control, Raising, and ECM Constructions

Icelandic

In ECM constructions, the complementizer að is also impossible:

(29) a. *Við teljum að frambjóðendurna vera
we$_{\text{NOM}}$ believe that candidates.the$_{\text{ACC}}$ be
frambærilega.
pretty good
'We believe the candidates to be pretty good.'

b. Við teljum ∅ frambjóðendurna vera frambærilega.
we$_{\text{NOM}}$ believe candidates.the$_{\text{ACC}}$ be pretty good
'We believe the candidates to be pretty good.'

Why PRO is necessary*

It is possible to entertain the hypothesis that PRO is not necessary and the same NP satisfies argument properties of both matrix and embedded verb. But it might not work for Icelandic.

In Icelandic, some verbs have dative case subjects:

(30) a. Strákarnir   komust   allir   i   skóla.
          the-boys.NOM got   all.NOM.PL.M in school
          'The boys all got to school.'

      b. Strákanum   leiddist   öllum   i   skóla.
          the-boys.DAT was-bored all.DAT.PL.M in school
          'The boys were all bored in school.'

Why PRO is necessary*

The subject of the embedded control clause (PRO) can have a case different from the subject of the matrix clause:

(31)   a.   Strákarnir   vonast til að   PRO komast
             the-boys.NOM hope   for that   get
             allir   í skóla.
             all.NOM.PL.M in school
             'The boys hope to all get to school.'

          b.   Strákarnir   vonast til að   PRO leidhast ekki
             the-boys.NOM hope   for that   be-bored not
             öllum   í skóla.
             all.DAT.PL.M in school
             'The boys hope to all not be bored in school.'

Subject control: Summary

In Subject control constructions:

- There is a class of verbs that are called subject control-verbs: *hope*, *try*, etc.
- All θ-roles are assigned locally:
  - Subject control verbs assign an external θ-role to its subject and an internal θ-role to the non-finite clause.
  - Embedded non-finite verb assigns its full set of θ-roles.
- The subject of the embedded clause and the subject of the matrix clause refer to the same entity.
- The subject of the embedded clause is a special type of pronoun, PRO, which does not need case and obligatory refers to the matrix subject.
- Such verbs select infinitival CP with an empty complementizer.

Subject control constructions: Summary

(32) Sally$_i$ T hopes [$_{CP}$ PRO$_i$ to win the game].
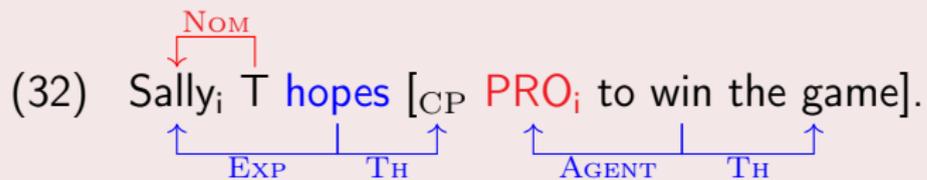
Object control verbs

- believe is an ECM verb:

  (33)   a.   John believes [Bill to have slept].
         b.   John believes [that Bill has slept].
         c.   *John believes Bill [that Mary has slept].

- Now compare it with the verb convince:

  (34)   a.   John convinced Bill to sleep.
         b.   *John convinced [that Bill has slept].
         c.   John convinced Bill [that Mary should sleep].

While sentences a. seem similar, there are some grammaticality differences in sentences b. and c.

Object control verbs

(35) a. John believes [Bill to have slept]. (ECM)
     b. John convinced Bill to sleep. (???)

- Verbs believe and convince have different argument structure.
- believe has an external EXPERIENCER argument and **one** internal THEME argument, in this case an infinitival clause.
- convince has an external AGENT argument and **two** internal arguments: PATIENT — the person who had been convinced, and THEME — an infinitival clause indicating what the patient was convinced to do: such verbs are called Object Control verbs.

Internal argument

Expletive *it*

- In case of ECM verbs, we can have an expletive it as an argument:

  (36) a. John believes it to be obvious that Bill left.
        b. John believes it to be raining.

- In case of Object Control verbs, it leads to ungrammaticality:

  (37) a. *John convinced it to be obvious that Bill left.
        b. *John convinced it to be raining.

Internal argument

Active and passive embedded clauses

- Active and passive sentences usually have the same meaning.

  (38) a. Brett drank beer.
        b. Beer was drunk by Brett.

- ECM verbs: both active and passive embedded clauses are possible:

  (39) a. Mark believes Brett to have drunk beer.
        b. Mark believes beer to have been drunk by Brett.

- Object Control verbs: grammaticality/acceptability differs:

  (40) a. Mark convinced Brett to drink beer.
        b. *Mark convinced beer to be drunk by Brett.

Internal argument

Idioms

- Idioms are ok with ECM verbs:

  (41) a. John believes the shit to have hit the fan.
        b. Sue believes the cat to be out of the bag.

- Idioms are illicit with Object control verbs: idiom subject would receive a θ-role from the matrix verb (can only get literal awkward meaning)!

  (42) a. *John convinced the shit to hit the fan.
        b. *Sue convinced the cat to be out of the bag.

θ-roles and object control

(43) John T convinced [$_{XP}$ Bill to sleep].
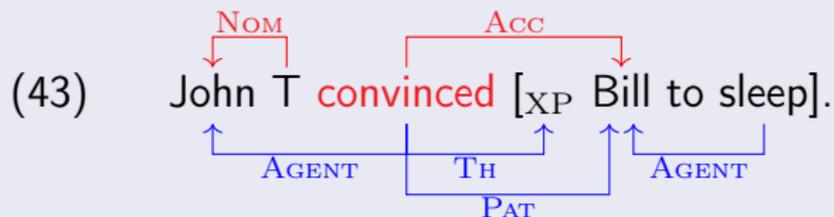
Problem: Bill receives two θ-roles!

- We will assume the similar analysis as for Subject Control constructions: Bill is in the matrix clause and it controls PRO, which is the subject of the embedded clause.

- We will also assume the embedded clause to be a CP.

Object Control vs. Subject Control

(44)   John T convinced Bill$_i$ [$_{CP}$ PRO$_i$ to sleep]. (Object Control)

Nom · Acc · Agent · Pat · Th · Agent

(45)   Sally$_i$ T hopes [$_{CP}$ PRO$_i$ to win the game]. (Subject Control)

Nom · Exp · Th · Agent · Th

- In Object control sentences, the subject of the embedded clause is PRO and it is controlled by the matrix object.

- In Subject control sentences, the subject of the embedded clause is PRO and it is controlled by the matrix subject.

ECM vs. Object control

(46)   John T convinced Bill$_i$ [$_{CP}$ PRO$_i$ to sleep]. (Object Control)

With role labels: Nom (John), Acc (Bill), Agent (John), Pat (Bill), Th, Agent (PRO)

(47)   John T believes [$_{CP}$ Bill$_i$ to have slept]. (ECM)

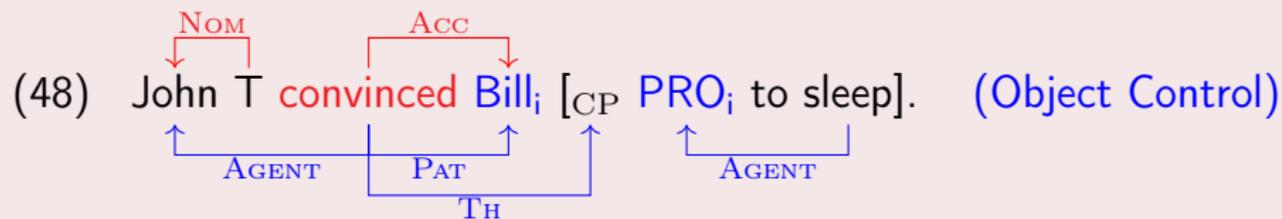With role labels: Nom (John), Acc (Bill), Agent (John), Th (Bill), Agent

- Object control verbs: two θ-roles, one external, one internal.
- ECM verbs: three θ-roles, one external, two internal.
  - We have so far avoided ditransitive verbs. Let's have ternary branching for two objects for now.

Object Control: Summary

In Object control constructions:

- There is a class of verbs that are called object control-verbs: *convince*, *persuade*, etc.
- All θ-roles are assigned locally:
  - Object control verbs three θ-roles: one external θ-role to its subject and two internal θ-roles: THEME to the non-finite clause, and PATIENT to the object.
  - Embedded non-finite verb assigns its full set of θ-roles.
- The subject of the embedded clause is PRO; the object of the matrix clause and PRO refer to the same entity.
- Such verbs select infinitival CP with an empty complementizer.

Objects Control: Summary

(48) John T convinced Bill$_i$ [$_{CP}$ PRO$_i$ to sleep].   (Object Control)

Idioms and Weather *It*

Idioms

- Idioms are set phrases, meaning of which cannot be derived from the meaning of parts:

(49)   a.   The shit hit the fan.
          b.   The cat is out of the bag.
          c.   The pot is calling the cattle black.

- The subjects of idioms are not interpreted literally and cannot be associated with θ-roles.
- So, in constructions where subjects get a separate θ-roles, idioms can not preserve their meaning.

Idioms

(50)   a.   The shit hit the fan.
     b.   The shit$_i$ is likely [___$_i$ to hit the fan].   (Raising)
     c.   I arranged [for the shit to hit the fan].   (*for*-Infinitive)
     d.   John believed [the shit to have hit the fan].   (ECM)
     e.   The shit$_i$ is believed [___$_i$ to have hit the fan]. (ECM/Pass.)
     f.#The shit$_i$ wants [PRO$_i$ to hit the fan].   (Subject Control)
     g.#I convinced the shit$_i$ [PRO$_i$ to hit the fan]. (Object Control)

- In all non-finite construction, except Control, the idiom part *the shit* starts as an argument of the embedded idiom verb *hit*.
- In Control constructions, the upper instance of *the shit* gets its own θ-role from the matrix verb — EXP/PAT — so it's only possible to have a literal reading.

Meteorological *it*

For exactly the same reasons, weather *it* behaves in the same way: it is unacceptable in subject control constructions, because *it* cannot have a θ-role:

(51) a. It is cold.
   b. It$_i$ is likely [___$_i$ to be cold].   (Raising)
   c. I arranged [for it to be cold].   (*for*-Infinitive)
   d. John believed [it to be cold].   (ECM)
   e. It$_i$ is believed [___$_i$ to be cold].   (ECM/Pass.)
   f. *It$_i$ wants [PRO$_i$ to be cold][a].   (Subject Control)
   g. *I convinced it$_i$ [PRO$_i$ to be cold].   (Object Control)

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[a]Control sentences are ok if *it* is a "real" referential pronoun (i.e. refers to some animal), and is not an expletive.

Null-Subjects

PRO subjects

We saw that in Control constructions, PRO is the subject of the embedded clause:

- PRO must refer to something that comes before it (requires a coreferent).
- PRO does not need Case, so it can only be the subject of non-finite clauses.

(52)   a.   Sally$_i$ wants [PRO$_i$ to dance].
       b.   *Sally$_i$ thinks [that PRO$_i$ danced].   ✗Case
       c.   *PRO likes jazz.   ✗Case, Coreferent

Arbitrary PRO

There is another type of PRO: PRO$_{arb}$ — arbitrary PRO.

- Still cannot have case.
- Can occur in generic constructions, and does not need linguistic coreferent.

(53) a. [PRO$_{arb}$ to eat vegetables] is healthy.
      b. [PRO$_{arb}$ to live] is [PRO$_{arb}$ to dance].
      c. It is interesting [PRO$_{arb}$ to study syntax].
      d. [PRO$_{arb}$ eating mushrooms] is dangerous.

Little *pro*

There are situations when the subject of finite clause is empty:

(54) *Italian*

Speaker A: Maria è tornata?
Maria is returned?
'Has Maria returned?'

Speaker B: Sì, ∅ è tornata.
Yes, is returned
'Yes, she has returned.'

- Null-subjects of finite clauses exist in Italian, Spanish, Chinese, Korean, etc.

- In this case, we say that the subject is *pro* — "little *pro*."

(55) Sì, *pro* è tornata.

Little *pro*

- Languages that allow little *pro* are called *pro*-drop languages:
    - Spanish, Italian, Portuguese, Chinese, Japanese, Korean, some Slavic Languages, Greek, Arabic, Turkish

pro in English

English is not a *pro*-drop language, but there are cases where *pro* is allowed.

- Imperatives:

    (56)   Don't *pro* go there!

- Truncated null subjects:

    (57)   Did you find your pen?
            No, *pro* can't find it!