24.902: Covert Movement

(1) **What** did John buy__?

(2) a. Taroo-wa nani-o katta no?  [Japanese]
   Taroo TOP what ACC bought Q
   ‘What did Taroo buy?’

   b. Bkrashis-lags-gi gare gzigs-gnang-pa -red pas?  [Tibetan]
   Tashi HON ERG what buy do PAST AGR Q
   ‘What did Tashi buy?’

   c. C’am’it mir cak’ara:nim?  [Chaha]
   C’am’it what cooked
   ‘What did C’am’it cook?’

   d. Qiaofong mai -le sheme (ne)  [Chinese]
   Qiaofong buy ASP what Q
   ‘What did Qiaofong buy?’

   e. Ya um hakiv tuwa?  [Hopi]
   Q you who-ACC found
   ‘Who did you find?’

• possibility 1: there is no wh-movement in these languages.
• possibility 2: there is wh-movement, but it's hard to see.
Some Island Effects for covert movement

(3)  a. Why did Mary say that John read that book?
    b. Why will Mary get angry if John reads that book?
    c. Why did Mary meet a person who read that book?
    d. Why did Mary ask whether John read the book?

(4)  a. Mary shuo [John weishenme mai shu]?
    Mary say John why buy book
    'What's the reason X such that Mary said that John, for X, bought the book?'
    b.* Mary [zai John weishenme mai shu yihou] shengqi le?
        Mary at John why buy book after get.angry Perf
        'What's the reason X such that Mary got angry after John, for X, bought a book?'
    c.* Mary zui xihuan [weishenme mai shu de ren]?
        Mary most like why buy book C person
        'What's the reason X such that Mary likes the person who, for X, bought the book?'

(5)  a. Mary-wa [John-ga sono hon-o naze yonda to] itta no?
    Mary TOP John NOM that book ACC why read that said Q
    'What's the reason X such that Mary said that John, for X, read that book?'
    b.* Mary-wa [John-ga sono hon-o naze yondara] okoru no?
        Mary TOP John NOM that book ACC why read-if get.angry Q
        'What's the reason X such that Mary will get angry if John, for X, reads that book?'
    c.* Mary-wa [sono-hon -o naze yonda] hito-to atta no?
        Mary TOP that book ACC why read person-with met Q
        'What's the reason X such that Mary met a person who, for X, read that book?'
    d.* Mary-wa [John-ga naze sono hon -o yonda ka dooka] tazuneta no?
        Mary TOP John NOM why that book ACC read whether asked Q
        'What's the reason X such that Mary asked whether John, for X, read that book?'

--> wh-phrases aren't pronounced as though they're moved, but if we say they're moved, we can capture their island effects.
...wait a minute, though:

(6) a. What did Mary say that John read?
   b.* What will Mary get angry if John reads?
   c.* What did Mary meet a person who read?
   d.* What did Mary ask whether John read?

(7) a. Mary shuo [John mai shenme]?
   Mary say John buy what
   'What did Mary say that John bought?'

   b. Mary [zai John mai shenme yihou] shengqi le?
      Mary at John buy what after get.angry Perf
      'What did Mary get angry after John bought?'

   c. Mary zui xihuan [mai shenme de ren]?
      Mary most like buy what C person
      'What does Mary like the person who bought?'

(8) a. Mary-wa [John-ga nani-o yonda to] itta no?
   Mary TOP John NOM what ACC read that said Q
   'What did Mary say that John read?'

   b. Mary-wa [John-ga nani-o yondara] okoru no?
      Mary TOP John NOM what ACC read-if get.angry Q
      'What will Mary get angry if John reads?'

   c. Mary-wa [nani-o yonda] hito-to atta no?
      Mary TOP what ACC read person-with met Q
      'What did Mary meet a person who read?'

   d.* Mary-wa [John-ga nani-o yonda ka dooka] tazune no?
      Mary TOP John NOM what ACC read whether asked Q
      'What did Mary ask whether John read?'

...for some wh-words (like 'why'), islands reliably appear, while for others (like 'what') they don't (except for wh-islands, at least for Japanese, where they show up again).

Rats.
(9)  
   a.*Whose did he buy [ _ car]?
   b. [Whose car] did he buy?

(10)  
   a. Čju on kupil [ _ mašinu]? [Russian]
        whose he bought    car
   b. [Čju mašinu] on kupil?
        whose car      he bought

(11)  
   a. [What] do you think [that John bought _ ]?
   b.* [That John bought what] do you think?

(12)  
   a. [Ima -ta -taij] ya -ngui [Juan __ randi-shka-ta]?
        what ACC INT think 2 Juan buy NLZ ACC
        'What do you think that Juan bought?'
   b. [Ima-ta Juan randi-shka-ta-taj] ya -ngui?
        what ACC Juan buy NLZ ACC INT think 2
        '[that Juan bought what] do you think?'

--> pied-piping possibilities vary from language to language...

(13)  
   a.* [Ima-ta-taj] riku-rka-ngui [ __ randi-shka runa-ta]?
        what ACC INT see PAST 2 buy NLZ man ACC
        'What did you see [the man who bought __ ]?'
   b. [Ima-ta randi-shka runa-ta-taj] riku-rka-ngui?
        what ACC buy NLZ man ACC INT see PAST 2
        '[the man that bought what] did you see?'

--> and pied-piping is sometimes used to circumvent islands.
   how Q it.is.big fish your spirit be.happy
   ‘How big do you want [a fish that is __ ]?’

   b. [Waa kligéiyi xáát sá] i tuwáa sigóo?
      how it.is.big fish Q your spirit be.happy
      ‘[A fish that is how big] do you want?’

(15) a.* [Zer] joan ziren hemen-dik [ __ ikusi ondoren]? [Basque]
   what go AUX here from see after
   'What did they leave [after seeing __ ]?'

   b. [Zer ikusi ondoren] joan ziren hemen-dik?
      what see after go AUX here from
      '[after seeing what] did they leave?'

(16) a.* [Nork] irakurri du Peruk [ __ idatzi zuen liburua]?
      who read AUX Peter wrote AUX book
      'Who did Peter read [the book that __ wrote]?

   b. [Nork idatzi zuen liburua] irakurri du Peruk?
      who wrote AUX book read AUX Peter
      '[the book that who wrote] did Peter read?'

(17) a.* [Nor] galdetu duzu [ __ etorriko d -en]?
      who asked AUX come AUX Q
      'Who did you ask [whether __ came]?’

   b.* [Nor etorriko d -en] galdetu duzu?
      who came AUX Q asked AUX

--> We need a theory of pied-piping that will allow us to fix CED islands and Complex NP islands, but not wh-islands. (we're not going to try to develop one here!)

(18) a. Mary-wa [John-ga nani-o yondara] okoru no?
      Mary TOP John NOM what ACC read-if get-angry Q
      'What will Mary get angry if John reads?’

   b. Mary-wa [nani-o yonda] hito-to atta no?
      Mary TOP what ACC read person-with met Q
      'What did Mary meet a person who read?’

   c.* Mary-wa [John-ga nani-o yonda ka dooka] tazuneta no?
      Mary TOP John NOM what ACC read whether asked Q
      'What did Mary ask whether John read?’
Interrogative particles

(19) Siri mokak da k eruwe? [Sinhala]
Siri what INT did
‘What did Siri do?’

(20) a. oyaa [kauru liyəpu pəta] da k ieuwe?
you who wrote book INT read
‘Who did you read [a book that __ wrote]?’

b. * oyaa [kauru da liyəpu pəta] k ieuwe?
you who INT wrote book read

Japanese ittai

Mary TOP John NOM on.earth what ACC read that said Q
‘What on earth did Mary say that John read?’

b. * Mary-wa [John-ga ittai  nani-o yonda] okoru no?
Mary TOP John NOM on.earth what ACC read-if get-angry Q
‘What on earth will Mary get angry if John reads?’

c. * Mary-wa [kyonen ittai  nani-o yonda] hito-to atta no?
Mary TOP last.year on.earth what ACC read person with met Q
‘What on earth did Mary meet a person who read last year?’

(22) a. Mary-wa ittai [John-ga nani-o yonda] okoru no?
Mary TOP on.earth John NOM what ACC read-if get-angry Q
‘What on earth will Mary get angry if John reads?’

b. Mary-wa ittai [kyonen nani-o yonda] hito-to atta no?
Mary TOP on.earth last.year what ACC read person with met Q
‘What on earth did Mary meet a person who read last year?’

Intervention effects

(23) *John-ka Bill-ga nani-o katta no?
John or Bill NOM what ACC bought Q
‘What did John or Bill buy?’

(24) a. Mary-wa [John-ka Bill-ga nani-o katta ato de] dekaketa no?
Mary TOP John or Bill NOM what ACC bought after left Q
‘What did Mary leave [after John or Bill bought __ ]?’

b. *John-ka Bill-wa [Mary -ga nani -o katta ato de] dekaketa no?
John or Bill TOP Mary NOM what ACC bought after left Q
‘What did John or Bill leave [after Mary bought __ ]?’
(25) **Who** bought **what**?

(26) a. *Which book* did the senator deny [the rumor that he wanted to ban __]?
    b. *Which senator* denied [the rumor that he wanted to ban *which book*]?

(27) a. *What* are the agents trying to figure out [whether the senator bought __]?
    b. *Who* is trying to figure out [whether the senator bought *what*]?

    John TOP Mary NOM what ACC bought whether wants.to.know Q
    ‘What does John want to know whether Mary bought __?’
    
    b. John-wa [Mary-ga nani-o katta ka dooka] dare-ni tazuneta no?
    John TOP Mary NOM what ACC bought whether who DAT asked Q
    ‘Who did John ask __ whether Mary bought what?’

(29) a. *Koja kniga otreče senatorat [mālvata če iska da zabrani __]?* [Bulgarian]
    which book denied the.senator the.rumor that wanted to ban
    ‘Which book did the senator deny [the rumor that he wanted to ban __]?’
    
    b. Koj senator koja kniga __ otreče [mālvata če iska da zabrani __]?
    which senator which book denied the.rumor that wanted to ban
    ‘Which senator denied [the rumor that he wanted to ban which book]?’