Locality and Quasi-Locality: Old and New Approaches to 'Clause-mate' Phenomena
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(1)   The - students - like - books - about - syntax
(2)   [[The students] [like [books [about syntax]]]]
(3)   One of the most fundamental properties of human languages: Sentences have structure.
        They aren't simply strings of words (or morphemes, or phones).

(4)   This property is amply illustrated by its interaction with another fundamental property:
        displacement (i.e., the situation where some expression is pronounced in one place in the
        sentence, but semantically understood in another). The portions of a sentence that can be
        displaced ('moved') are structural units - sub-structures of the whole structure:
(5)   a.   Books about syntax, the students like __   'Topicalization'
        b. *Like books, the students __ about syntax
        c. *Books about, the students like __ syntax
        etc.
(6)   This is one instance of what Noam Chomsky has called *structure dependence*.

(7)   Structure is also implicated in constraints on relations between two positions in a
        sentence (displacement being one such; there are plenty of others).

(8)   We have seen Topicalization. Interrogation also involves movement (in this case,
        movement of the direct object and of the auxiliary verb. Here, I am most interested in the
        former):
(9)   a. John will put the book on the table
        b. What will John put __ on the table

(10)   A declarative can occur embedded inside a larger sentence:
(11)   Mary thinks [(that) John will put the book on the table]

(12)   When this happens, interrogative movement is generally still possible, even though the
        distance (both structurally and linearly) is long:
(13)   What$_i$ does Mary think (that) John will put on the table __$_i$ <The subscripts
                indicate the item that moved and the position from which it moved>
(14)   In the 1960's, this kind of movement was sometimes called 'unbounded', but Chomsky
        (1964) noticed that there are certain constraints on it. (And in the classic work on the
        topic, Ross (1967) pointed out many more configurations that block movement. He called
        these configurations 'islands'.)

(15)   An interrogative can, like a declarative be embedded in a larger sentence:

(16)　　a. Where$_i$ will John put the book __$_i$
　　　　b. Mary wonders [where$_i$ John will put the book __$_i$]

(17)　　Chomsky observed that movement out of an embedded question, unlike movement out of an embedded declarative, is degraded. This is often called the 'WH-island constraint'

(18)　　*What$_j$ did Mary wonder [where$_i$ John will put __$_j$ __$_i$]

(19)　　Ross found some interesting exceptions to the WH-island constraint, that is, he found embedded questions that did not seem to be islands:

(20)　　　　　　　　　　　　　　　　　　　　　　　[whether PRO to buy __$_i$ or not]
　　　　He told me about a book which$_i$ I can't figure out　[how$_j$ PRO to read __$_i$ __$_j$]
　　　　　　　　　　　　　　　　　　　　　　　[where$_j$ PRO to obtain __$_i$ __$_j$]
　　　　　　　　　　　　　　　　　　　　　　　[what$_j$ PRO to do __$_j$ about __$_j$]

(21)　　Observe that in these examples, as Ross points out, the embedded questions are all infinitives, unlike the situation in the degraded (18). They also all have silent subjects, called by Chomsky (1973) 'PRO'.

(22)　　So there is 'unbounded' movement, which is actually island-bound. But sometimes the island is weakened.

(23)　　In addition, there are much more local operations and relations, classically called 'clause-bound'. Reflexivization is one such:

(24)　　a. Mary defended herself
　　　　a *Mary said [that John insulted herself]

(25)　　Here too, it looks if an infinitival clause lacking an overt subject is weaker: it doesn't seem to block this relation:

(26)　　a. Mary figured out [how to defend herself]
　　　　b. Mary tried [to defend herself]

(27)　　Chomsky (1973) had an account in terms of his Specified Subject Condition (SSC). A non-finite clause blocks a relation between X, outside the clause, and Y, inside the clause, across the subject of that clause unless that subject is 'controlled' by X. So for Chomsky, the examples in (26) actually have subjects 'PRO' in the embedded infinitives, but those PROs are controlled by 'Mary' so do not block the reflexive relation.

(28)　　a. Mary figured out [how PRO to defend herself]
　　　　b. Mary tried [PRO to defend herself]

(29)　　It should be noted that under both the classic deletion account of these null subjects and the PRO account, there is an alternative analysis available: The downstairs subject (PRO, or a full subject, 'Mary' before it is deleted is the antecedent of the reflexive. We will eventually see some evidence that both such a short relation AND the long relation must be available.

(30)　　Another phenomenon classically described in clause-mate terms: 'clitic-climbing'.
(31)　　Rivero (1970) points out that generally clitic pronouns in Spanish are moved to a pre-verbal position.

(32)   a. Compré un abrigo
     'I bought a coat.'
    b. Lo compré
     'I bought it.'

(33)   BUT clitics cannot raise across a sentence boundary:

(34)   a. Quiero que estés haciéndomelo
    b. Quiero que me lo estés haciendo
    c. *Me lo quiero [que estes haciendo]
     'I want you to be doing it for me.'

(35)   However, a now familiar exemption arises: When the embedded sentence is non-finite, and lacks an overt subject, 'clitic-climbing' is possible:

(36)   a. Quiero estar haciéndomelo
    b. Quiero estármelo haciendo
    c. Me lo quiero estar haciendo
     'I want to be doing it for myself.'

(37)   Rivero, following a proposal of Ross's about similar phenomena in Serbo-Croation, says that once the overt subject is eliminated (by a process called Equi-NP Deletion), the embedded sentence loses its finiteness, and even its syntactic status as a clause. In Ross's metaphor, the S node is 'pruned'. With the S-node gone, there is no barrier to clitic-climbing.

(38)   Quicoli (1976) discusses a similar pattern found in some dialects of Portuguese (those that still have clitics; I am told that many don't anymore).

(39)   As with the other cases of clitic movement we have seen, climbing out of a finite clause is not possible. This is a consequence of the Chomsky (1973) Tensed Sentence Condition (TSC).

(40)   a. Zeca viu que nos saímos.
     'Zeca saw that we left.'
    b. *Zeca nos viu que saímos.
     Zeca us saw that left

(41)   Marta viu que o garoto apanhou a bola.
    'Martha saw that the boy caught the ball.'

(42)   a. Marta viu   que o   garoto a   apanhou
     Martha saw that the boy   it-fem. caught
    b. *Marta   a   viu que o   garoto apanhou.
     Martha it-fem. saw that the boy   caught

(43)   Also as in Spanish, clitics can climb out of a non-finite clause lacking an overt subject.

(44)   a. O medico queria examinar-nos.
    b. O medico queria nos examinar
    c. O medico nos queria examinar.
    'The doctor wanted to examine us.'

(45)   Following Chomsky (1973), Quicoli argues against a clause-mate account, and in favor of the SSC and TSC instead. However, as he notes, the SSC would block the clitixc

climbing observed in (44) since the clitic (Y) moves to a position (X) that does NOT control Chomsky's hypothesized null subject PRO (i.e., X is not the subject of the main sentence). Hence, in a hybrid of old and new, Quicoli proposes that the subject of the infinitival actually undergoes Equi NP deletion is such cases. There being no subject at all, there is no 'specified subject' to block the movement.

(46)   Postal (1974) discusses a number of clause-mate type phenomena. He rejects the then prevalent pruning view, arguing, instead, that under certain circumstances a full clause becomes a weaker 'quasi-clause'. Infinitives lacking overt subjects are one instance of a quasi-clause he discusses. In principle, there could be others.

(47)   Some relations that were thought to be blocked by any clause boundary are not blocked by quasi-clause boundaries.

(48)   An infinitival clause lacking an overt subject might be a quasi-clause because it has no subject at all (Postal's approach and, in essence, Quicoli's). Or there might be a subject, PRO, that, by virtue of being controlled, renders the clause a quasi-clause (a version of Chomsky's SSC).

More quasi-clause effects (and a surprise)

Reciprocal Binding
(49)   John and Mary visited each other
(50)   John and Mary want [__ to visit each other]
        This sentence can, possibly must, have a 'long' reading, with the semantic antecedent of 'each other' the subject of 'want':
        'Each wants to visit the other'   Higginbotham (1980)
(51)   They decided [__ to keep each other's comments confidential]
        Can mean: 'Each of them decided to keep the other's comments confidential' (a 'long reading'   Heim et al. (1991)
(52)   This is the kind of case alluded to in (27) where the simpler alternative to SSC doesn't work.
(53)   *John and Mary want [Bill to visit each other]
The surprise:
(54)   John and Mary thought [they loved each other]
(55)   a. John and Mary thought they (that is, John and Mary) loved each other <short reading OK>
     → b. John thought that he loved Mary and Mary thought that she loved John <long reading OK. Surprising because the long antecedent is outside a **finite** clause>
(56)   *John and Mary thought that Susan loved each other <would = Each of John and Mary thought that I loved the other.>
(57)   *John and Mary thought that I loved each other

(58)   It appears that some normally very local relations X,Y are possible even across a finite clause, when the subject of that clause is a bound pronoun, a previously unexplored type of quasi-clause.

Gapping

(59) John read books and Mary ~~read~~ magazines

(60) John wanted to read books and Mary ~~wanted to read~~ magazines

(61) *John wanted Bill to read books and Mary ~~wanted Bill to read~~ magazines

(62) *John thinks that Bill will see Susan and Harry ~~thinks that Bill will see~~ Mary

(63) ?John thinks that he will see Susan and Harry ~~thinks that he will see~~ Mary
                    [Nishigauchi (1998), attributed to an anonymous reviewer]

(64) "... the clausemate restriction on Gapping is alleviated by an intervening pronoun."

(65) John$_i$ thinks that he$_i$ will see Susan and Harry$_j$ ~~thinks that he$_{j/*i}$ will see~~ Mary

(66) *John thinks that I will see Susan and Harry ~~thinks that I will see~~ Mary

(67) In particular, the alleviation requires a **bound** pronoun.

Multiple Interrogation (some dialects)   Kuno and Robinson (1972), Postal (1974)

(68)   Who kissed who

(69) *Who thought [Joan kissed who]

(70)   Who convinced who that it was time to leave

(71) *Who convinced Joan [(that) Bob kissed who]

(72) ✓Who wants [__ to marry who]?

(73)   a. *Which man claims that Kevin lent Jill which magazine?
         b. ?Which man claims that he lent Jill which magazine?   Grano and Lasnik (2016)

(74)   a. Quem$_i$ disse que pro$_i$ lê que jornal?   Portuguese
               who said that reads what journal
         b. ??Quem$_i$ disse que ele$_i$ lê que jornal?
               who said that he reads what journal
         c. *Quem disse que Pedro lê que jornal?
               who said that Pedro reads what journal

(75)   a. ¿Quién$_i$ dice que pro$_i$ lee qué revista?   Spanish
               who says that reads which magazine
         b. ? ¿Quién$_i$ dice que él$_i$ lee qué revista?
               who says that he reads which magazine
         c. ?* ¿Quién dice que Pedro lee qué revista?
               who says that Pedro reads which magazine

Multiple Sluicing

(76) Someone talked about syntax, but I don't know who ~~talked about syntax~~   'Sluicing', Ross (1969)

(77) Mary talked about something, but I don't know about what ~~Mary talked~~

(78) Someone talked about something
     ?but I don't know who about what

(79) Someone wanted [__ to talk about something]
     ?but I don't know who about what

(80) Someone wanted [Mary to talk about something]
     *but I don't know who about what

(81)   A certain boy decided [__ to talk to a certain girl]
        I forget which boy to which girl   Barrie (2005)
(82)   ?Each professor$_i$ said [he$_i$ was working on a different one of these topics], but I can't
        remember which on which one   [Lasnik (2013), from Jason Merchant,
        personal communication, based on an observation in Merchant (2001)]
(83)   *Each professor said [Susan was working on a different one of these topics], but I can't
        remember which on which one   [Jason Merchant, personal communication]
(84)   A certain boy$_i$ said [he$_i$ would talk to a certain girl]
        I forget which boy to which girl   Barrie (2005)

Extraposition ("Complex NP Shift")   [Usually clause-bound, as discovered by Ross (1967);
        Grosu (1973) called this the Right Roof Constraint.]
(85)   a. I will discover [exactly what happened to Rosa Luxemburg] tomorrow
        b. I will discover ___ tomorrow [exactly what happened to Rosa Luxemburg]
(86)   a. I have wanted [to know exactly what happened to Rosa Luxemburg] for many years
        b. I have wanted [to know __] for many years [$_{CNP}$ exactly what happened to Rosa
        Luxemburg]   Postal (1974)
(87)   a.   I have wanted [Bob to know exactly what happened to Rosa Luxemburg] for many
        years
        b. *I have wanted [Bob to know __] for many years [$_{CNP}$ exactly what happened to Rosa
        Luxemburg]   Postal (1974)
(88)   The absent-minded professor$_i$ will say [that {he$_i$/*Lucy}'s working __], if you press him,
        on a new molecular compound for flubber   [Jason Merchant, personal communication]

Tough Movement and its kin
(89)   a. This book is difficult [PRO to read __]
        b. This book is difficult [PRO to convince people [PRO to read __]]
        c. This book is difficult [PRO to convince people (anyone) [that they ought to read __]]
                                                        Chomsky (1981)
        d. ?*This book is difficult [PRO to convince people (anyone) [that Mary ought to read _]]

(90)   a.   This book is too valuable for James to lend to Maria
        b.   This book is too valuable for James to claim to have lent to Maria
        c.   ?This book is too valuable for James$_i$ to claim that he$_i$ lent to Maria
        d.   *This book is too valuable for James to claim that Karen lent to Maria   Grano and
        Lasnik (2016)

(91)   Generalization so far (for the above phenomena and 8 additional ones discussed by Grano
        and Lasnik (2016): A bound subject keeps a clausal domain 'open', even when the clause
        is finite.

(92)   A possible technical implementation (assuming, as is standard in Minimalist work, that
        derivations proceed strictly bottom-up):

(93)   a. Clause-mate phenomena are constrained by 'phases' in the sense of Chomsky (1999) and much subsequent work.
b. The Phase Impenetrability Constraint is operative here. C(omplementizer) is a phase head. The complement of a phase head, T(ense)P in this case, is sealed off.
c. Bound pronouns can be introduced into a structure with unvalued agreement features, which will be valued when the antecedent is introduced into the structure. [A modification of an idea due to Kratzer (2009); Chomsky (1955) had already proposed that bound pronouns are lexically different from free ones.]
d. Unvalued features in the complement of a phase head keep a phase open. [A version of an idea considered by Chomsky (2000), though not ultimately adopted there]

(94)   What about a bound **non**-subject? So far, the behavior should be the same, but it seems not to be. A few examples follow. (For the third and fourth of these, the relative judgments were strongly confirmed by an experiment reported in Grano and Lasnik (2016), as was the sharp improvement indicated above provided by a bound subject for these two phenomena.)

Gapping
(95)   a. ?Joe_i claims [that he_i reads books] and Tim_j ~~claims [that he_j reads~~ articles]
b. *Joe_i claims [that Bill gave him_i books] and Tim_j ~~claims [that Bill gave him_j~~ articles]
c. *Joe_i claims [that [his_i daughter] reads books] and Tim_j ~~claims [that [his_j daughter] reads~~ articles]

Multiple Sluicing
(96)   a. ?A certain professor said [he would tell the students about a certain book],
    but I forget which professor about which book
b. *A certain professor said [the students asked him about a certain book],
    but I forget which professor about which book
c. *A certain professor said [his students asked about a certain book],
    but I forget which professor about which book

Multiple interrogation
(97)   a. ?Which man claims that he lent Jill which magazine?
b. *Which man claims that Jill lent him which magazine?
c. *Which man claims that his father lent Jill which magazine?

Too/Enough Movement
(98)   a. ?This shirt is too expensive for Barbara to claim that she bought for Mike
b. *This shirt is too expensive for Barbara to claim that Mike bought for her
c. *This shirt is too expensive for Barbara to claim that her father bought for Mike

(99)   →Apparently only bound **subject** creates the bound pronoun loophole.
(100)   Grano and Lasnik (2016), based on a suggestion of Hisa Kitahara, propose that it is specifically the **head** (T in this case) of the complement of a phase head whose agreement features are relevant. But T gets its agreement features from the subject. And, by hypothesis, the subject, if a bound pronoun, lacks agreement features until its antecedent is introduced into the structure. Thus, the phase remains open until then.

(101) A bound **non**-subject will not have this effect, since T only gets its agreement features from subject.

(102) One last remark is in order though. One of the early instances of clause porousness, in this presentation and in the development of generative grammar, involved clitic-climbing. But clitic-climbing never shows the bound pronominal subject effect. To the best of my knowledge, no language allows clitic-climbing out of a finite clause, no matter what its subject is. Evidently, as argued by Postal (1974), while some processes are permitted across quasi-clause boundaries, others are blocked by **all** clause boundaries. We are then led to either classic pruning for clitic-climbing, or the reinterpretation of pruning as 'restructuring' by Rizzi (1978). As has so often happened in the development of generative grammar, the resurrection of old ideas can be very useful.

(103) Or, as Faulkner said in <u>Requiem for a Nun</u>, "The past is never dead. It's not even past."

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