

The Development of Case Theory

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I. The origins - John-Roger Vergnaud's April 18, 1977 letter to Howard Lasnik and Noam Chomsky

- (1) English has three cases: Subject Case; Genitive Case; 'Governed Case' ("the case of complements of verbs and of prepositions")
- (2) The restrictions on subjects of infinitivals can follow from a general filter limiting the distribution of NPs in the Governed Case. Vergnaud offers two possible versions of filter, both involving a structural relation discussed by Chomsky and Lasnik (1977) which is very close to 'government' (which is how I will render it here).
- (3)a A structure containing an NP in the Governed Case is ungrammatical unless that NP is governed by [-N].
 b A structure containing an NP in the Governed Case is ungrammatical unless that NP is adjacent to and governed by [-N].
- (4)a John believes (*sincerely) [Bill to be the best man]
 b *It was proven (conclusively) [John to be the best man]
 [c John was proven (conclusively) [t to be the best man]]
- (5) (3) is the obvious parent of modern Case theory, especially in its 'checking' form.
- (6) Foreshadowing another important development, Vergnaud builds versions of (3) into two distinct theories, depending on whether:
- (7)a "...only NPs that are phonologically realized are marked for case"
 or
 b "case-marking applies to traces, but the case-marker for a phonologically empty NP is the zero morpheme \emptyset ..." [In this theory, the structural requirements on case are somewhat weakened for phonologically empty NPs.]

II. Chomsky's First Case Theory - "On Binding" Chomsky (1980)

A. The core theory

- (8) "Suppose we think of Case as an abstract marking associated with certain constructions, a property that rarely has phonetic effects in English but must be assigned to every lexical NP."
 [p. 24]
- (9) Case assignment:

- a NP is oblique when governed by P and certain marked verbs;
- b NP is objective when governed by V;
- c NP is nominative when governed by Tense.

- (10) α is governed by β if α is c-commanded by β and no major category or major category boundary appears between α and β . [p.25]
- (11) "This convention builds in ... 'adjacency and c-command' ... Excluded are the structures $\beta [\gamma \alpha$ and $\beta \gamma \alpha$, where γ is a major category." [p.25]
- (12) "We must next determine at what point in derivations Case is assigned and to which NPs..."
- (13) Case "percolates" from NP to its head N.
- (14) Case Filter: Lexical NPs (i.e., those with a lexical head) must have Case
***N, where N has no Case** This is a morpho-phonological requirement.
- (15) Oblique Case is assigned in the base, and is carried along under movement rules.
- (16) Nominative Case assignment must follow NP movement.
- (17) John seems [__ to be a nice fellow]
- (18) But Case must be assigned to *who-whom* prior to *Wh* Movement.
- (19)a Who does it seem [__ is a nice fellow]
 b *Who does it seem [__ to be a nice fellow]
- (20) Move α for *Wh*
 a. Assign the index [+COMP]
 b. Assign Case under [(9)]
 c. Adjoin α to COMP (coindexing by convention)
- (21) (9) applies at surface structure.

B. P stranding

- (22) "... these conventions permit an NP subject to be nominative while its trace is governed by V, but they do not permit an NP subject to be nominative or objective (i.e. nonoblique) while its trace is governed by P. If we interpret conflict of Case Assignment rules as assigning *, it then follows that there can be no preposition stranding under NP Movement, though there can be under *Wh* Movement. Furthermore, pseudopassives are possible only if there has been reanalysis of a [verb ... P] construction as a verb in the base ..." [p.26]

C. Of Insertion

- (23)a the destruction *(of) Rome
 b proud *(of) John
- (24) "... there is a reason, under the Case Assignment theory, for

the fact that 'objects' of adjectives and nouns require *of* ...
Otherwise, the 'object' is not assigned Case ..." [p.29]

- (25) [_{NP} *the* [_N *destruction Rome*]]
(26) In a structure such as (25), "either optional *Of* Insertion must apply, assigning oblique Case, or NP Movement must apply to give *Rome's destruction*, with possessive Case assigned."

D. Lexical subjects of infinitives

- (27) "We have been taking Case Assignment to be clause-bound in the unmarked case ..." [p.28]
(28) "Suppose that certain verbs are assigned a marked feature, call it F, which permits Case to be assigned across a clause boundary." [p.28] (Only a Case assigner can be a 'marked' Case assigner, and only an otherwise legitimate Case assigning configuration can be a marked Case assigning configuration.)
(29) "In English ... *believe* with infinitival complement will be marked [+F] ..."
(30) I believe [_S [_S NP to be a fool]]
(31)a I believe [John to be a fool]
b John is believed [t to be a fool]
c Who do you believe [t to be a fool]
(32)a *I said (alleged) John to be a fool
b John is said (alleged) t to be a fool
(33)a *Who is it said (alleged) [t to be a fool]
b *Who [t is said (alleged) [t to be a fool]
(34)a *je crois [Jean avoir vu cette homme]
b ?qui crois-tu [t avoir vu cet homme]
c ?il le croit [t avoir vu cet homme]
(35) "One might express these facts by stipulating that while *croire* as distinct from *believe* does not have the marked feature [+F], it marginally permits Case Assignment across clause boundary to a null NP ..." [p.32] <But it isn't obvious how this helps: *qui* and *il* are the items that need Case.>

E. More about what kinds of NPs are subject to Case requirements

- (36)a I talked to the man who/that you met
b I talked to the man \emptyset you met
(37)a I talked to the man who/that it seems [t is the best candidate]
b ?I talked to the man \emptyset it seems [t is the best candidate]
(38)a *I talked to the man who/that it seems [t to be the best candidate]
b *I talked to the man \emptyset it seems [t to be the best candidate]

Lasnik and Freidin (1981)

- (39) *the man [that [you tried [[t to win]]]]
- (40) **Wh-trace must have Case.**
- (41) *_[NP e] if α has no Case and α contains a phonetic matrix or is a variable. Chomsky (1981, p.175)
- (42) Reduction of the Case Filter to the θ -criterion. Chomsky (1981, pp.331ff)
- (43) Case renders an argument visible for θ -role assignment. Thus, a Caseless argument violates the θ -criterion.
- (44) PRO??
- (45) The head of an argument chain must be assigned Case **or be PRO.**
- (46) *It seems [there to be a man in the room]
- (47) There is a man in the room
- (48) (*there*ⁱ, [ⁱ a man])
- (49) The associate of *there* can satisfy the θ -criterion by virtue of forming a chain with the pleonastic. <It was assumed that the associate couldn't receive Case any other way.>
- (50)a *It seems [it to be clear [that Bill is intelligent]]
 b *It is believed [it to be clear [that Bill is intelligent]]
- (51)a It is clear [that Bill is intelligent]
 b It is believed [that Bill is intelligent]
- (52) (*it*ⁱ, [ⁱ that Bill is intelligent])
- (53) The clausal argument can satisfy the θ -criterion by virtue of forming a chain with the pleonastic *it*.
- (54) *My belief [it to be clear [that Bill is intelligent]]
- (55) My belief [that Bill is intelligent]

III. A new approach to *there* constructions: Expletive replacement

- (56)a There is [a man in the room] S-structure
 b A man is [t in the room] LF
- (57) Chomsky (1986) offers several arguments for this analysis, including:
- (58)a Full Interpretation: Pleonastic elements, lacking any semantic properties, must be eliminated before the LF-semantics interface.
 b No Case 'transference' is needed. *There ... a man* behaves just like a chain because it is a chain at LF.
- (59) This has an extremely significant consequence that Chomsky did not actually comment on:
- (60) Before this, there was no observable difference between two potential theories of Case - Case assignment and Case checking. The former was presented by Chomsky (1981) (though with the

acknowledgment that little was at stake). The latter is more in the spirit of Vergnaud's original proposal.

(61) BUT "You'll get the scope facts wrong." Lori Davis

IV. Structural and inherent Case Chomsky (1986, Section 3.5.2.5)

(62) of-insertion allows escape from Case filter violations:

- (63)a destruction [of the city]
- b proud [of John]
- c John is uncertain [of the time]

BUT

- (64)a *there was killed of John
 - b *the belief [of John to be the winner]
- <<That is, of-insertion is triggered by certain heads and only on their complements. (63)a is not exactly the right example to illustrate the second of these points, though, because of:

- (65)a *the belief [of this theory]
- b *the belief [of God] >>

(66) the proof [of the theorem]

(67) *the proof [of John to be the winner]

(68) Nouns and adjectives are Case-assigners, but of a special sort.

(69) "We distinguish the "structural Cases" objective and nominative, assigned in terms of S-structure position, from the "inherent Cases" assigned at D-structure. The latter include the oblique Case assigned by prepositions and now also genitive Case, which we assume to be assigned by nouns and adjectives just as verbs normally assign objective Case." Chomsky (1986, p.193)

(70) "Inherent Case is associated with θ -marking while structural Case is not ... Thus, we assume that inherent Case is assigned by α to NP if and only if α θ -marks NP, while structural Case is assigned independently of θ -marking." Chomsky (1986, p.193)

V. On the last resort nature of movement

(71) If $C = (\alpha_1, \dots, \alpha_n)$ is a maximal CHAIN, then α_n occupies its unique θ -position and α_i its unique Case-marked position Chomsky (1986, p.137)

<<A CHAIN is a chain or a *there* - associate relation. Expletive replacement reduced CHAINS to chains.>>

(72) Chomsky (1986, p.203) calls this condition a "'last resort' principle".

(73) Chomsky (1993) localizes this last resort property in the moving item, and calls the principle **Greed**.

(74) "...Move α applies to an element α only if morphological properties of α itself are not otherwise satisfied. The operation cannot apply to α to enable some different element β

to satisfy *its* properties. Last Resort, then, is always 'self-serving'..." Chomsky (1995b, p.201)

VI. Structural Case configurations

- (75) On standard GB assumptions, structural Case involved three distinct structural configurations.
 - (76)a Structural nominative was licensed in the SPEC-head relation with the functional head AGR_S -Tense created by the raising of Tense to AGR_S .
 - b Structural accusative Case was licensed under government by V.
 - c Exceptional Case marking took place in a relation not statable in X' terms at all.
- (77) Chomsky (1991), Chomsky and Lasnik (1993), and Lasnik and Saito (1991) suggest that all three of these situations involve a SPEC-head relation with AGR (AGR_0 in the last two instances). That configuration is created by covert A-movement.
- (78) On this assumption, successive cyclic A-movement constructions and ECM constructions raise a large problem for Greed.
- (79) Mary is believed [t to seem [t to have [t solved the problem]]]
- (80) I believe [Mary to have [_{VP} t solved the problem]]
- (81) Movement (just) to satisfy the EPP is not Greedy.
- (82) Enlightened Self Interest: Movement of α to β can be for satisfaction of formal requirements of α or β Lasnik (1995a), Lasnik (1995b)
- (83) Attract: Movement of α to β must be for satisfaction of formal requirements of β . Chomsky (1995a)

VII. More on last resort

- (84) We must "prevent a nominal phrase that has already satisfied the Case Filter from raising further to do so again in a higher position." Chomsky (1986, p.280)
- (85) "...a [-Interpretable] feature is 'frozen in place' when it is checked, Case being the prototype." Chomsky (1986, p.280)
- (86) *my belief [John to seem [t is intelligent]]
- (87) "... a visible Case feature ... makes [a] feature bundle or constituent available for 'A-movement'. Once Case is checked off, no further [A-]movement is possible." Lasnik (1995b, p.16)
- (88) "If uninterpretable features serve to implement operations, we expect that it is structural Case that enables the closest goal G to select P(G) to satisfy EPP by Merge. Thus, if structural Case has already been checked (deleted), the phrase P(G) is "frozen in place," unable to move further to satisfy EPP in a

higher position. More generally, uninterpretable features render the goal *active*, able to implement an operation: to select a phrase for Merge (pied-piping) or to delete the probe." Chomsky (2000, p.123)

VIII. On the PRO - Case disjunction

- (89) The head of an argument chain must be assigned Case **or be PRO**.
- (90) "PRO, like other arguments, has Case, but a Case different from the familiar ones: nominative, accusative, etc. From the point of view of interpretation, we might regard PRO as a 'minimal' NP argument, lacking independent phonetic, referential or other properties. Accordingly, let us say that it is the sole NP that can bear null Case (though it may have other Cases as well, in nonstandard conditions that we will not review here)." Chomsky and Lasnik (1993, p.561)
- (91)a *We want John to strike *t* [that the problems are insoluble]
 b *We want John to seem to *t* [that the problems are insoluble]
- (92)a *We want PRO to strike *t* [that the problems are insoluble]
 b *We want PRO to seem to *t* [that the problems are insoluble]
- (93) Null Case is licensed by (certain kinds of) non-finite Infl, crucially not the kind in raising and ECM constructions. Lasnik (1993), Martin (1996)
- (94) "A chain is visible for θ -marking if it contains a Case position - necessarily, its head, by Last Resort." Chomsky and Lasnik (1993, p.561)

IX. Overt object shift? Johnson (1991), Koizumi (1993), Koizumi (1995)

- (95) The problem for Greed created by ECM constructions might be eliminable, if *Mary* is actually in SPEC of AGR₀ in the higher clause.
- (96) I believe [Mary to have [_{VP} *t* solved the problem]]
- (97) But there is evidence that in ECM constructions, and even in simple transitives, raising is optional. Lasnik (1999), Lasnik (2001)
- (98) Thus, Case must be checkable by feature movement (Chomsky (1995a)) or long distance Agree.
- (99) Then, the problem for Greed remains, and a still worse problem arises for Last Resort.

X. A speculative argument for the PF nature of the Case filter

- (100) *I alleged John to be a fool
- (101) ?John, I alleged to be a fool
- (102) John, I alleged to be a fool. Mary did ~~fallege John to be a fool~~ too.

(103) Repair by ellipsis?

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