Case-to-Case movement

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Abstract. This squib examines why an argument can move from one Case position to another. I argue that Case-to-Case movement is possible under the Strong Minimalist Thesis where Merge is the sole operation in narrow syntax, relegating Agree to Interpretation (Chomsky et al. 2023). Under this view, movement can happen before Agree. Case-to-Case movement is possible when the low case head moves before Case valuation. As a result, the position which was previously a case position becomes a non-case position, allowing the argument to move for case. Drawing on evidence from Mandarin possessor raising, I propose that Case-to-Case movement is licensed only if the lower Case head has undergone prior displacement, thereby preventing a violation of Case requirements.

Keywords. Activity condition, case, Agree, possessor raising

1. Introduction. Movement out of a possessive phrase is considered an illegitimate operation ever since Ross (1967). And this can be understood in a more recent way through the Activity Condition, which precludes movements from a case position:

(1) Activity Condition (Chomsky 2001: p. 6)
"(For the Case/agreement systems, the uninterpretable features are ϕ-features of the probe and structural Case of the goal N. ϕ-features of N are interpretable; hence, N is active only when it has structural Case.) Once the Case value is determined, N no longer enters into agreement relations and is 'frozen in place'."

Obviously, the possessor can receive case from the possessive phrase, so it should be frozen in place. However, possessor raising is widely found, e.g. in Mandarin Chinese (2a):

(2) a. [Zhangsan$_i$] lan le [t$_i$ li].
Zhangsan rot PFV pear
'Zhangsan lost pears through rotting.'
b. Zhangsan de li lan le.
Zhangsan POSS pear rot PFV
'Zhangsan's pear rot.'

(2a) is a structural variant of (2b). Both contain an existential presupposition of *Zhangsan de li* 'Zhangsan's pear', a property uniquely associated with possessive phrases. Therefore, (2a) and (2b) share the same base structure where the possessive phrase serves as the theme of the verb *lan* 'rot' – [T [rot [Zhangsan POSS pear]]]. To derive (2b), the possessive phrase moves to the subject position; to derive (2a), the possessor moves to the subject.

(3) a. [[Zhangsan POSS pear]$_i$ T [rot t$_i$]]
b. [Zhangsan$_i$ T [rot [t$_i$ POSS pear]]]

Crucially, the subject of (2a) comes from a case position, constituting a case-to-case movement, henceforth Case-to-Case movement. Consequently, (2a) raises a significant question to linguistic theories: how can a nominal move from one case position to another case position?

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2. Case-to-case Movement. This section argues that (2a) is derived by movement. A notable property of (2a) is that the subject and object retain a possessive interpretation, and their non-local dependency is established through movement rather than binding. Although both raising and control involve an argument that appears to be interpreted in relation to a lower nominal, they differ fundamentally in how the argument is licensed and interpreted. In raising constructions, the subject originates within the lower nominal and moves to the higher position. By contrast, in control constructions the argument occupies its own θ-position, while the lower nominal contains a null pronominal element (PRO) whose reference is controlled by the higher argument. The distinction between raising and binding therefore hinges on whether the apparent embedded subject position contains a trace of movement or a null pronominal element. Previous studies have proposed a range of diagnostics to distinguish the two. Here we examine the dependency in (2a) using several hallmark properties of movement, including island sensitivity and locality constraints.

A structure derived through movement is expected to be sensitive to islands. Coordinate structure is one of the well-established island in this regard, and is well known for "locking" movement (Ross 1967). If the subject raises out of the object, the island effect would prevent extraction, and the derivation crashes. By contrast, if the subject is base-generated in a high position and binds into the object, the coordinate embedding won't interfere. As the judgement shows, the derivation fails when the object source is embedded within a coordinate island:

(4) *Zhangsan lan le [____ li he Lisi de pingguo].
Zhangsan rot PFV pear and Lisi POSS apple
'Zhangsan lost pears as a result of the rotting of his pears and Lisi's apple.

The failure in coordinate embedding therefore indicates that the subject raises from the object.

Second, (2a) exhibits sensitivity to locality constraints. When multiple potential goals are available, the probe that triggers movement can only target the structurally higher one. Binding, however, is not constrained in the same way. Consider a binding case like (5). Here, both *Zhangsan* and *Zhangsan de didi* 'Zhangsan's brother' function as possessors. *Zhangsan* is base-generated as the agent and binds into the embedded possessor, even though it is structurally lower than the main possessor:

(5) Zhangsan qin le [[PRO didi] de laopo].
Zhangsan kiss PFV brother POSS wife
'Zhangsan kissed his brother's wife.'

By contrast, (2a) strictly obeys locality: the probe cannot access the lower possessor.

(6) *Zhangsan lan le [___ didi] de li.
Zhangsan rpt PFV brother POSS pear
'Zhangsan lost his brother's pear through rotting.'

The high probe can only see the high goal, which subsequently blocks any further search. Consequently, what these island and locality facts indicate is that (2a) involves movement. Coupled with the fact that both the source position and the target position are case positions, (2a) represents a Case-to-Case movement.

3. Proposal. This article approaches Case-to-Case movement from the perspective of the timing of AGREE. Throughout much of the history of generative grammar, AGREE has been treated as an operation within narrow syntax. Under such models, movement is AGREE-driven, and therefore occurs only after AGREE has taken place. As a result, when combined with the Activity Condition, movement from one Case position to another is categorically ruled out: once AGREE assigns Case to the goal, that goal becomes inactive for further movement. A different view has recently emerged within the Strong Minimalist Thesis, where Merge is taken to be free and movement may occur prior to AGREE. In this framework, the Activity Condition blocks movement from a Case position only once the Case value has been determined. Consequently, movement from a Case position becomes possible if AGREE has not yet applied or applies later in the derivation.

The timing of Agree has evolved significantly in the development of the Minimalist Program. In early minimalist work (Chomsky 1995, 1998), Agree was assumed to be immediate: once a probing head is merged, it searches its accessible domain for a suitable goal. Subsequently, the introduction of phase theory further refined the timing of Agree. In Chomsky (2001, 2008), vP and CP were proposed as phases, cyclic domains subject to Spell-Out. This phase-based architecture imposes a derivational timing condition: Agree must apply before the transfer of the relevant phase. By and large, Agree is still considered an essential component in structure building. Structure building operations like movement are generally viewed as Agree-driven. A major change occurred in more recent work, especially with the Strong Minimalist Thesis (SMT, Chomsky et al. 2023), where the timing of Agree was re-examined in light of the goal of minimizing syntactic machinery. It is argued that Merge is the only component in narrow syntax, leaving Agree to Interpretation. This major change not only enables free merge, but also allows Case-to-Case movement – as long as an argument moves before Agree, the case position won't freeze it in place.

However, moving the argument prior to Agree gives rise to at least two problems. First, the possessor cannot raise to the subject position with its case feature still unvalued. Even though AGREE is delegated to Interpretation, enabling free Merge. Given cyclicity, syntactic output will be submitted to interfaces before a full sentences is derived. For a nominal structure (which is also a phase (Bošković 2014)), the latest point at which Agree can apply is within the nominal phase. Even though the phase edge can be seen by a high probe, the constituent at the edge must be Agreed with case no later than the nominal phase head is merged. However, T is introduced into the derivation long after that point. That is, although movement may precede Agree, it is still bounded by Spell-out. Consequently, while a possessor may move before Agree takes place, it cannot move beyond the nominal phase domain (to a high case position) and T is simply too high to see an uncased possessor. Second, the lower case head is deprived of the goal necessary for feature valuation. If α reaches T with unchecked features, it follows that the relevant features associated with POSS has not been valued either. Once Agree applies, the unchecked features on POSS would render the derivation uninterpretable.

Fortunately, both issues can be resolved if POSS moves prior to AGREE. First, this movement removes the concern that the possessive head must check its features within the possessive phrase. If the possessive head itself moves, its ϕ-features and Case features do not need to be checked locally inside the nominal domain, as they can be carried to a higher position where they remain active. Second, the problem of phase-based cyclicity can also be addressed. Following Den Dikken & Singhapreecha (2004), head movement may extend a phase: when a phase head incorporates into a higher head, the phase boundary is effectively extended, delaying the application of AGREE. As a result, when POSS moves before AGREE, its ϕ-features and Case features are transferred upward

into the clausal domain in an active state.

Once introduced into the clausal domain, the active features in POSS yield two additional advantages. First, they explain how an unaccusative predicate can appear in a transitive configuration. Second, they account for how the object receives Case. Consider *lan* 'rot', an unaccusative verb that nevertheless surfaces in an SVO pattern. This configuration presents two difficulties. As an intransitive predicate, *lan* cannot independently introduce two arguments, nor can it license an object for Case. If POSS incorporates into *lan*, however, these problems disappear. The ϕ-features carried by POSS effectively transitivize the predicate by introducing a subject, while its Case features license the object. In this way, incorporation of POSS accounts for the otherwise puzzling transitive behavior of unaccusatives in possessive constructions.

4. Evidence. A central component of the present proposal is that the possessive head incorporates into the verb, making the identification of this head crucial. This head has become PF-null[1], and therefore the argument for a covert possessive head rests largely on syntactic and semantic evidence.

The incorporation of a possessive head changes the overall semantics of the predicate. Compared with (2b), (2a) conveys an additional change of possession (Shen 2006; Hu & Pan 2008; Zhong to appear).

(8) a. $[[lan_{intransitive}]]$ = $\lambda x \exists e$.Rot(e) $\wedge$ Th(x, e)
b. $[[lan_{transitive}]]$ = $\lambda x \lambda y \exists e \exists s$.Rot(e) $\wedge$ Th(x, e) $\wedge$ $\neg$POSS(x,y, s)

This change of possession[2] follows as a consequence of the core event. This causal dependency in turn imposes a restriction on the predicate. For instance, pears can also be modified by properties like *ruan* 'soften', *xiang* 'fragrant' or *tian* 'sweet'; however, becoming fragrant or sweet does not result in the loss (or gain) of possession, and accordingly becomes incompatible in Case-to-Case movement constructions:

(9) a. Zhangsan de li ruan le.
Zhangsan POSS pear soften PFV
'Zhangsan's pear became soft.'
b. *Zhangsan ruan le li.
Zhangsan soften PFV pear
int. 'Zhangsan lost pears through soften.'

As the contrast shows, a possessive component is semantically obligatory in Case-to–Case movement constructions. Further evidence for this obligatoriness comes from their aspectual behavior.

[1] I assume that the null realization of the possessive head at PF is derived by a morphological process that licenses PF-identification between POSS and a host head:

(7) POSS $\rightarrow$ X_0/___ X_0

After identification, only one of the copies is pronounced. I will not defend this idea here but want to mention that the possessive head is famous for being flexible, including a null form.

[2] In some cases, the effect may instead be a gain of possession; we set those cases aside here. See Zhong (to appear) for detailed discussions.

Because the loss of possession is entailed, it cannot be suppressed or canceled. As the possessive state constitutes the telic culmination of the core event, it arises only when that event is fully completed (Ritter & Rosen 1993). A natural diagnostic, therefore, is to test whether the construction remains grammatical when the core event is presented as ongoing:

(10) a. Zhangsan de li kaishi lan le.
Zhangsan POSS pear begin rot PFV
'Zhangsan's pear begins to rot.'
b. *Zhangsan kaishi lan li le.
Zhangsan begin rot pear PFV
int. 'Zhangsan lost pears through the beginning of his pear's rotting.'

Kaishi 'begin' denotes only the initial stage of the rotting event; the event is therefore not fully completed. Consequently, it is incompatible with Case–to-Case movement. By the same reasoning, progressive marking is also unacceptable, since it presents the core event as ongoing rather than completed:

(11) a. Zhangsan de li zhengzai lan.
Zhangsan POSS pear PROG rot
'Zhangsan's pear is rotting.'
b. *Zhangsan zhengzai lan li.
Zhangsan PROG rot pear
'Zhangsan is losing pears through rotting.'

The dispossessive state, which appears asymmetrically in Case-to-Case movement constructions only, is blocked if the core event is on-going.

The presence of this covert possessive state is further supported by evidence from VP ellipsis (Larson et al. 1997; Zhong to appear). VP ellipsis is a strongly anaphoric process: a VP may be elided only if it has an identical antecedent (Merchant 2001). In (12a), the elided material can be recovered from its interpretation as saw dogs, which must match the antecedent VP:

(12) a. John [saw more dogs] than Lisi △.
b. John [saw more dogs] than Lisi ~~saw dogs~~.

Given its anaphoric nature, the elided VP, though null at PF, cannot be freely interpreted; it must be identical to its antecedent VP. Since there is only one VP antecedent available, the elided VP in the second clause of (12a) is unambiguously interpreted as [saw dogs]. On this basis, one might predict that, because there is only a single overt predicate *lan* 'rot' in the surface structure, (13) should likewise receive a single interpretation—namely, that Zhangsan lost more pears through rotting than Lisi lost pears through rotting. Contrary to this expectation, however, (13) in fact permits interpretative ambiguities (Zhong to appear):

(13) Zhangsan guangshi lan de li jiu bi Lisi △ duo.
Zhangsan just rot DE pear JIU than Lisi more
'Zhangsan lost more pears through rotting than Lisi lost pears through rotting.'
'Zhangsan lost more pears through rotting than Lisi has pears.'

(13) can be used in the following contexts. First, suppose Lisi lost some pears due to rotting, say 1 ton, and another individual, Zhangsan, also lost pears due to rotting, say 2 tons. In this scenario, (13) can be uttered to compare the quantity of pears lost through rotting. Here, Lisi indeed experiences a rotting event in his pears.

Second, (13) can be used in a context where Lisi never experiences any rotting event. For instance, assume someone claims that Lisi has the most pears, but a passerby who overhears and disagrees utters (13), asserting that the number of pears Lisi has is less than the number of pears Zhangsan lost through rotting – regardless of Zhangsan's total number of pears. In this interpretation, a focus on *LAN* is expected: focus-triggered alternative semantics render *lan* rot' inappropriate as the ellipsis antecedent. Therefore, it is the covert predicate serving as the antecedent. An emphatic adverb like *guangshi* just' can further highlight the intended meaning. Crucially, none of Lisi's pears need to rot in this case.

Thus, *lan* 'rot' does not serve as an elided component in the second interpretation. Given the anaphoricity of VP ellipsis – where an elided VP must be interpreted in relation to its antecedent – what licenses VP ellipsis when *lan* is not the antecedent, but the covert predicate. Under this reading, the elided VP is reconstructed as follows:

(14) Zhangsan guangshi LAN de li jiu bi Lisi ~~xian-you~~ ~~de~~ ~~li~~ duo.
Zhangsan just rot DE pear JIU than Lisi now-has DE pear more
'Zhangsan lost more pears through rotting than Lisi has pears.'

Because VP ellipsis requires an identical antecedent, (14) implies that the first clause contains a covert possessive head in the VP (Zhong to appear):

(15) Zhangsan rot=POSS pear.

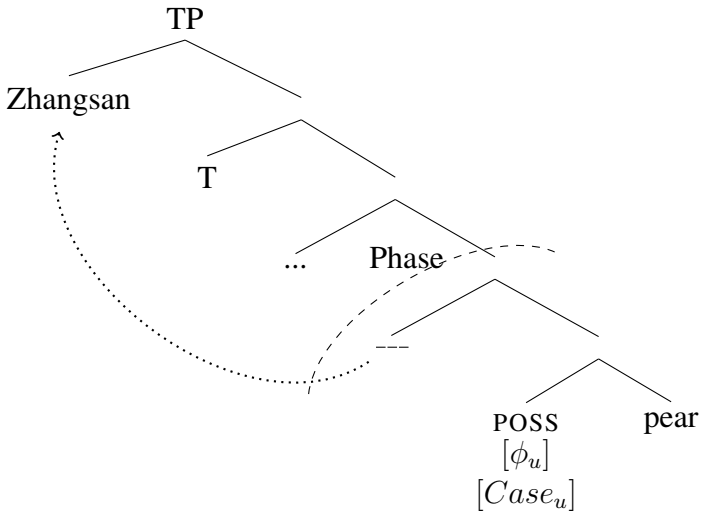
Despite its PF-nullness, its presence in the structure is detected by syntactic/semantic properties.

5. Discussion. This squib examines an unexpected movement in Mandarin Chinese, in which an argument moves from one case position to another, apparently violating the well-known Activity Condition. We argue that, although the Activity Condition bars an argument whose Case value has already been determined from moving to a new case position, it does not categorically prohibit movement between two case positions. Such movement is possible if it occurs before AGREE. Following the Strong Minimalist Thesis (Chomsky et al. 2023), we assume that Merge is the sole operation in Narrow Syntax, with Agree occurring only at the interface with Interpretation. As long as C–C movement takes place in Narrow Syntax prior to AGREE, the argument remains unvalued for Case and is eligible to enter an Agree relation with a higher case position.

However, for this mechanism to succeed, the possessor cannot move alone. If it does, its low case head remains unchecked at the time of Agree, and the high case position lies too high in relation to the nominal phase. Specifically, when operations in Narrow Syntax are complete and

sent to Interpretation for Agree, a possessor that moves independently leaves the low case head improperly checked:

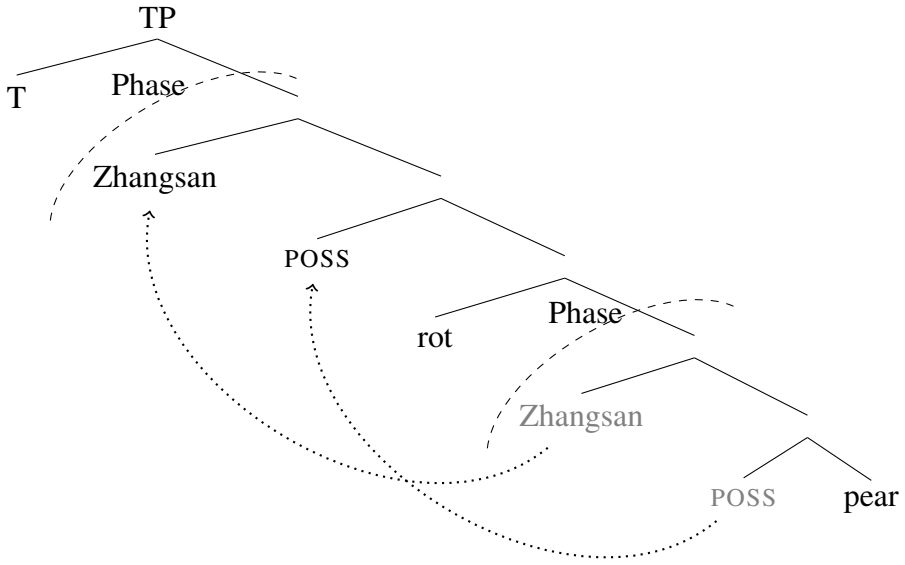
(16)



Given the nominal phasehood (Den Dikken & Singhapreecha 2004; Syed & Simpson 2017; Witkoś a & Dziubała-Szrejbrowskab 2014; Bošković 2014, 2013), the latest time of Agree must be executed when the structure is turned to Spell-out. Therefore, even though the possessor may displace in its uncased form from a case position, the phase status determines the latest time where the nominal must receive case. If *Zhangsan* moves past this point of time, the consequence is either that POSS becomes unchecked or the possessor moves in its cased form.

These issues are resolved if the possessive head moves along, which extends the nominal phase and gets a new environment for feature checking:

(17)



Since POSS moves before AGREE, its ϕ-features and case features remain active. The reconfiguration of these active features not only avoids the structural collapse due to unchecked features in POSS, but also provides good accounts to two key issues of Case-to-Case movement constructions: a) How does an unaccusative appear in a transitive structure? b) How is the object case checked? The ϕ-features in POSS enable the verb *lan* 'rot' to take an additional argument, realizing transitivization. The possessive head carries AgreeO (Hoekstra 2008), and provides case to the object.

6. Conlusion. This squib addresses why an argument can move from one case position to another. While the Activity Condition bans a Cased nominal from entering case agreement with a high probe, a nominal from a case position can still move if the case head moves before Agree. When this happens, even though the low position is a case position, the nominal does not get case low. Instead, it is dragged by the ϕ-features to a high position where it moves further to another high position for case.

References

Bošković, Željko. 2013. Phases beyond clauses. In Lilia Schürcks, Anastasia Giannakidou, Urtzi Etxeberria & Peter Kosta (eds.), *The nominal structure in slavic and beyond*, 75–128. Berlin: De Gruyter Mouton.

Bošković, Željko. 2014. Now i'ma phase, now i'm not a phase: On the variability of phases with extraction and ellipsis. *Linguistic inquiry* 45(1). 27–89.

Chomsky, Noam. 1995. *The minimalist program*. Cambridge, MA: MIT Press.

Chomsky, Noam. 1998. *Minimalist inquiries: The framework*. Cambridge, MA: MIT Press.

Chomsky, Noam. 2001. Derivation by phase. In Michael Kenstowicz (ed.), *Ken hale: A life in language*, 1–52. Cambridge, MA: MIT Press.

Chomsky, Noam. 2008. On phases. In Robert Freidin, Carlos P. Otero & Maria Luisa Zubizarreta (eds.), *Foundational issues in linguistic theory*, 133–166. Cambridge, MA: MIT Press.

Chomsky, Noam, T Daniel Seely, Robert C Berwick, Sandiway Fong, MAC Huybregts, Hisatsugu Kitahara, Andrew McInnerney & Yushi Sugimoto. 2023. *Merge and the strong minimalist thesis*. Cambridge University Press.

Den Dikken, Marcel & Pornsiri Singhapreecha. 2004. Complex noun phrases and linkers. *Syntax* 7(1). 1–54.

Hoekstra, Teun. 2008. The nature of verbs and burzio's generalization. In *Arguments and case: Explaining burzio's generalization*, 57–78. John Benjamins Publishing Company.

Hu, Jianhua & Haihua Pan. 2008. Mandarin intransitive verbs and their objects at the syntax-information structure interface. In *Proceedings of the 20th north american conference on chinese linguistics (naccl-20)*, vol. 2, 653–663.

Larson, Richard, Marcel Den Dikken & Peter Ludlow. 1997. Intensional transitive verbs and abstract clausal complementation. *Linguistic Inquiry* .

Merchant, Jason. 2001. *The syntax of silence: Sluicing, islands, and the theory of ellipsis*. Oxford University Press.

Ritter, Elizabeth & Sara Thomas Rosen. 1993. Deriving causation. *Natural Language & Linguistic Theory* 11(3). 519–555.

Ross, John Robert. 1967. *Constraints on variables in syntax*: MIT dissertation.

Shen, Jiaxuan. 2006. The generative mechanism of sentences like ”wangmian died father”: sentence generation by blending in chinese. *Zhongguo Yuwen* (4). 291–300.

Syed, Saurov & Andrew Simpson. 2017. On the dp/np status of nominal projections in bangla: Consequences for the theory of phases. *Glossa: a journal of general linguistics* 2(1).

Witkośa, Jacek & Dominika Dziubała-Szrejbrowskab. 2014. The nominal non-phase: How the study of polish nominals contributes to phase theory. In *Complex visibles out there: Proceedings of the olomouc linguistics colloquium*, 477–498.

Zhong, Liumao. to appear. Hidden possessive head in mandarin wangmian sentences. *Language and Linguistics* .