

Somber Prospects for Late Merger

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I discuss the phrase-structure-theoretic operation of Late Merge proposed in Lebeaux 1991 as it is used in late adjunct merger and wholesale late merger. I show that under current theoretical assumptions about the nature of the Merge and Move operations, Late Merge over-generates in ways that are difficult to overcome. Given that Late Merge is otherwise demonstrably computationally unparsimonious (Kobele and Michaelis 2012), I conclude that it should not be an available operation and suggest Neglect (Sportiche 2016) as an alternative to generate the needed Logical Form representations.

Keywords: Late Merge, late adjunct merger, wholesale late merger, Neglect

Late Merge is a phrase-structure-theoretic composition operation proposed in Lebeaux 1991 and used by many authors ever since in a number of very influential pieces of work—for example, Bhatt and Pancheva 2004, Chomsky 1993, Demirdache 2015, Fox 2017, Fox and Nissenbaum 1999, Hulsey and Sauerland 2006, Lebeaux 2009, Stanton 2016, and Takahashi and Hulsey 2009. I will argue that this operation should not be allowed. This is not to say that the logical forms (LFs) produced by Late Merge are undesirable. These LFs have the right desirable properties (e.g., to circumvent Condition C), but they should not be produced by merging late.

1 Why Late Merger

Lebeaux's (1991) classic late adjunct merger proposal is motivated by the following asymmetry:¹

- (1) a. Which villages near Picasso₁'s estate did he₁ visit t?
- b. *Which pictures of Picasso₁ did he₁ sell t?
- c. *Whose hypothesis that Picasso₁ was a fraud did he₁ refute t?

Here is the standard account in terms of late merger,² framed in a system that takes traces to be copies and phrase structures to be built derivationally. The boxed relative clause in (1a) is taken

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¹ Even though they have been recently questioned (see Adger et al. 2017, Bruening and Al Khalaf 2017), such asymmetries are robust for many speakers (including me) in many languages, but not for all speakers (in any language?); this suggests the presence of at least one uncontrolled variable.

² The premises of this account have not gone unchallenged (see, e.g., Sportiche 2016). If these premises are wrong, the particulars underlying this argument for late merger disappear but its logic remains (see, e.g., Fox 2017, Fox and Nissenbaum 1999, Hulsey and Sauerland 2006).

to be an adjunct to the noun *villages*; the boxed phrase in each of (1b) and (1c), a complement to the noun (*pictures* or *hypothesis*). The late adjunct merger analysis allows (1a) to be derived in either of the following two ways:

- (2) a. which villages near Picasso₁'s estate did he₁ visit ~~which villages near Picasso₁'s estate~~
 b. which villages near Picasso₁'s estate did he₁ visit which villages

If the trace is a full copy of the moved phrase as in (2a), the (unpronounced) bottom copy (crossed out) must be interpreted; this yields a Condition C effect at LF. But late adjunct merger also allows the derivation in (2b), with the boxed part late-merged (i.e., adjoined to *villages* after *wh*-movement), thus circumventing Condition C. (1a) with this derivation is fine.

Because the *of*-phrase in (1b) and the *that*-clause in (1c) are assumed to be complements, they cannot be inserted (so³) late. Consequently, the bottom copy must contain *pictures* (resp. *hypothesis*), a complement (of the D complement of) *sell* (resp. *refute*), and *of Picasso* (resp. the *that*-clause), which is the complement of the noun. For example, the full representation of (1b) must contain the substructure in (3), triggering a Condition C effect.

- (3) . . . he₁ sell pictures of Picasso₁

The availability of late merger nontrivially increases the generative capacity of grammars. It has been established that the formal systems underlying linguists' current grammars (e.g., Minimalist grammars with copy; see Kobele 2006) are computationally well-behaved without late merger (Michaelis 1998). Kobele and Michaelis (2012) show that adding late merger increases the generative capacity of such grammars to supersets of unknown computational properties, possibly intractable. Although this is not damning in itself, as some (unknown) constraint on late merger may in fact restrict generative capacity to demonstrably tractable sets, there is a proven sense in which late merger itself is a priori unparsimonious. Whether late merger should be allowed is thus in principle a substantive question.

But there is also evidence that late merger as used by the aforementioned authors should not be allowed: as I will show, because late merger must be able to operate within islands or be unboundedly countercyclic, it allows the equivalent of island-violating movements or unconstrained parasitic gaps, among many other pathological cases.

2 Simple Late Adjunct Merger

Simple late adjunct merger must be able to be unboundedly countercyclic: a treatment of the asymmetry above⁴ in terms of late adjunct merger requires not only countercyclic syntactic operations, but in fact an unboundedly countercyclic syntax. The countercyclicality comes from the fact

³ Lebeaux (1991) also proposes that (the content of) complements can be late-inserted under limited circumstances, a precursor to the wholesale late merger discussed below.

⁴ And other such cases—for example, the unbounded countercyclic cases of late merger motivated in Fox 2017 on the basis of extraposition.

that the relative clause in (1a) must be assumed to be late-merged in the position in which it is interpreted, namely, inside the complement structure of the determiner of the relative clause. This insertion is countercyclic since merger of the relative clause is not at a phase edge. But the logic of this account requires that such late merger be unboundedly countercyclic. This is illustrated by the following kind of example:

- (4) [Whose criticism of [Mary's rendition of (. . .) the claim [that you [formulated (. . .) the hypothesis [that Henri [visited the villages near Picasso₁'s estate]]]]]]_k did he₁ endorse t_k?

Such sentences with the indicated coreference are well-formed. This means that the boxed adjunct must have been late-merged. But it is late adjunction to an element (*villages*) that is a recursive complement of a complement of the main head noun *criticism*. This means that none of this intervening material can be (so) late-merged: as a result, the late merger of the adjunct must take place inside the four bracketed constituents, all of which are phases. It should be clear that the example can be modified so that late merger is required in an arbitrarily deeply embedded constituent, yielding unbounded countercyclicity.⁵

Why is this undesirable? That is, is the fact that unboundedly countercyclic syntactic operations are allowed undesirable? Not necessarily in itself. As we will see, late merger yields structures that are readily legible, that is, readily interpretable at the LF or PF interface by standard interpretive rules. But once late merger's generative power is allowed, overgeneration ensues. Here is how.

First, since Chomsky 2004 and Starke 2001, it has been recognized that formally, the operations of Merge and Move are one and the same phrase-structure-theoretic operation, differing only in their domains. Standard Merge is the subcase operating on doubletons $\{\alpha, \beta\}$, where neither α nor β has been previously merged. Standard Merge is thus sometimes called First Merge. Standard Move is the partial complement case where exactly one element—say, α —of the doubleton has been previously merged or moved. It is thus called Remerge (of α) to β : α and β now form a new object, γ . Late merger now can be seen as relaxing the definition of standard Merge and allowing first merger of, say, α to and crucially into⁶ a previously merged β . In (2b), for example, the boxed adjunct has been late-merged into *which villages*, which had been previously merged, and to *villages*, which is a subpart of this previously merged phrase.

Such late merger of an adjunct is usually invoked in instances of late first merger of this adjunct. But there is in fact no reason why it couldn't be late *remerger* since there is no theoretical difference between the operations of First Merge and Remerge (only the sources of the merged material differ). This second option, which in effect fakes a movement dependency, predicts that adjunct movement can violate (probably) any island.

⁵ This conclusion (as well as the cases in Fox 2017 mentioned in footnote 4) contradicts some claims in the literature. See, for example, Tada 1993:63–70 and Sauerland 1998, where it is argued that the depth of embedding at which late merger can apply is limited.

⁶ By *merged to*, I mean that β projects in this case, which must be true if previously built structures can be added to but not changed. This is a weaker version of Chomsky's (2008) No Tampering Condition, which would independently bar late merger of any kind. By *merged into*, I mean that α is merged to a subconstituent of β .

To see this, consider the following representation:

(5) *near Paris John thinks . . . that you live t*

This structure would be ruled out if there were no trace (here, $t =$ (copy of) *near Paris*), as the adjunct is not interpretively related to anything. But there are now two ways of deriving this structure with a trace.

One is the standard way: first merge *near Paris* with *live*, then remerge it higher.

The other way base-generates the adjunct where it appears. There is surely nothing wrong with this: since there is no theoretical difference between First Merge and Rmerge, clefted (or topicalized, or dislocated, etc.) adjuncts can in principle be first-merged in their landing position.⁷ This would normally lead to uninterpretability because, as noted above, the adjunct is not interpretively related to anything.

But suppose that next, *near Paris* is remerged late where the trace is, yielding (5). Since late (re)merger must be unboundedly countercyclic, this means that the ellipsis points in (5) can stand for anything (e.g., the null string), yielding a well-formed output.

These ellipsis points can also stand for weak islands, strong islands, or what have you. The prediction is that adjuncts can freely escape any island, unboundedly.⁸ To take another example, late remerger makes it possible to create ill-formed structures mimicking any type of parasitic gap structure (even with PPs, which do not allow parasitic gap structures).

(6) *near Paris John said [. . . that you live t] [. . . when a plane crashed t]*

Here again, both traces are generated by late merger and the ellipsis points could stand for whatever we choose.

One may wonder if these clearly undesirable derivations are not ruled out by other considerations making them, for example, uninterpretable at LF or PF, and thus causing them to crash at the interface. Late remerger in effect creates a representation identical to a representation created by movement but in reverse order, so this option is unlikely; but to check it, let me be more explicit about the interpretive procedures.

The semantic interpretation of a standard movement involves the following abstract steps:

1. Merge a phrase α to β .
2. Merge a copy of α in a position that c-commands β .
3. Prepend λn to the phrase that is the sister to the copy of α .
4. Trace-convert α (as in Fox 2002), giving it the index n .

The late remerger derivations described above would proceed as follows:

⁷ But if there is skepticism about this, the cases in (6) and (7b) can be used.

⁸ Technically, I have only shown that late merger can operate at any depth of a string of complements. To eliminate a potential objection, the point about island violations can be made with an (unbounded) sequence of *wh*-islands, that is, a nested string of complements, which are strong islands for adjuncts. That said, allowing late merger into complements but not into adjuncts does not seem to be an option worth exploring.

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These derivations are the same with respect to their semantics. The higher phrase is made a binder and the lower phrase is made the variable that is bound. The only difference lies in where the copy is put: higher or lower. Countenancing late merger allows the copy to be put in the lower position, creating problems. Preventing late Merger forces the copy to be put in the higher position, thereby avoiding the problems.

Turning now to the PF interface, one could try to capitalize on the reasonable position that (at least some) cyclicity effects on movement should be reduced to linearization/PF mapping constraints (see, e.g., Fox and Pesetsky 2005), with linearization itself proceeding phase by phase. Would the linearizability requirement distinguish a derivation of (5) with downward late remerger (in effect downward movement) from a derivation via standard remerger (upward movement)?

In cyclic linearization structures, linearization constraints are added at each phase. A movement dependency, two copies of the same item, creates contradictory requirements, but it can be linearized as long as one of the copies is deleted (phonetically ignored, neglected). Now, an unboundedly deep late-merged structure must also be linearizable. This means that all previous phasal information has been lost up to the highest constituent in the derivation at the point at which the late-merged constituent is merged; so the structure visible to the linearization algorithm must be the entire structure (the very top, whose merger diagnoses the point at which late merger takes place, and the very bottom, where late merger actually occurs). But then, the same principle that allows moved elements to be linearized (silent trace) applies in unboundedly deep late remerger too: both copies are simultaneously visible to the ordering-constraint algorithm, but, as in standard movement cases, the bottom one can be phonologically ignored, allowing linearization.

Finally, one could also deny that remerging a phrase α higher or lower than α yields the same object, a movement “chain” in both cases. For example, Fox (2017) tentatively suggests a near equivalent of the following idea: for a relation between two copies to count as movement, Agree must have been involved in the remerging that created one of the copies.⁹ This would indeed distinguish the two options since Agree is directional. Note first that there is no theoretical reason why Agree itself should be directional (rather than this directionality following from an appropriate ban on countercyclicity).¹⁰ But this would not be sufficient to avoid the pathological cases allowed by later merger, as the case in (6) shows. Indeed, consider again (5), generated by standard movement of the adjunct *near Paris* leaving a trace. The result is (7a), where the adjunct agrees with, say, the Topic head in some feature, say, *top*.

⁹ For Fox (2017), this step is necessary to allow linearization, so this is in effect a subcase of the previous discussion.

¹⁰ Essentially, and ironically, Graf (2014) proposes to encode late merger in a computationally more parsimonious way by in effect making Agree bidirectional, thus allowing downward movement.

- (7) a. [[near Paris]_{-no top} [Topic_{+no top} [[John [. . . live t]]]]]
 b. [[near Paris]_{-no top} [Topic_{+no top} [[John [. . . live t . . . when a plane crashed ζ]]]]]

Suppose now that there is additional structure as in (7b), which could be part of an adjunct clause, one or more *wh*-islands, a complex noun phrase, or what have you. Late remerger of *near Paris* as a VP adjunct in the position ζ is allowed (and, if it matters, we can restrict this to cases where ζ is c-commanded by *near Paris* and not by the trace).

I conclude that late merger of adjuncts should not be allowed.

3 Wholesale Late Merger: Same Overgeneration Problem

Wholesale late merger, which allows late merging of a complement under certain conditions (Bhatt and Pancheva 2004, Takahashi and Hulsey 2009), is illustrated in (8).

- (8) The conclusion that John₁ had cheated seemed to him₁ to be unfounded.

Coreference between *him* and *John* is possible. Proponents of this type of late merger (see Lebeaux 2009, Takahashi and Hulsey 2009) argue that the DP headed by *the* is merged as argument of *unfounded*, without its NP *conclusion that John had cheated*, and that this NP is late-merged after the DP has raised to subject of the main clause. Agreeing with Lebeaux's and Takahashi and Hulsey's description, let us assume a timing constraint on such late merger: descriptively, this type of late NP merger is limited to applying to a D at the latest when this D is in a Case position (so that, for Takahashi and Hulsey, NP can check its own Case in a timely fashion). Now note that coordinate structures are among the islands within which late merger can operate.

- (9) a. [[The pictures that John₁ likes] and [the books]], he₁ had to sell.
 b. [[The conclusion that John₁ had cheated] and [the punishment]] seemed to him₁ to be unfounded.

In both well-formed examples, the first bracketed constituent must have been inserted late inside one conjunct of a coordinate structure to avoid a Condition C violation. (9a) illustrates late adjunct merger; (9b), wholesale late merger.

Just like late adjunct merger, wholesale late remerger can fake (illegal) movement of, say, NPs as in, for example, Split Topicalization, which is available in a variety of languages but not in English (van Hoof 2006). As van Hoof (2006) illustrates, Split Topicalization in German can move an NP, stranding a determiner.

- (10) [_{CP} [_{NP} Definitiver Beweis]_k [_{C'} ist bis jetzt [_{DP} keiner t_k] gefunden worden]].
 definitive proof is until now no found been
 'No definitive proof has been found until now.'
 (van Hoof 2006:422, (31))

In addition, Van Riemsdijk (1989) shows that Split Topicalization exhibits the diagnostic properties of movement: it leaves behind a gap, is island-sensitive, and shows the connectivity effects with respect to binding and morphological case that are typical of movement dependencies. Given

that NPs are precisely what wholesale late merger merges late, it should be clear that we can duplicate with wholesale late merger of NP the faking of movement across islands that we demonstrated with adjuncts, incorrectly predicting that Split Topicalization of NPs is unbounded.

In English, we can also fake the NP-movement involved in the promotion analysis of relative clauses, yielding pathological structures. To illustrate, an NP can be remerged to a *wh*-D that is allowed in a relativized DP regardless of where this D is. Thus, it is possible to relativize from inside an island (here, a pied-piped DP) without movement by remerging the NP (here, *book*), as in (11).

- (11) a. I bought the book [[the topic of [which and this review]]_I [you knew about *t*₁]].
 b. I bought the [_{NP} book] [_{C_{rel}} [the topic of [_{DP} [_{DP} [_D which] [_{NP} *book*]] and [_{DP} this review]]]_I [you knew about *t*₁]].
 c. I bought the [_{NP} book] [_{C_{rel}} [the topic of [_{DP} [_D which]]]_I [you knew about *t*₁]].

The relative clause in (11a) is merged to the external NP *book* (as in matching derivations; see Hulsey and Sauerland 2006), and this NP is late-merged to *which* inside the coordinate structure, as in (11b). Pied-piping applies legally in (11a): following Heck's (2009) analysis, pied-piping can occur in case the *wh*-element triggering the pied-piping (here, *which*) is accessible via Agree to the C probe of the relative clause *C_{rel}*. In (11a), it is accessible, as shown by (a) the well-formedness of (11c), which demonstrates that the DP containing the conjunction can be pied-piped, and (b) the fact that Agree is able to reach into coordinations (as demonstrated by, e.g., first conjunct agreement configurations). So there is nothing wrong with pied-piping per se.¹¹ Late remerger of the italicized NP *book* in (11a) is not subject to the timing constraints on complement insertion (since it is already Case-checked) and it can violate the Coordinate Structure Constraint: it can thus be produced, overgenerating.

I conclude that no variety of late merger is available.¹² As mentioned at the outset, the LFs produced by late merger have the right desirable properties (to circumvent Condition C), but they should not be produced by late merger. How then are they produced?

Contemporary theories of the syntactic computational system distinguish the derivation tree of a structure—the derivational history in terms of Merge and Move—from the maps from such a derivation tree to PF and LF representations (Kobele (2006) introduces this for Minimalist grammars, but the point is more general). The undesirable increase of generative capacity and the empirical problems I have outlined are due to encoding the origin of the desirable LFs into

¹¹ Of course, (9a) must be excluded. If pied-piping is possible, why is (9a) ruled out? I argue elsewhere (Sportiche 2017) that all relatives involve promotion of the head and consequently that such cases are excluded by standard constraints on movement—here, the Coordinate Structure Constraint (thus reducing (part of) pied-piping theory to movement theory, unlike for example Heck's (2009) proposal, which reduces it to Agree theory).

¹² Although I will not discuss this in detail here, late merger as normally conceived, which allows unboundedly countercyclic applications, is also incompatible with models using multidominance to represent movement. Indeed, in such models movement is standardly represented by assigning two distinct mothers M1 and M2, one c-commanding the other, to a phrase P, which is interpreted as having moved from M1 to M2 (but see Johnson 2016 for an alternative). Late merger would require P to strictly include a subconstituent at M1 without containing it at M2. This is not possible: a given phrase cannot both include and not include a particular subconstituent.

the derivational process itself (by allowing late merger). Elsewhere (Sportiche 2016), I put forth a proposal that does not assume late merger, but instead exploits what is already assumed concerning how the map from a derivation tree to an LF (or a PF) functions: informally speaking, such a map can *neglect* to fully spell out the content of a trace. This way of reaching desirable LFs (or PFs) does not allow overcoming island violations (and does not *seem* to alter the generative capacity of the computational system (Gregory Kobele and Thomas Graf, pers. comms.), although a proof is needed, of course). It thus looks like a promising replacement for late merger.¹³

References

- Adger, David, Alex Drummond, David Hall, and Coppe van Urk. 2017. Is there Condition C reconstruction? In *NELS 47: Proceedings of the Forty-Seventh Annual Meeting of the North East Linguistic Society*, ed. by Andrew Lamont and Katerina Tetzloff, 1:21–30. Amherst: University of Massachusetts, Graduate Linguistic Student Association.
- Bhatt, Rajesh, and Roumyana Pancheva. 2004. Late merger of degree clauses. *Linguistic Inquiry* 35:1–46.
- Bruening, Benjamin, and Eman Al Khalaf. 2017. No argument-adjunct distinction in reconstruction for binding condition C. Paper presented at the 35th West Coast Conference on Formal Linguistics, Calgary, Alberta.
- Chomsky, Noam. 1993. A minimalist program for linguistic theory. In *The view from Building 20*, ed. by Kenneth Hale and Samuel Jay Keyser, 1–52. Cambridge, MA: MIT Press.
- Chomsky, Noam. 2004. Beyond explanatory adequacy. In *Structures and beyond: The cartography of syntactic structures*, vol. 3, ed. by Adriana Belletti, 104–131. Oxford: Oxford University Press.
- Chomsky, Noam. 2008. On phases. In *Foundational issues in linguistic theory: Essays in honor of Jean-Roger Vergnaud*, ed. by Robert Freidin, Carlos P. Otero, and Maria Luisa Zubizarreta, 133–166. Cambridge, MA: MIT Press.
- Demirdache, Hamida. 2015. Resumption, epithets and trace conversion. Paper presented at the 25th Colloquium on Generative Grammar, IKER, Bayonne.
- Fox, Danny. 2002. Antecedent-contained deletion and the copy theory of movement. *Linguistic Inquiry* 33: 63–96.
- Fox, Danny. 2017. Embedded Late Merge and the theory of displacement. Ms., MIT, Cambridge, MA. <http://ling.auf.net/lingbuzz/003429>.
- Fox, Danny, and Jon Nissenbaum. 1999. Extraposition and scope: A case for overt QR. In *WCCFL 18: Proceedings of the 18th West Coast Conference on Formal Linguistics*, ed. by Sonya Bird, Andrew Carnie, Jason D. Haugen, and Peter Norquest, 132–144. Somerville, MA: Cascadilla Press.
- Fox, Danny, and David Pesetsky. 2005. Cyclic linearization of syntactic structure. *Theoretical Linguistics* 31:1–46.
- Graf, Thomas. 2014. Late Merge as lowering movement in Minimalist grammars. In *LACL 2014*, ed. by Nicholas Asher and Sergei Soloviev, 107–121. Heidelberg: Springer.
- Heck, Fabian. 2009. On certain properties of pied-piping. *Linguistic Inquiry* 40:75–111.
- van Hoof, Hanneke. 2006. Split topicalization. In *The Blackwell companion to syntax*, ed. by Martin Everaert and Henk van Riemsdijk, 4:410–465. Malden, MA: Blackwell.

¹³ See also Graf 2014, which is primarily concerned with generative capacity, and which explicitly recasts late merger as downward movement in a different formal system than standard Minimalist grammars, but in a way that is computationally parsimonious. Such an approach could in principle be enriched to prevent the kind of overgeneration discussed here, and may yield another alternative.

- Hulsey, Sarah, and Uli Sauerland. 2006. Sorting out relative clauses. *Natural Language Semantics* 14: 111–137.
- Johnson, Kyle. 2016. Towards a multidominant theory of movement. Ms., University of Massachusetts, Amherst. http://people.umass.edu/kbj/homepage/index_johnson.htm.
- Kobele, Gregory. 2006. Generating copies: An investigation into structural identity in language and grammar. Doctoral dissertation, UCLA, Los Angeles, CA.
- Kobele, Gregory, and Jens Michaelis. 2012. CoTAGs and ACGs. In *Logical aspects of computational linguistics*, ed. by Denis Béchet and Alexandre Dikovsky, 119–134. Berlin: Springer.
- Lebeaux, David. 1991. Relative clauses, licensing and the nature of derivations. In *Phrase structure, heads and licensing*, ed. by Susan Rothstein and Margaret Speas, 209–239. San Diego, CA: Academic Press.
- Lebeaux, David. 2009. *Where does the binding theory apply?* Cambridge, MA: MIT Press.
- Michaelis, Jens. 1998. Derivational Minimalism is mildly context-sensitive. In *Logical Aspects of Computational Linguistics*, ed. by Michael Moortgat, 179–198. Berlin: Springer.
- Riemsdijk, Henk van. 1989. Movement and regeneration. In *Dialectal variation and the theory of grammar*, ed. by Paola Benincà, 105–136. Dordrecht: Foris.
- Sauerland, Uli. 1998. On the making and meaning of chains. Doctoral dissertation, MIT, Cambridge, MA.
- Sportiche, Dominique. 2016. Neglect. Ms., UCLA, Los Angeles, CA. <http://ling.auf.net/lingbuzz/002775>.
- Sportiche, Dominique. 2017. Relative clauses: Promotion only, in steps. Ms., UCLA, Los Angeles, CA. <http://ling.auf.net/lingbuzz/003444>.
- Stanton, Juliet. 2016. Wholesale late merger in \bar{A} -movement: Evidence from preposition stranding. *Linguistic Inquiry* 47:89–126.
- Starke, Michal. 2001. Move dissolves into Merge: A theory of locality. Doctoral dissertation, University of Geneva. <http://ling.auf.net/lingbuzz/000002>.
- Tada, Hiroaki. 1993. A/A-bar partition in derivation. Doctoral dissertation, MIT, Cambridge, MA.
- Takahashi, Shoichi, and Sarah Hulsey. 2009. Wholesale late merger: Beyond the A/ \bar{A} distinction. *Linguistic Inquiry* 40:387–426.

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