1 Background

1.1 Marantz 1997 @ PLC 21, No escape from syntax, revisiting Chomsky 1970, RoN.

1. a. Jane grows tomatoes.
   b. Tomatoes grow.
   c. Tomatoes' growth/The growth of tomatoes
   d. #Jane's growth of tomatoes (\* on reading parallel to 1a).

Account: \(\sqrt{\text{GROW}}\) belongs to 'internally caused CoS' root class

- Flavors of verbalizer
  - \(v1\) 'agentive' verbalizer, introduces agent in specifier
  - \(v2\) 'BECOME', inchoative verbalizer

- \(-\text{th}\) instantiates a root nominalization
  - nominalizer attaches without intermediate verbalizing layer
  - hence no \(v1\) (or \(v2\)) possible
  - hence no agent argument is structurally introduced

'Since the root of growth refers to an internally caused CoS, the complement to the root will be interpreted as both the theme and the internal cause... [HH necessarily reflexive?] there is no source for a v-1 'agent' interpretation'.

2. a. 
   \[
   \text{DP} \quad \text{vP} \\
   \text{Jane} \quad \text{v1} \quad \text{\(\sqrt{\text{GROW}}\)} \\
   \text{\(\phi\)} \quad \text{\(\text{grow}\)} \\
   \text{\(\text{tomatoes}\)}
   \]

   b. 
   \[
   \text{vP} \\
   \text{v2} \\
   \text{\(\sqrt{\text{GROW}}\)} \\
   \text{\(\text{grow}\)} \\
   \text{\(\text{tomatoes}\)}
   \]
3. a. The glass rose/Jane raised the glass  
   a'. *Jane's rise/raise of the glass  
   b. Jane amused the children  
   b'. *Jane's amusement of the children  
   c. The film annoyed Kim  
   c'. *The film's annoyance of Kim.

Other parallel cases:

- rise/raise \( \sqrt{\text{RISE}} \)
- object experiencer psych predicates: amuse, annoy, entrance

4. a. Jane destroyed the city.  
   b. *The city destroyed.  
   c. Jane's destruction of the city.  
   d. The city's destruction (by Jane)

\( \sqrt{\text{DESTROY}} \) class ('externally caused CoS')

- \( \sqrt{\text{DESTROY}} \): compatible with agentive interpretation for possessor
- 3b. shows it's incompatible with verbalizer which explicitly excludes agentivity  
  i.e. with v-2
- Root nominalization structure permits an agentive interpretation for possessor, despite the fact  
  that we know (from \( \text{grow} \)) that it doesn't include a v layer
5. All signs point to a claim that √DESTROY includes agentivity entailments in the root. √GROW does not; any non-internal cause has to be introduced from outside.

√BREAK class ('result-of-CoS' √)

6. a. Jane cracked the glass
b. The glass cracked.
c. *Jane's crack of the glass
d. *The glass's crack/*The crack of the glass
e. The crack in the glass.

'Essentially, 'possessors' of NPs may be interpreted in almost any kind of semantic relation with respect to the possessed NP that can easily be reconstructed from the meaning of the possessor and possessed by themselves'

→ The famed 'Relation R' — some kind of association, whatever the root & possessor license.

7. Yesterday's destruction of the city…

'John' in John destroyed the city and John's destruction of the city might receive similar interpretations through different syntactic means.'

'There's a further issue of whether the categories reflect features of the roots themselves or rather features of the functional nodes that serve as the context for the insertion of the roots'

→ Sketch of a feature-based account: Roots acquire features constraining the flavor of v they must co-occur when in the context of v (cf Ramchand 2008’s system)

8. √GROW / [[____] v ]v + uv
   √DESTROY / [[____] v ]v + uv1
Plus +RelationR interacting with $\sqrt{\text{GROW}}$ and $\sqrt{\text{DESTROY}}$ encyclopedically, in the way Marantz proposes, to derive possessor-agency facts

1.2 Harley and Noyer 2000: Encyclopedic knowledge, not root features

$\sqrt{\text{ACCUMULATE}}$ a member of the $\sqrt{\text{GROW}}$ class…in certain contexts

9. a. Dust accumulated
   b. Jane/the armoire accumulated dust
   c. *Jane/the armoire's accumulation of dust
      (d. Dust's accumulation on the armoire/The accumulation of dust on the armoire)

10. a. Jane accumulated wealth
    b. Jane's accumulation of wealth / The accumulation of wealth by Jane
    c. (Wealth accumulates in the top 1%)
    d. (The top 1%'s accumulation of wealth)

$\rightarrow$ Other cases: Causation not licensed for possessors, agentivity is licensed

11. a. The couple separated.
    b. Adultery separated the couple.
    c. *Adultery's separation of the couple.

12. a. The children separated.
    b. The teacher separated the children.
    c. The teacher's separation of the children.

13. a. The German principalities unified in the 19th century.
    b. The (events of the) 19th century unified the German principalities.
    c. *The (events of the) 19th century's unification of the German principalities

14. a. The German principalities unified.
    b. Bismarck unified the German principalities.
    c. Bismarck's unification of the German principalities

$\rightarrow$ Our conclusions:

Membership in the 'internally caused' class of CoS verbs is a property of the whole $\sqrt{P}$ predicate; the $\sqrt{}$ interpreted in conjunction with its arguments, in the context of our world/encyclopedic knowledge

The availability of an Agent interpretation for possessive D depends on whether the event nominal denotes an internally caused event, which arises from our world/encyclopedic knowledge
Separation/Unification cases: what's bad is when the subject of a caused CoS verb is a Cause, rather than an Agent—controlled for by controlling animacy; these inanimate subjects of these events are encyclopedically typically Causes, not Agents Folli & Harley 2005, and Folli & Harley 2008—coming back to this)

Accumulation/collection of dust/wealth cases: what's bad is when the CoS itself is encyclopedically typically caused, rather than agentively executed, determined by the nature of the theme. In those caused contexts, can really clarify which sense is meant by controlling animacy (Jane marginally allows for an agentive interpretation, The armoire does not).

→ What is super clear is that causativization cannot be encoded by RelationR

→ Rolf & I wrote:

"The question still arises, of course, as to why the 'facilitator' role present in transitive verbal grow is not a possible interpretation for the specifier of D."

→ What is the nature of the relationship between a possessor in Spec-D and the nominal in its complement?

2 Lessons from relational nouns

Partee & Borschev 2003, Barker 2019

2.1 DP'ses are always arguments of relational nPs

→ First pass: All DP'ses are arguments of some relation
  • either arguments of a 'free R', usually possessive, if the denotation of nP is sortal
  • or arguments of 'inherent R' (if the denotation of nP is relational either by virtue of being headed by relational √, or by virtue of containing a relational adjective like 'favorite')


15. That brother of Jane's
   [ that [ brother (of) [[ Jane ] s] ]] ‘s turns type e argument into something that can compose with a relational noun
   a. ‘s λyλR[λx[R(y)(x)]]
   b. Jane’s λR[λx[R(Jane)(x)]] NOT an <e,t> predicate *That brother is Jane’s
   c. brother (of) Jane’s λx[brother(Jane)(x))] Now an <e,t> predicate He is a brother of Jane’s
(d. Jane's brother \( tx[\text{brother}(\text{Jane})(x)] \) = the brother of Jane's)

→ R contained in the noun, not introduced by the 's

→ Jensen and Vikner: all sortal nouns coerce to relational nouns to compose with 's

→ Content of coerced R determined lexically (e.g. brother) or pragmatically (e.g. book in Jane's book)

→ One interesting moral of the literature on relational nominals: The property of being relational is a *phrasal* property, not a property of the head

16. Barker: *birthday* vs *day*
   Partee & Borschev: *movie* vs *favorite movie*

→ inherent relation can be contributed by non-head; open argument position in favor or birth percolates up.

(→ fits with our observations above about accumulation of dust vs accumulation of wealth
   Property of being a \( \sqrt{\text{GROW}} \)-class predicate a phrasal property, not a \( \sqrt{\cdot} \)-level property)

→ Means that possessor must be introduced as sister of nP, not sister of \( \sqrt{\cdot} \)

2.2 Possession relations, lexical relations, contextually-supplied relations

→ Lots of effort to distinguish between different types of 's relations

→ Lots of languages (Russian, Polish, Hebrew) make sharper morphosyntactic distinctions than English

→ One surprising result from English, emphasized by Barker: The *flexible* R relation, the relation whose content can be supplied by pragmatic or lexical content, is *not* available with postnominal DP's
The postnominal 's relation is always **possession** (in Barker's/Vikner & Jensen's terms: 'control')

Barker: The *flexible* R relation appears only with prenominal 's

17. a. Those dogs of Jane's were rabid ← possession only
    b. Jane's dogs were rabid ← any kind of relation
       (including possession, but also contextually supplied ones)

But! Even prenominally, can still distinguish between possession R and inherent or coerced R.

Prenominal possession R can take scope over *former*, coerced/pragmatic or lexical R cannot:

18. a. *my former mansion* the mansion that used to be mine  possessive R
    my thing that used to be a mansion
    
    b. *my former wife* the person who used to be my wife  lexical R
    *my person who used to be a wife
    
    c. *my former favorite book* the thing that used to be my favorite book  lexical R
    *my favorite thing that used to be a book
    
    d. *my former attorney* the attorney who used to work for me  contextual R
    *my person who used to be an attorney
    
    e. *my former ponytail* the hairstyle that used to be my ponytail  lexical R
    *my hair that used to be a ponytail
    
    f. *my former class* the class I used to attend/teach/organize  contextual R
    *my meeting that used to be a class

Confirm's Jensen & Vikner's approach to flexible R—it's introduced at the nP level by coercion of a sortal noun to a relational noun

Suggests a syntactic approach to possessive R — actually introduced by a syntactic head.

*DP's* adjoined to nP, like *former*, can adjoin first or second for different scope readings

[ Larson & Cho ]

When prenominal *DP's* triggers coercion of nP; no change in structure of nP; *former* must include coerced R in its scope

( Coercion account supported by P&B's observation that predicate *DP's* is also always possessive: )
19.  a.  That book/mansion/dog/painting is Jane's
    b.  *That mother/friend/uncle is Jane's

→ of course can't coerce an NP that isn't there!

→ complicated to sort out for predicative DP’s in English because N-ellipsis is also a thing. But best P&B can tell, still have to be different:
   If Kandinsky's portraits had all been Gabriele Münter's, then I suppose they would all be in Munich now.)

→ Whole thing makes sense in an i* kind of Wood/Marantz framework
   o  ‘s introduces an argument DP in an NP
   o  it might be interpretable or uninterpretable
     •  if interpretable, introduces possession relation between DP & NP
     •  if uninterpretable, Full Interpretation requires relational NP
       •  relation provided lexically if NP inherently inalienable/relational or
       •  relation provided by coercion, then it's 'Free R'

2.3  Summary

→ ‘s encodes either possession (if interpretable) or is semantically vacuous
→ If vacuous, then NP must provide a relation allowing ‘s argument to be interpreted
   (lexically ('inalienable possession') or via coercion+contextual relation 'Free R')
→ postnominal and predicative DP’s is interpretable, contributes possession
→ prenominal DP’s can be interpretable or uninterpretable

→ Terminology:
   •  I will call possessive DP’s 'alienable possessors'
   •  I will call vacuous DP’s 'inalienable possessors'
   •  I will call the possession relation 'possession'
   •  I will call a relation contributed by NP, either lexically or via coercion,
     'lexical/pragmatic-enrichment R'; referring specifically to coercion, 'contextual R' or 'coerced R'

3  Return to agentive DP’s in denominal verbs

→ Seems obvious that Jane's destruction of the city involves the vacuous, uninterpretable
   instance of ‘s, with the relational content coming from the noun

→ Can test this: If agentive DP’s is some kind of possession reading, should be possible as a
   predicate and take scope under former; if agency interpretation is derived from
   lexical/pragmatic-enrichment R, then it can't

20.  a.  *The destruction of the city is the barbarians'.
    b.  The barbarians' former destruction of the city
        The destruction of the city by the barbarians that occurred in the past
*The destruction of the city that used to be done by barbarians but now is done by someone else.

→ So agent interp of DP's is an instance of lexical/pragmatic-enrichment R—the R is coming from nP, not from any underspecified relation contributed by 's itself

→ nP might be lexically relational, including an Agent role (cf. Ausensi, Yu, Smith 2021; Smith, Yu 2022), or, we pragmatically enrich it, coercing an agentive relation between DP's and the nP (a version of Marantz's take)

→ A reason to prefer the coercion account: accumulation, separation, unification

21. a. The couple separated
   b. Adultery separated the couple.
   c. *Adultery's separation of the couple.
   (d. The separation of the couple/The couple's separation)

22. a. The children separated.
   b. The teacher separated the children.
   c. The teacher's separation of the children.
   (d. The separation of the children/The children's separation)

23. a. The German principalities unified in the 19\textsuperscript{th} century.
   b. The (events of the) 19\textsuperscript{th} century unified the German principalities.
   c. *The (events of the) 19\textsuperscript{th} century's unification of the German principalities
   (d. The unification of the German principalities/The principalities' unification)

24. a. The German principalities unified.
   b. Bismarck unified the German principalities.
   c. Bismarck's unification of the German principalities
   (d. The unification of the German principalities/The principalities' unification)

→ Agentive vs causative verbal structures not lexically different; we don't want SEPARATE1 and SEPARATE2

→ Just one SEPARATE & one external-argument-less, Voice-less deverbal nominalization structure
When a DP's is added, pragmatic coercion supplies an Agent relation.

If Agency R can be coerced with separation, destruction, etc:
Why can't we pragmatically coerce a causation relation between DP's and a √GROW-class nominalization?

Consider the transitive possessive forms again. Why do we get the readings that we get?

25. a. Jane's growth of tomatoes ok as possessed result nominal
   * as causative event nominal
   * as an agentive event nominal

   b. *Jane's rise of the glass no result nominal possible
   * as a causative event nominal
   * as an agentive event nominal

   c. DP's separation of the couple no result nominal possible

   d. DP's unification of the German principalities no result nominal possible
   * as a causative event nominal
   ok as an agentive event nominal

   e. DP's accumulation of dust ok as a possessed result nominal
   * as a causative event nominal
   odd scenario but ok as agentive event nominal

Animacy and (in)alienable possession:

26. a. That oak tree has a long branch.

   b. #That oak tree has a bird's nest

   c. Jane has a long neck.


27. a. The tree's branch

   b. #The tree's nest

   c. Jane's neck

   d. Jane's book

Inanimate DP's ok as inalienable possessors, saturating a lexically-supplied merelogical part-of relation provided by nP (?what about pragmatic-enrichment R?)

Inanimate DP's not ok as arguments of possessive 's

Animate DP's ok as arguments of possessive 's, as inalienable possessors, and as arguments of pragmatic-enrichment R

Let's look at each case in turn. First: Cases with both event and result nominal interpretations, and an intentional subject or DP's
28. Jane accumulated dust  
Jane's accumulation of dust

\[
\text{DP} \\
\quad \triangleleft \text{Jane} \\
\quad \text{DP} \\
\quad \text{D'} \\
\quad \text{D} \\
\quad \text{nP} \\
\quad \text{nP} \\
\quad \text{vP} \\
\quad \text{vP} \\
\quad \sqrt{\text{ACCUMUL}} \\
\quad \sqrt{\text{ACCUMUL}} \\
\quad \text{of} \\
\quad \text{dust}
\]

→ Readings for 's: possession relation, or vacuous with coerced R
→ Readings for nP: event of accumulation of dust
   result of the event of accumulation of dust (regular sortal nP)

<table>
<thead>
<tr>
<th>Reading</th>
<th>possessive 's</th>
<th>vacuous 's — coerced R</th>
</tr>
</thead>
</table>
| event reading  | *                                  | The event of dust-
|                |                                     | accumulation agentively |
|                |                                     | accomplished by Jane—she |
|                |                                     | actively went out and |
|                |                                     | collected dust         |
| result reading | the physical accumulation of dust   | the physical accumulation |
|                | that Jane owns                     | of dust associated with Jane |
|                |                                     | …probably locative, but |
|                |                                     | could be other contextually |
|                |                                     | determined associations  |

→ Next: Cases which only allow a result nominal reading, with inanimate, non-intentional subject or DP's

29. The armoire accumulated dust  
The armoire's accumulation of dust

\[
\text{DP} \\
\quad \triangleleft \text{The armoire} \\
\quad \text{DP} \\
\quad \text{D'} \\
\quad \text{D} \\
\quad \text{nP} \\
\quad \text{n} \\
\quad \text{vP}
\]
→ Readings for 's: possession relation, or vacuous with coerced R
→ Readings for nP: event of accumulation of dust
   result of the event of accumulation of dust

\[
\begin{array}{|c|c|c|}
\hline
& \text{possessive 's} & \text{vacuous 's — coerced R} \\
\hline
\text{event reading} & * & * \\
\text{result reading} & * because armoires aren't animate, can't possess things & \text{The physical accumulation of dust associated with the armoire …probably locative, but maybe could be other contextually determined associations} \\
\hline
\end{array}
\]

→ Next: Cases without a result nominal, variable intentionality DP's

30. a. The teacher/Adultery separated those guys
    b. The teacher's/*Adultery's separation of those guys \textit{no result nominal possible}\footnote{Ok maybe there is a result nominal available for \textit{separation} naming the physical space between two objects created by the event of separating them; needs objects to be introduced with \textit{between not of} imho (The separation between \textit{A and B} measured 5 cm)}
    c. Bismarck/The 19\textsuperscript{th} century unified the German principalities
    d. Bismarck's/*The 19\textsuperscript{th} century's unification of the German principalities \textit{no result nominal possible}

→ Readings for 's vacuous with coerced R (can't possess an event)
→ Readings for nP event

\[
\begin{array}{|c|c|c|}
\hline
& \text{possessive 's} & \text{vacuous 's — coerced R} \\
\hline
\text{event reading} & * & * \\
\hline
\text{result reading} & * & * \\
\hline
\end{array}
\]

→ Got to coerce a relationship between DP's and the event; best way is for DP's to be an event participant. Agency is a good way to be an event participant, coercible. Inanimate/non-intentional DPs can't participate agentively, so they can't be DP's
Next: Cases without a result nominal, only causative external arguments possible, impossible to participate in the event as an Agent

Readings for 's  vacuous
Readings for nP  event

31. a. Jane raised her glass
    b. *Jane's raise/ rise of her glass

<table>
<thead>
<tr>
<th></th>
<th>possessive 's</th>
<th>vacuous 's — coerced R</th>
</tr>
</thead>
<tbody>
<tr>
<td>event reading</td>
<td>*</td>
<td>* Just can't relate a DP to the event nohow</td>
</tr>
<tr>
<td>result reading</td>
<td>*</td>
<td>*</td>
</tr>
</tbody>
</table>

Next: Cases with a result nominal, event such that only causative external arguments are possible, impossible to participate in the event as an Agent

Readings for 's  possessive, vacuous
Readings for nP  event, result

32. a. Jane grew tomatoes
    b. Jane's growth of tomatoes

<table>
<thead>
<tr>
<th></th>
<th>possessive 's</th>
<th>vacuous 's — coerced R</th>
</tr>
</thead>
<tbody>
<tr>
<td>event reading</td>
<td>*</td>
<td>* Just can't relate a DP to the event reading nohow</td>
</tr>
<tr>
<td>result reading</td>
<td>The growth of tomatoes owned by Jane</td>
<td>The growth of tomatoes associated with Jane, probably locative or mereological but other relations could be possible</td>
</tr>
</tbody>
</table>

4 Conclusions

When 's is vacuous, and DP's needs to be related to an event-denoting nominal via coercion, the way we do it is by coercing an event participant role for the DP

It seems like 'Causer' is not an event participant role
Observations about Causes and the things they cause

Kayne 1975, Folli and Harley 2004: Causes require an <s,t> complement — a Small Clause, a saturated predicate

33. a. Jane ate the apple
    b. Jane ate the apple up
    c. #The sea ate the beach
    d. The sea ate the beach away.
We proposed another external-argument-introducing 'flavor of v,

Marantz v1 Folli & Harley vDO, Agent subjects
Marants v2 Folli & Harley vCAUSE, Cause subjects

We said vCAUSE selects a SC complement

Probably not right—no obvious, principled way to allow vDO inside nominalizations but exclude vCAUSE

Alternative: only 1 v, introducing event, fine inside deverbal nominalizations like separation or growth

DP's inside such nominalizations must get its interpretation via coerced R in the denotation of the event nominal

How to relate to an event-denoting nominal? Be an event participant

Why 'Cause' not an event participant?

Levin & Rappaport Hovav 1999 note that causes can temporally precede their caused events ('ballistic causation'), and can cease their involvement in the event after initiation but prior to its culmination.

Agents' involvement in events continues throughout ('entrained causation')

34. a. The Vietnam War gave Norman Mailer a book.
    b. The news upset Jane.
    c. Jane sang La Bamba.

This also seems to be what is required to be understood an event participant via a coerced R relation—you have to be an event participant throughout, you can't just cause the event and bow out.

Related to the observation from Vikner & Jensen, building on Pustejovsky 1998's Qualia structures, that 'CONTROL' is relevant to the contextual R relation supplied in vacuous possession.

(What is CONTROL? I dunno. But Causes don't have it).

That's why in Jane's growth of tomatoes it sounds like she has tomatoes growing out of her head or body.
Some references:


Belvin, R. S. (1993). The two causative haves are the two possessive haves. *MIT working papers in linguistics, 20*, 19-34


