

## A-movement out of PP diagnoses Voice[Pass]\*

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BCGL 15, 7 October 2022

### 1. Introduction

#### A NOVEL GENERALIZATION

\* P-stranding A-movement in English is restricted in ways that non-P-stranding A-movement is not.

- (1) a. *Verbal (pseudo)passive*  
The patient was {treated/operated on} by a specialist.  
b. *\*Pseudomiddle*  
Some patients don't {treat/\*operate on} very easily.

(2)

	non-P-stranding	P-stranding
a. <i>Verbal passive</i>	✓	✓
b. <i>Adjectival passive</i>	✓	✓
c. <i>Concealed passive</i>	✓	✓
d. <i>Middle</i>	✓	✗
e. <i>-able</i>	✓	✗
f. <i>DP-preposing</i>	✓	✗
g. <i>Object shift</i>	✓	✗
h. <i>Unaccusative</i>	✓	✗

**HYPOTHESIS:** P-stranding A-movement must be licensed by a lexically specified, locally c-commanding head—in English, this is (at least) Voice[Pass]. **P-stranding A-movement diagnoses passive Voice.**

→ A-movement permitting P-stranding: (2a)–(2c) **contain Voice[Pass]**.

→ A-movement not permitting P-stranding: (2d)–(2h) **do not contain Voice[Pass]**.

An independent diagnostic for non-active Voice—**Perlmutter's Generalization**—supports this analysis.

#### Analysis and Some Consequences

Voice[Pass] **Removes** (Müller 2017, 2018) non-structural Case (KP), allowing a nominal already assigned Case to participate again in A-relations (i.e. Case and  $\phi$ -agreement).

- ▷ Some structures previously thought to (optionally) include Voice[Pass] must not (deverbal *-ation* nominals *pace* Borer (2013, 2020), *-able* adjectives *pace* Ultra-Massuet (2013)).
- ▷ *By*-phrases do not diagnose Voice[Pass], since they are available in contexts where Voice[Pass] is banned (e.g. deverbal *-ation* nominals and *-able* adjectives). Instead, *by*-phrases diagnose *v*.
- ▷ Variation results from differences in the presence vs. absence of Voice[Pass] (e.g. %pseudopassive *-able*) and in the inventory of heads which suppress oblique case (e.g. %pseudomiddles).

\*I am indebted to Karlos Arregi, Jason Merchant, Erik Zyman, and Andy Murphy for their generous feedback on this work. I would also like to thank Heidi Harley and Stefan Keine for their comments. All remaining errors are solely my responsibility.

### ROADMAP:

- §2 A-movement with(out) P-stranding
- §3 Perlmutter's Generalization & non-active Voice
- §4 Analysis: Voice[Pass] Removes KP
- §5 Deriving P-stranding A-movement
- §6 Conclusion

### 2. An asymmetry: A-movement with(out) P-stranding

A-movement with(out) P-stranding is possible in verbal passives, adjectival passives, and concealed passives.

#### NON P-STRANDING A-MOVEMENT

- (3) **Verbal passive** (*be/get*):
- a. The patient was/got treated by specialists.
  - b. That idea is/gets cited often by experts.
  - c. The plan was/got authorized by the general.
  - d. The wall was/got defaced by someone with a talent for graffiti.
  - e. The safe was/got broken by a burglar.
  - f. The title was/got selected by the committee.
  - g. This forest was traversed by humans.

- (4) **Adjectival passive:**
- a. That patient seems treated by specialists.
  - b. That idea seems often cited by experts.
  - c. The plan appears authorized by the general.
  - d. The wall looks defaced by someone with a talent for graffiti.
  - e. The safe appears broken by a burglar.
  - f. The title remains unselected by them.
  - g. This forest appears traversed by deer.

- (5) **Concealed passive:**
- a. That patient needs/wants treating immediately by specialists.
  - b. That idea merits citing by experts.
  - c. The plan needs/wants authorizing immediately by the general.
  - d. This wall could use defacing by someone with a talent for graffiti.
  - e. The safe needs breaking by experts.
  - f. —
  - g. —

#### P-STRANDING A-MOVEMENT

- (6) **Verbal pseudopassive** (*be/get*):
- a. The patient was/got operated on by specialists.
  - b. That idea is/gets referred to often by experts.
  - c. The plan was/got signed off on by the general.
  - d. The wall was/got written on by someone with a talent for graffiti.
  - e. The safe was/got broken into by a burglar.
  - f. The title was/got decided on by them.
  - g. This forest was traveled through by humans.

- (7) **Adjectival pseudopassive:**
- a. That patient seems operated on by specialists.
  - b. That idea seems referred to often by experts.
  - c. The plan appears signed off on by the general.
  - d. The wall looks written on by someone with a talent for graffiti.
  - e. The safe appears broken into by a burglar.
  - f. The title remains undecided on by them.
  - g. This forest appears traveled through by deer.

- (8) **Concealed pseudopassive:**
- a. That patient needs/wants operating on immediately by specialists.
  - b. That idea merits referring to by experts.
  - c. The plan needs/wants signing off on immediately by the general.
  - d. This wall could use writing on by someone with a talent for graffiti.
  - e. The safe requires breaking into by experts.
  - f. —
  - g. —

Adjectival pseudopassive: Emonds (1970: 80, (84)), Siegel (1973), Wasow (1977), Bresnan (1982), Maling and Zaenen (1985), Bruening (2014), contra Postal (2010: 221–229).

Concealed (pseudo)passives: Jespersen (1940), Hantson (1984), Clark (1985), Safir (1991), Huddleston (2002), Authier and Reed (2008).

P-stranding A-movement fails in middles, *-able* adjectives, DP-preposing, object shift, and unaccusatives.

NON P-STRANDING A-MOVEMENT

P-STRANDING A-MOVEMENT

- |   |   |
|---|---|
| <p>(9) <b>Middle:</b></p> <p>a. That kind of patient treats easily.<br/>         b. ?That kind of idea cites easily.<br/>         c. Such plans don't authorize very easily.<br/>         d. Walls like this don't deface all that easily.<br/>         e. Such safes don't break all that easily.<br/>         f. ?Such titles don't select all that easily.<br/>         g. Dense woods don't traverse easily.</p> <p>(10) <b>'Passive' -able:</b></p> <p>a. Such patients are treatable by specialists.<br/>         b. Such ideas are hardly citable by experts.<br/>         c. Such plans aren't authorizable by low-ranking generals.<br/>         d. Such walls are entirely defaceable by anyone with a can of spray paint.<br/>         e. Safes this cheap are breakable by amateurs.<br/>         f. We must determine whether the title is selectable by the committee.<br/>         g. This forest is traversable only by experts.</p> <p>(11) <b>Nominal 'passive':</b></p> <p>a. the patient's treatment by a specialist<br/>         b. that idea's citation by experts<br/>         c. the plan's authorization by the general<br/>         d. this wall's defacement by a graffiti artist<br/>         e. ?the safe's breaking by the robbers<br/>         f. the title's selection by the committee<br/>         g. this forest's traversal by humans</p> <p>(12) <b>Object shift:</b></p> <p>I caught the patient<sub>i</sub> up <u>   </u><sub>i</sub>.</p> <p>(13) <b>Unaccusative:</b></p> <p>Matt<sub>i</sub> suddenly appeared <u>   </u><sub>i</sub> to her.</p> | <p>(14) <b>*Pseudomiddle:</b></p> <p>a. *That kind of patient operates on easily.<br/>         b. *That kind of idea refers to easily.<br/>         c. *Such plans don't sign off on very easily.<br/>         d. *Walls like this don't write on all that easily.<br/>         e. *Such safes don't break into all that easily.<br/>         f. *Such titles don't decide on all that easily.<br/>         g. *Dense woods don't travel through easily.</p> <p>(15) <b>*'Pseudopassive' -able:</b></p> <p>a. *Such patients are oper(at)able on by specialists.<br/>         b. *Such ideas are hardly referable to by experts.<br/>         c. *Such plans aren't {signable off on/signoffable on/signoffonable} by low-ranking generals.<br/>         d. *Such walls are entirely writable on by anyone with a can of spray paint.<br/>         e. *Safes this cheap are breakable into by amateurs.<br/>         f. *We must determine whether the title is decidable on by the committee.<br/>         g. *This forest is travelable through only by experts.</p> <p>(16) <b>*Nominal 'pseudopassive':</b></p> <p>a. *the patient's operation on by a specialist<br/>         b. *that idea's reference to by experts<br/>         c. *the plan's approval of by the general<br/>         d. *this wall's writing on by a graffiti artist<br/>         e. *the safe's breaking into by the robbers<br/>         f. *the title's decision on by the committee<br/>         g. *this forest's travel(ing) through by humans</p> <p>(17) <b>*Pseudo-object shift:</b></p> <p>*I caught the patient<sub>i</sub> up with <u>   </u><sub>i</sub>.</p> <p>(18) <b>*Pseudounaccusative:</b></p> <p>*She<sub>i</sub> appeared [to <u>   </u><sub>i</sub>] then [that Matt was a spy].</p> |
|---|---|

\*Pseudomiddles: Roberts (1987), Fagan (1988), Pesetsky (1995), Baltin and Postal (1996), Den Dikken and Sybesma (1998), Blight (2000), Postal (2004, 2010), Merchant (2017).

\*Nominal 'pseudopassives': Emonds (1970), Anderson (1978, 1979), Stowell (1981), Kayne (1984), Keyser and Roeper (1984), Roberts (1987), Fagan (1988), Den Dikken and Sybesma (1998), Postal (2004).

**N.B.** The same asymmetry in DP-preposing is evident with prenominal genitive PRO:

- (19) Such patients<sub>i</sub> shall be subject to [PRO<sub>i</sub> {treatment / \*operation on} by specialists].

\*Pseudounaccusatives: McGinnis (1998), Nevins (2004), Wilson (2021).

\*\*\* See Appendix A for Norwegian data which attest to a similar contrast. \*\*\*

(20) **A-movement generalization**

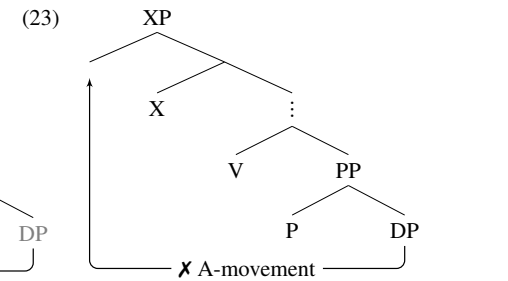
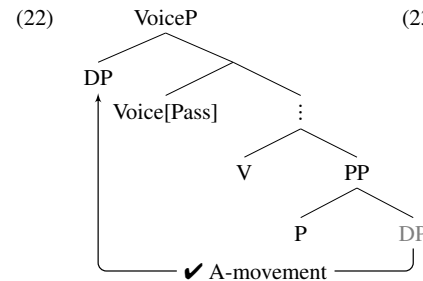
- a. A-movement is unrestricted in verbal *belget* passives, adjectival passives, and concealed passives.  
 b. A-movement is restricted in DP-preposing, object shift, and unaccusatives, and for at least some speakers, in middles and *-able* adjectives.

**A lexical licensing account**

(21) **P-stranding A-movement diagnoses Voice[Pass]**

P-stranding A-movement is possible if and only if P is locally c-commanded by Voice[Pass].

→ I implement the correlation as arising from movement to [Spec, Voice[Pass]P].



Where X = {T, Voice[Mid], A-able, D's, μ, ...}

**N.B.** If Voice[Pass] can appear inside a nominal, P-stranding DP-preposing suddenly becomes possible:

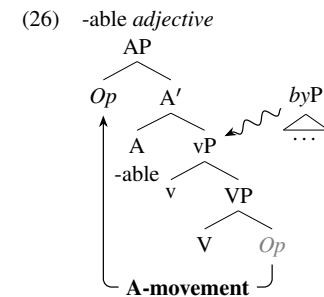
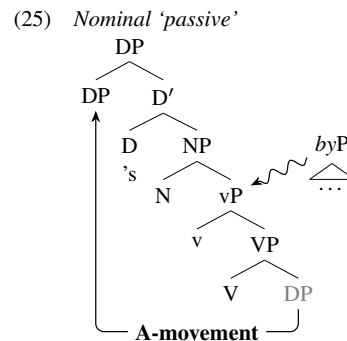
- (24) *POSS-ing nominals with verbal passive auxiliaries allow P-stranding DP-preposing*  
 her being/having been operated on by a specialist

This supports the hypothesis that **Voice[Pass]** in particular licenses P-stranding A-movement.

**A consequence: by-phrases diagnose vP, not Voice([Pass])P**

*-able* adjectives and deverbal *-ation* nominals bar P-stranding A-movement ((15)–(16)) but allow agentive *by*-phrases ((10)–(11)).

⇒ *By*-phrases diagnose *v*—the head responsible for introducing the external argument—not Voice[Pass] (Collins 2005; Merchant 2013; Angelopoulos et al. 2020).



### 3. Perlmutter's Generalization diagnoses non-active Voice

Perlmutter's Generalization supports the link between Voice[Pass] and the A-movement generalization ((53)).

#### (27) Perlmutter's Generalization (PerlGen)

In languages with passives of intransitives, at most unergatives can passivize; unaccusatives never passivize (Perlmutter 1978; Perlmutter and Postal 1984).

- (28) a. *Passive of unergative*                      b. *\*Passive of unaccusative:*  
 Er wordt hier veel geskied.                      \*Door de lijken werd al gerot.  
 there is here much skied                      by the corpses was already rotted  
 (Dutch; Perlmutter 1978: 168, (38))                      (Dutch; Perlmutter 1978: 169, (51b))

PerlGen extends to **middles** ((31)). PerlGen reflects an incompatibility of heads which prevent the projection of the external argument (e.g. Voice[Pass] & Voice[Mid]) with unaccusatives, which lack external arguments.

**PREDICTION:** A-movement structures which can embed unaccusative verbs must (be able to) lack Voice[Pass].

(29)

		P-stranding?	Unaccusatives?
Verbal passive ( <i>be/get</i> )	(Voice[Pass])	✓	✗
Adjectival passive	varies	✓	✓ (see below)
Concealed passive	(Voice[Pass])	✓	✗
Middle	(Voice[Mid])	✗	✗
-able	-	✗	✓
DP-preposing	-	✗	✓
Object shift	-	✗	✓

- (30) *\*Concealed passive of unaccusative:*  
 \*That tree needs/wants/requires dying (soon).

- (32) *'Passive' -able of unaccusative:*  
 Those tomatoes are perishable.

- (31) *\*Middle of unaccusative:*  
 ??Het bejaardenhuis sterft rustiger dan het slagveld.  
 the old.people.home dies more.quietly than the battlefield  
 'The care home is a more peaceful place to die than the battle-  
 field.' (Dutch; Ackema and Schoorlemmer 2017: 44, (131))

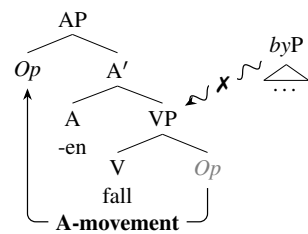
- (33) *Nominal 'passive' of unaccusative:*  
 The train's frequent arrival alarmed us.  
 (34) *Object shift of unaccusative:*  
 The ice broke up.

Unaccusative-based adjectival 'passives' are licit (Bresnan 1982; Levin and Rappaport 1986; McIntyre 2012) because adjectival participles can embed a phrase smaller than VoiceP.

#### (35) Unaccusative-based adjectival participles embed a smaller-than-VoiceP structure

- a. That train seems recently arrived  
 (\*by the engineer).  
 b. That forest is full of (fallen) trees  
 (\*fallen by lumberjacks/with axes).

(Bruening 2014: 391, (76))

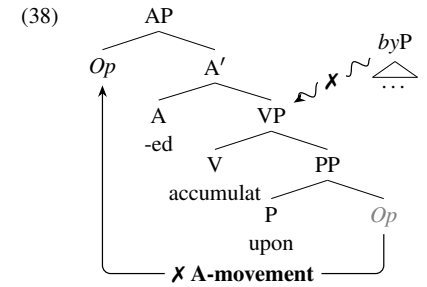


However, adjectival *pseudopassives* can never embed unaccusatives because P-stranding requires Voice[Pass], and Voice[Pass] is incompatible with unaccusatives per PerlGen.

#### (37) Unaccusative-based adjectival pseudopassives are impossible

- a. \*a much accumulated-upon object  
 b. \*a frequently collapsed-under dome  
 c. \*a recently existed-under bridge

(Pesetsky 1995: 25, (56))



**UPSHOT:** A-movement {with / without} Voice[Pass] {can / cannot} strand P and {bans / doesn't ban} unaccusatives; PerlGen applies to all heads preventing DP<sub>ext</sub> from projecting, accounting for Voice[Mid].

### 4. Analysis: Voice[Pass] Removes oblique K<sub>OBL</sub>P

There are (at least) two kinds of Case in English (Baker and Vinokurova 2010): oblique and structural Case.

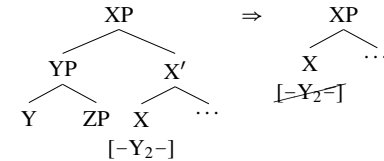
- Oblique Case is represented structurally as K<sub>OBL</sub>P; Case-assigning heads (e.g. P<sup>0</sup>) l-select K<sub>OBL</sub>P.
- Structural Case is assigned differently to DPs (perhaps *dependently*, à la Marantz 1991; Baker 2015).

Voice[Pass] is lexically specified to *attract* K<sub>OBL</sub>P and *suppress* oblique Case, allowing the moved nominal to get assigned (dependent) structural Case (NOM in CP, GEN in DP). Otherwise, K<sub>OBL</sub>P is *inert to A-movement*.

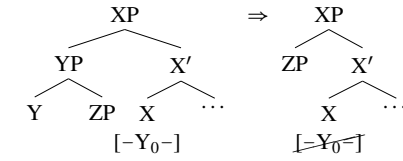
**PROPOSAL:** Voice[Pass] Removes (Müller 2016, 2017, 2018, 2020, 2021; Zyman 2018; Murphy 2019) KP.

#### A brief primer on Remove

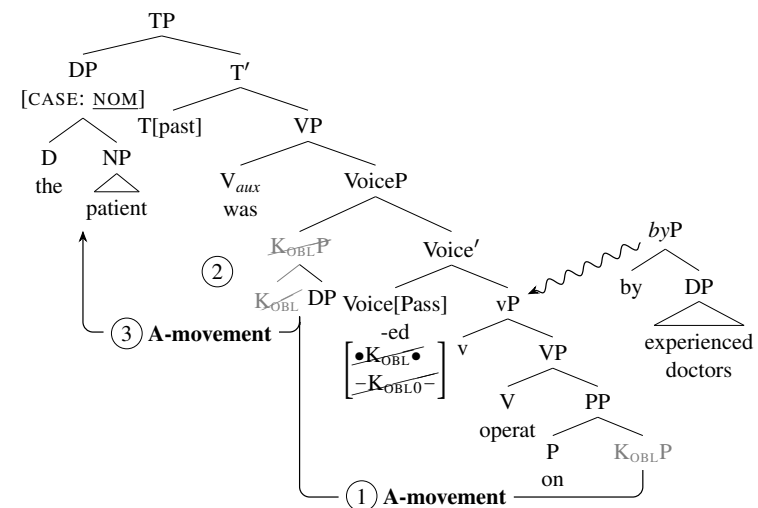
- (39) [-F<sub>2</sub>-] removes phrases



- (40) [-F<sub>0</sub>-] removes heads



- (41)

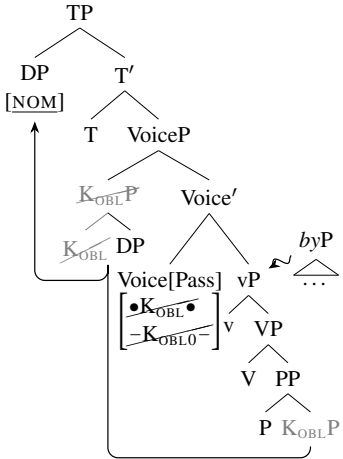


## 5. Deriving P-stranding A-movement

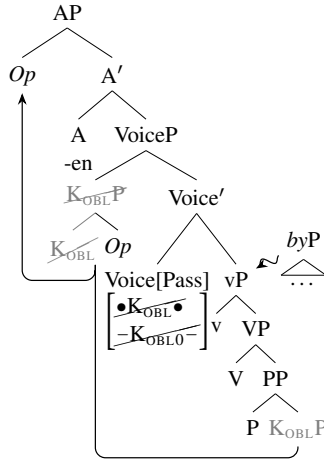
### Voice[Pass] attracts and Removes $K_{OBL}P$ in verbal, adjectival, and concealed passives

Extracted DP must move to satisfy EPP features and/or to get Case from some other head (e.g. T, D, etc.).

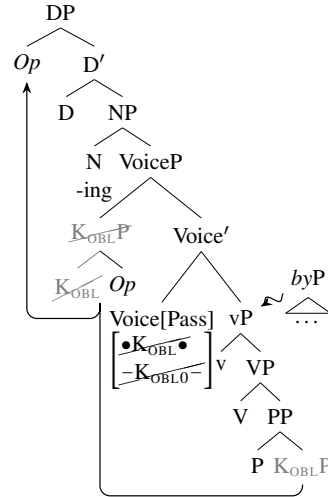
(42) Verbal pseudopassive



(43) Adjectival pseudopassive

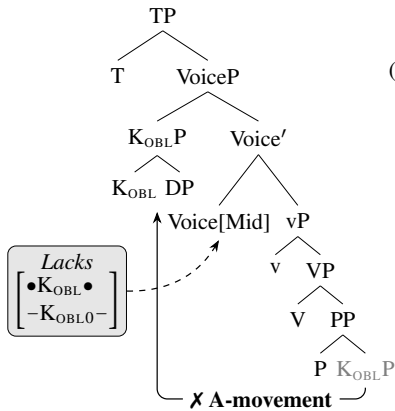


(44) Concealed pseudopassive



### Voice[Mid] cannot attract or Remove $K_{OBL}P$

(45) \*Pseudomiddles



- Middles are only possible if  $K_{OBL}P$  can remain in situ; expletive pseudomiddles are licit in Dutch, not English:

(46) Expletives can save pseudomiddles which don't Remove KP

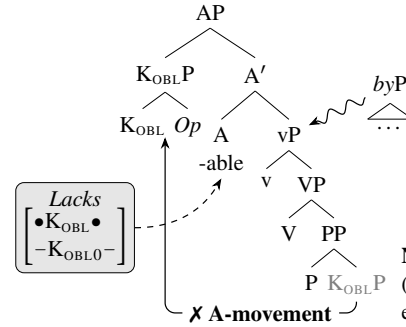
- \*There {treats / operates on} that kind of patient easily (with the right surgical tools).
- Het loopt prettig op deze schoenen.  
it walks comfortably in these shoes  
'These shoes are comfortable to walk in.'  
(Dutch; Ackema and Schoorlemmer 2017: 15, (45a))

- Even if Voice[Mid] could attract  $K_{OBL}P$ , English does not allow obliquely case-marked subjects.

**N.B.** Assume for English speakers who allow pseudomiddles that Voice[Mid] can bear  $[•K_{OBL}•, -K_{OBL}0-]$ .

### A-able cannot attract or Remove $K_{OBL}P$

(47) \*'Pseudopassive' -able



- For speakers who disallow 'pseudopassive' -able, A-able never embeds Voice[Pass] (pace Oltra-Massuet 2013), only vP.

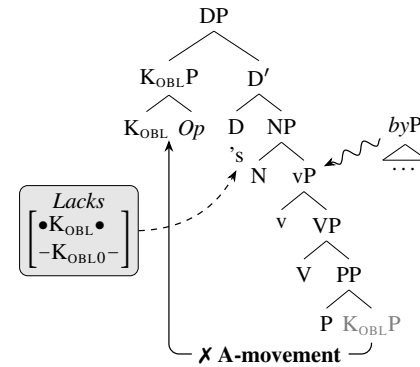
- Assume that -able adjectives contain a null operator which A-moves to [Spec, AP] to trigger  $\lambda$ -abstraction, creating a predicate of individuals (Bruening 2014).

- Without the Removal of  $K_{OBL}P$ , the null operator will not move to [Spec, AP] and/or null operators cannot bear case.

**N.B.** Assume for English speakers who allow pseudopassive -able (e.g. Marchand 1969: 230, Kayne 1984: 140–141) that A-able can embed Voice[Pass]P.

### D<sub>s</sub> cannot attract or Remove $K_{OBL}P$

(48) \*Nominal 'pseudopassive'



- Deverbal -ation nominalizations never embed Voice[Pass] (pace Borer 2013, 2020).

- $K_{OBL}P$  can remain in situ in deverbal nominalizations:

(49) the (frequent) reference to that idea by experts

- POSS-ing nominals can contain additional clausal structure (including Voice[Pass]), hence permit P-stranding:

(50) its being frequently referred to \_\_\_ by experts

### $\mu$ and T cannot attract or Remove $K_{OBL}P$

\*Pseudo-object shift:  $\mu$  cannot Remove  $K_{OBL}P$ , and  $K_{OBL}P$  cannot remain in situ because English prohibits expletive unergative constructions (Bowers 2002).

- (51) a. \* There was caught up with a patient.  
b. \* I caught there up with the patient.

\*Pseudounaccusative:  $K_{OBL}P$  can't remain in situ due to (presumably independent) constraints on there-insertion.

(52) \* There appears [to Joni] [that they might be spies].

## 6. Conclusion

### Summary and Consequences

#### (53) A-movement generalization

- a. A-movement is unrestricted in verbal passives, adjectival passives, and concealed passives.
  - b. A-movement is restricted in DP-preposing, object shift, and unaccusatives, and for at least some speakers, in middles and *-able* adjectives.
- ▷ The A-movement generalization is explained if Voice[Pass] can Remove oblique Case from the nominal complement of P, allowing DP to participate in A-relations again.
  - ▷ P-stranding A-movement diagnoses Voice[Pass] (which must be absent from deverbal *-ation* nominalizations and *-able* adjectives).
  - ▷ *By*-phrases diagnose vP, not Voice[Pass]P.
  - ▷ Voice[Pass] may be present without any overt morphological reflex (e.g. in concealed passives).

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## A. Norwegian P-stranding A-movement

Norwegian allows P-stranding in bli-passives (all data come from Bokmål):

- (54) Den pasienten ble operert på av erfarne leger.  
that patient.DEF bli.PAST operated on by experienced doctors  
'That patient was operated on by experienced doctors.' (Bokmål)

Adjectival pseudopassives are often degraded ... though with a different placement of the adverb, they appear to become relatively acceptable:

- (55) a. \*en sovnet (ofte) i seng  
a slept (often) in bed  
(int.) 'a (frequently) slept in bed'  
b. \*et gått (ofte) på tak  
a walked (often) on roof  
(int.) 'a (frequently) walked on roof'  
c. \*en lyttet (ofte) til sang  
a listened (often) to song  
(int.) 'a (frequently) listened to song'  
d. \*et sett (ofte) på bilde  
a looked (often) on picture  
(int.) 'a (frequently) looked at picture'
- (56) a. ?en ofte sovnet i seng  
a often slept in bed  
'a frequently slept in bed'  
b. ?et ofte gått på tak  
a often walked on roof  
'a frequently walked on roof'  
c. ?en ofte lyttet til sang  
a often listened to song  
'a frequently listened to song'  
d. ?et ofte sett på bilde  
a often looked on picture  
'a frequently looked at picture'

'Pseudopassive' -able adjectives appear to be impossible:

- (57) a. \*Dette taket er ikke {på-gåe-lig / gåe-lig på / på-gå-bart / gå-bart på}.  
this roof.DEF is not {on-walk-able / walk-able on / on-walk-able / walk-able on}  
(int.) 'This roof is not walkable on.'  
b. \*Denne sangen er ikke {til-lytte-lig / lytte-lig til / til-lytt-bar / lytt-bar til}.  
this song.DEF is not {to-listen-able / listen-able to / to-listen-able / listen-able to}  
(int.) 'This song is not listenable to.'  
c. \*Dette bilde er ikke {på-se-lig / se-lig på / på-se-bar / se-bar på}.  
this picture.DEF is not {on-see-able / see-able on / on-see-able / see-able on}  
(int.) 'This picture is not lookable at.'

Non-P-stranding -lig/-bar adjectives in Norwegian allow agentive by-phrases, meaning they can embed vP:

- (58) tekst som er {leselig / lesbar} av personer med fargeblindhet  
text that is {readable / readable} by people with colorblindness  
'text that is readable by people with colorblindness'

Norwegian also appears to ban 'pseudo-unaccusatives':

- (59) Hestvik (1986: 193, (25a–b))  
a. Det virket [på Marit] [som om Jon var syk].  
there seemed to Mary as if John was ill.  
b. \*Marit virket [på \_\_\_] [som om Jon var syk].  
Mary seemed to as if John was ill

Whether s-passives constitute (pseudo)middles is controversial, see Fábregas and Putnam (2020).

## B. Non-affected objects and partitive Case

Non-affected objects (Anderson 1979, 2017; Tenny 1994) obey the A-movement generalization, except -able.

- (60) a. *Verbal passive*: ✓  
i. Reptile cages were being avoided by older zoo visitors.  
ii. This deserted island was being inhabited by several castaways when we arrived here.  
b. *Adjectival passive*: ✓  
i. Reptile cages remain avoided by older zoo visitors to this day.  
ii. This deserted island remains inhabited by castaways and ghosts to this very day.  
c. -able *adjective*: ✓  
i. The reptile cages are easily avoidable by zoo visitors who are scared of snakes.  
ii. This island is surely inhabitable by humans.  
d. *Middle*: ✗  
i. \*Exhibits that big don't avoid very easily.  
ii. \*Deserted islands don't inhabit very easily.  
e. *DP-preposing*: ✗  
i. \*We need to examine the reptile cage's avoidance by older zoo visitors in greater detail. (cf. 'We need to examine the avoidance of the reptile cage by older zoo visitors in greater detail.')ii. \*We are going to examine this island's inhabitation by castaways in greater detail. (cf. 'We are going to examine the inhabitation of this island by castaways in greater detail.')

(Non-)affectedness in Finnish (Kiparsky 1998) and Estonian (Roberts 2020) correlates with **Case**: affected objects are marked with (structural) accusative Case, non-affected objects with (non-structural) *partitive* Case.

- (61) a. Ammu-i-n karhu-j-a shoot-PST-1.SG bear-PL-PART 'I shot at (the) bears.'  
b. Ammu-i-n karhu-t shoot-PST-1.SG bear-PL-ACC 'I shot the bears.' (Kiparsky 1998)

### Voice[Pass] and A-able Remove K<sub>PART</sub>P

Assuming that Remove is a lexical property of heads, and that removal of K<sub>OBL</sub>P and of K<sub>PART</sub>P are independently varying properties of heads we can set up a four-way typology:

	Removes K <sub>OBL</sub> P	Doesn't Remove K <sub>OBL</sub> P
<b>Removes</b> K <sub>PART</sub> P	Voice[Pass] That patient was operated on. That cage is being avoided.	A-able *That patient is oper(at)able on. That cage is avoidable.
<b>Doesn't</b> Remove K <sub>PART</sub> P	(%Voice[Mid]) (*Such patients don't operate on easily.) *Deserted islands don't inhabit easily.	Voice[Mid], D <sub>s</sub> *that patient's operation on *the island's inhabitation by us