On Passives of Passives: Director's Cut

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This paper establishes a restriction against iteration of the passive, and considers the implications for an analysis of the passive. Perlmutter and Postal (1977 and subsequent) argued that only verbs with a thematic subject can undergo passivization, and hence passives cannot. Three prima facie counterexamples are often cited in the literature, constructions found in Turkish, Lithuanian, and Sanskrit. We re-examine these three cases and demonstrate that rather than counterexemplifying Perlmutter and Postal's generalization, these cases strongly confirm it. The Turkish construction is an impersonal of a passive, the Lithuanian is an evidential of a passive, and the Sanskrit is an unaccusative with an instrumental case marked theme. We provide an analysis of the passive that can capture this generalization.*

Keywords: passive, impersonal, voice, evidential, Turkish, Lithuanian, Sanskrit

1. INTRODUCTION. In this paper we establish a restriction against iteration of the passive. The issue came to the attention of linguists with the work of David Perlmutter and Paul Postal in the 1970s and 1980s (Perlmutter & Postal 1977, Perlmutter 1982, Perlmutter & Postal 1984, Postal 1986), in which it is argued that passive verbs cannot undergo passivization. In the intervening decades, three languages have surfaced as prima facie counterexamples – Turkish (Turkic: Turkey), Lithuanian (Baltic: Lithuania), and Classical Sanskrit (Indo-Aryan) (see i.a. Ostler 1979, Timberlake 1982, Keenan & Timberlake 1985, Özkaragöz 1986, Baker et al. 1989, Nakipoğlu-Demiralp 2001, Öztürk 2005, Özsoy 2009).[1] Indeed, recent theoretical work in three distinct frameworks (Bruening 2013, Kiparsky 2013, Murphy 2014) have taken these three languages as evidence for the theoretical approach required of the analysis of the passive. Specifically, they propose that the mechanism that, in descriptive terms, demotes the thematic subject must be quite general, able to also demote the thematic objects of passives.

We re-examine each case in turn and demonstrate that rather than counterexemplifying Perlmutter and Postal's generalization, they in fact confirm it. In all three cases, we demonstrate that the thematic object is not demoted, but rather is syntactically projected into argument position. In section 2, we carefully establish a distinction in Turkish between two constructions with identical morphology: (i) a passive, which is limited in application to transitive predicates with a thematic subject and structurally case marked object, and (ii) an impersonal, in which there is no argument demotion – an unpronounced impersonal pronoun fills the argument position, be it the thematic subject or the thematic object (see e.g. Blevins 2003 for discussion of the passive versus impersonal distinction). We then demonstrate that purported passives of passives in Turkish are in fact impersonals of passives. In section 3, we discuss Lithuanian, building on previous work to carefully show that the language exhibits an evidential construction with no argument demotion that has been confused with the passive due to partially overlapping morphosyntax. Apparent passives of passives are in fact evidentials of passives; the evidential may apply to a passive, while the passive may not. In section 4, we examine the

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[1] Irish was also mentioned in early work, e.g. Nerbonne 1982, but is now understood to involve an impersonal of a passive; see McCloskey 2007, Maling 2010, Legate 2014, inter alia.

Sanskrit construction that has been analysed as a passive of a passive. While the analysis is necessarily more tentative due to the lack of native speakers, the construction is argued to involve no passivization at all, but rather instrumental case assignment to the thematic object of unaccusatives, with verbal morphology shared between the passive and unaccusative.

The import of these three case studies, then, is the confirmation that the passive cannot iterate – it cannot apply to predicates that have already been passivized. In section 5, we discuss the consequences for the analysis of the passive. We argue that the generalization is naturally explained by a syntactic analysis, whereby active and passive are built independently using different lexical items, but not by analyses that posit passivization as a lexical or syntactic rule. We develop a syntactic analysis of the passive that accounts for our findings. Section 6 concludes.

2. TURKISH. The prima facie passive of a passive in Turkish is exemplified in 1; note in particular the sequence of two passive morphemes (identical modulo the application of regular phonological processes, see Kornfilt 1997), and the apparent demotion of both the thematic subject and the thematic object.

(1) a. Bu oda-da döv-ül-ün-ür.
    this room-LOC beat-PASS-PASS-AOR
    'One is beaten (by one) in this room.'

  b. Harp-te vur-ul-un-ur.
    war-LOC shoot-PASS-PASS-AOR
    'One is shot (by one) in the war.' (Özkaragöz 1986, 77)

Before tackling this construction, let us take a step back and examine the properties of constructions with a single passive morpheme. We argue that these bifurcate into a passive and an impersonal, each exhibiting a distinct set of characteristic behaviours.

The passive is characterized by both the demotion of the thematic subject and by the promotion of an accusative thematic object to a nominative grammatical subject. (Nominative is null in the language, and we leave it unglossed.) The thematic subject may

be expressed in a 'by'-phrase headed by *tarafından*.[2]

(2) a. Ali kitab-ı   hızlı oku-du.
         Ali book-ACC quick read-PST
         'Ali read the book quickly.'

    b. Kitap (Ali tarafından) hızlı oku-n-du.
         book Ali by   quick read-PASS-PST
         'The book was read (by Ali) quickly.'

Verbs without an accusative thematic object in the active do not allow the passive;[3] this includes verbs with an object that is pseudo-incorporated or marked with an oblique case. 3b illustrates pseudo-incorporation (cf 2b above), with the positioning of the unmarked object below the low manner adverb and the lack of accusative case on the object used as a diagnostics; see Massam 2001 on pseudo-incorporation and Kornfilt 2003 and Öztürk 2005 on the Turkish instance and these diagnostics. 4b illustrates the oblique object subcase using the verb 'kick', which takes a dative object. 4c, illustrates that in certain varieties of Turkish, passivization of 'kick' is possible, with the dative patterning as structural in promoting to a nominative grammatical subject.

(3) a.   Ali hızlı kitap oku-du.
          Ali quick book read-PST
          'Ali did book-reading quickly.'

    b.   * Ali tarafından hızlı kitap oku-n-du.
          Ali by   quick book read-PASS-PST
          'Book-reading was done quickly by Ali.'

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[2]This is morphologically decomposable, as follows.

(i) taraf -ı   -ndan
      side -3SG -ABL

[3] We have encountered two native speakers of Turkish with a more permissive grammar than our ten primary consultants; for these speakers, verbs with oblique or pseudo-incorporated objects may undergo passivization, unergatives may marginally do so, and unaccusatives cannot. We return to the grammar of these speakers when it provides insights into the phenomenon under discussion. More broadly, variation within Turkish is understudied. We focus in this paper on the variety spoken by our primary consultants, which they consider to be standard, but we mention any variation we are aware of.

(4) a. Çocuk top-a   vur-du.
         child   ball-DAT kick-PST
         'The child kicked the ball.'

     b. * Top-a   çocuk tarafından vur-ul-du.
         ball-DAT child   by   kick-PASS-PST
         'The ball was kicked by the child.'

     c. % Top çocuk tarafından vur-ul-du.
         ball child   by   kick-PASS-PST
         'The ball was kicked by the child.'

Verbs whose sole internal argument is a (non-case-marked) finite clause also cannot passivize:

(5) a. Onlar [ben Ali-yi   gör-dü-m]   san-ıyor-lar.
         they   I   Ali-ACC see-PST-1SG think-PROG-3PL
         'They think that I saw Ali.'

     b. * Onlar tarafından [ben Ali-yi   gör-dü-m]   san-ıl-ıyor.
         they   by   I   Ali-ACC see-PST-1SG think-PASS-PROG
         'That I saw Ali is thought by them.'

Verbs that take a nominalized clause pattern with those that take a nonclausal DP: if the complement is accusative in the active, the verb can be passivized, like *bilmek* 'know', whereas if the complement is oblique in the active, the verb cannot be passivized, like *inanmak* 'believe', which takes a dative clause.

(6) a. Herkes   [memur-un rüşvet al-dığ-ı-nı]   bil-iyor.
         everyone officer-GEN bribe take-NMLZ-POSS-ACC know-PROG
         'Everybody knows that the officer is taking bribes.'

     b. [Memur-un rüşvet al-dığ-ı]   herkes   tarafından bil-in-iyor.
         officer-GEN bribe take-NMLZ-POSS everyone by   know-PASS-PROG
         'That the officer is taking bribes is known by everybody.'

(7) a. Herkes   [uzaylı-lar-ın var   ol-duğ-u-na]   inan-ıyor.
         everyone alien-PL-GEN exist be-NMLZ-POSS-DAT believe-PROG

'Everybody believes that the aliens exist.'

b. [Uzaylı-lar-ın var   ol-duğ-u-na]   (*herkes tarafından)
    alien-PL-GEN exist be-NMLZ-POSS-DAT everyone by
    inan-ıl-ıyor.
    believe-PASS-PROG
    'That the aliens exist is believed (*by everyone).'

Verbs that are unergative or unaccusative also lack a structurally case marked object and so cannot be passivized in Turkish, as illustrated in 8 and 9 respectively.

(8) a.   Çocuk-lar bütün gece dans   et-ti-ler.
           child-PL   whole night dance do-PST-PL
           'The children danced the whole night.'

     b. * Bütün gece   çocuk-lar tarafından dans   ed-il-di.
           whole night child-PL by   dance do-PASS-PST
           'It was danced the whole night by the children.' (Özsoy 2009, 263)

(9) a.   Kaza-lar-da   adam-lar öl-ür-ler.
           accident-PL-LOC man-PL   die-AOR-PL
           'Men die in accidents.'

     b. * Kaza-lar-da   adam-lar tarafından öl-ün-ür.
           accident-PL-LOC man-PL   by   die-PASS-AOR
           'It is died by men in accidents.'

When a (cognate) object is added to an unergative verb, passivization becomes possible; thus in 10 passivization of 'run' is grammatical only in the presence of 'race'.[4]

(10) a.   Ali (koşu-yu) koş-tu.
            Ali race-ACC run-PST
            'Ali ran (the race).'

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[4]Similarly, when a transitive verb is detransitivized through the reflexive suffix or the reciprocal suffix, passivization becomes impossible. See Kornfilt 1997 on these suffixes.

b. * Ali tarafından koş-ul-du.

Ali by   run-PASS-PST

'*It/There was run by Ali.'

c. Koşu Ali tarafından koş-ul-du.

race Ali by   run-PASS-PST

'The race was run by Ali.'

Further evidence that the possibility for passivization is indeed determined by the presence of a structurally case marked object, rather than being lexically determined, comes from restructuring. George & Kornfilt 1977 argue that *iste-* 'want', *başla-* 'begin' and *çalış-* 'try' in Turkish can function not only as control verbs but also as restructuring verbs, presenting evidence from scrambling, rightward movement and the (im)possibility of embedded temporal adverbs. Most relevantly for our purposes, they also show that passivization of the restructuring verb yields a long passive (see Wurmbrand 2001 on restructuring and long passives in German). Thus, in 11a, the 'applaud' embedded under 'want' has an accusative thematic object, allowing passivization of 'want' in 11b. The embedded thematic object raises to become the matrix nominative grammatical subject; note that the 'by'-phrase realizes the thematic subject of 'want', not 'applaud'.[5]

(11) a. dinleyici-ler [yazar-lar-ı alkışla-mak] isti-yor-lar.

audience-PL author-PL-ACC applaud-INF want-PROG-3PL

'The audience wants to applaud the authors.' (George & Kornfilt 1977, 66)

 b. yazar-lar (dinleyici-ler tarafından) [alkışla-n-mak] iste-n-iyor-lar.

author-PL audience-PL by   applaud-PASS-INF want-PASS-PROG-3PL

'The authors were wanted to be applauded by the audience.' (George & Kornfilt 1977, 68)

In contrast, when the embedded predicate lacks a structurally case marked object, passivization of the matrix verb becomes impossible. In the following, 'board' takes a dative object, so matrix 'want' cannot be passivized.

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[5]George & Kornfilt 1977 argue that the passive morpheme on the embedded verb is due to a morphological copying operation rather than independent passivization of the embedded predicate. See also Wurmbrand & Shimamura 2017 for a recent implementation of such a copying operation.

(12) * Hasan tarafından [otobüs-e bin-il-mek]   iste-n-di.

      Hasan by   [bus-DAT board-PASS-INF] want-PASS-PST

      'The bus was wanted to be boarded by Hasan.'

Thus, it is the presence of a structural case marked object that is crucial in allowing passivization, not the identity of the lexical verb itself.

    Importantly, verbs lacking a structurally case-marked object can in fact be affixed with the passive suffix, provided that no 'by'-phrase is included. We provide an example below for each predicate type.[6]

(13) Hızlı   kitap oku-n-ur.

      quickly book read-PASS-AOR

      'One does book-reading quickly.'

(14) Her   gece top-a   vur-ul-ur.

      every night ball-DAT kick-PASS-AOR

      'One kicks the ball every night.'

(15) Her   gece dans ed-il-ir.

      every night dance do-PASS-AOR

      'One dances every night.'

(16) Türkiye-de her   gün trafik kaza-lar-ı-nda   öl-ün-ür.

      Turkey-LOC every day traffic accident-PL-CM-LOC die-PASS-AOR

      'In Turkey it is died in traffic accidents every day.' (Nakipoğlu-Demiralp 2001, 140)

(17) [Ben Ali-yi   gör-dü-m]   san-ıl-ıyor.

      I   Ali-ACC see-PST-1SG think-PASS-PROG

      'People think that I saw Ali.'

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[6] Nakipoğlu-Demiralp 2001 argues that the aorist is required for impersonals (her "impersonal passives") that are unaccusative, but other tense/aspect combinations are possible for those that are unergative. Our investigations accord with this, with two additions. First, the progressive may be used instead of the aorist, due to an ongoing progressive to imperfective shift; thus the progressive is extended to the domain of the imperfective aorist (see Kornfilt 1997, 339-340, Deo 2015, i.a.). Second, verbs with pseudo-incorporated or oblique objects pattern with unergatives, suggesting that the distinction is due to the base-generated position of the impersonal as thematic object or thematic subject. We leave further discussion of the relevance of tense/aspect to future research.

Such constructions have been analysed in the literature as impersonal passives, that is passives in which the thematic subject is indeed demoted, but there is no promotion to the grammatical subject position (Özkaragöz 1986, Kornfilt 1997, Nakipoğlu-Demiralp 2001, Öztürk 2005, Özsoy 2009, Kiparsky 2013). In constrast, we argue that these are impersonals, in which no demotion has taken place; rather the missing argument is syntactically projected as a null impersonal pronoun.[7] We provide eight arguments supporting our analysis whereby the thematic subject of the passive is demoted, whereas the thematic subject (or thematic object in the case of unaccusatives) of the impersonal is syntactically present as a null impersonal pronoun.

We have already seen the first argument in 3b, 4b, 5b, 8b, 9b versus 2b – a 'by'-phrase is impossible in the impersonal, but possible in the passive, indicative of demotion in the latter but not the former. While some languages have been claimed to exhibit passives but no 'by'-phrases, Turkish crucially does have 'by'-phrases, but these are limited to predicates that take a structurally case marked object in the active. Our analysis explains this pattern – 'by'-phrases are possible when the thematic subject is demoted, in passives, but not when the thematic subject is projected as an impersonal pronoun, in impersonals.

An anonymous reviewer suggests rather that 'by'-phrases may be disallowed only in impersonal passives, citing Icelandic as an exemplar of this pattern. This is not an alternative analysis of the distribution of 'by'-phrases in Turkish. As mentioned in footnote 3 above, we have consulted two native speakers of Turkish with a more permissive grammar than our ten primary consultants; for these speakers, verbs with oblique or pseudo-incorporated objects may undergo passivization, unergatives may marginally do so, and unaccusatives cannot. These two speakers do not allow 'by' phrases with unaccusative impersonals, but do allow 'by' phrases with impersonal passives with oblique and pseudo-incorporated objects, demonstrating that there is not a general restriction against 'by' phrases with impersonal passives in the language. (We annotate the first example as % to remind the reader that it is ungrammatical in the grammar of our primary consultants.)

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[7]This analysis is also proposed by Maling 2010, on the basis of the first two arguments presented here, as well as the aspectual properties mentioned in footnote 6 above; thank you to Joan Maling for alerting us to this paper.

(18) % Top-a   çocuk-lar tarafından vur-ul-du.
      ball-DAT child-PL   by   kick-PASS-PST
      'The ball was kicked by the children.'

(19) * Savaş-ta çocuk-lar tarafından öl-ün-ür.
      war-LOC child-PL   by   die-PASS-AOR
      'It is died by the children in the war.'

It is also worth noting that 'by'-phrases are possible in impersonal passives in Icelandic, provided that the agent expresses new information and/or is phonologically heavy (Ingason et al. 2016).[8] For example, in the following scenario, the agent is both heavy and new information and the impersonal passive with a 'by'-phrase is not only grammatical but in fact preferred over the active.

(20) Context: What happened when inflation went up after the wall fell?

  a. Það var stigið   á bremsurnar [af sameinuðum seðlabanka   Austur- og
      there was stepped on the.brakes   [by united   central.bank East-   and
      Vestur- þýskalands].
      West-   Germany]
      'The United Central Bank of East and West Germany hit the brakes.'
      (Lit: 'There was stepped on the brakes by the United Central Bank of East and
      West Germany.')

  b. ?Sameinaður seðlabanki   Austur- og Vestur- þýskalands steig   á
      united   central.bank East-   and West-   Germany   stepped on
      bremsurnar.
      the.brakes
      'The United Central Bank of East and West Germany hit the brakes.' (Ingason
      et al. 2016, 49)

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[8]We find plausible Ingason et al.'s (2016) speculation that the issue is one of usage; the speaker has a choice between the active and the passive. Promotion of the theme to subject position (and hence to the 'aboutness' topic) provides a motivation to choose the passive, as does leaving the agent unspecified. Neither of these motivations apply to an impersonal passive with a 'by'-phrase; this construction then is facilitated when there is some other motivation to use the passive.

In Turkish, on the other hand, manipulating the discourse status and phonological weight of the agent does not facilitate inclusion of the 'by'-phrase; it remains ungrammatical regardless. The following example illustrates.[9]

(21) Context: What happened when inflation skyrocketed?

Ekonomi-de (*Merkez Bankası ve geçici hükümet tarafından) fren-e
economy-LOC central bank and interim government by brake-DAT
bas-ıl-dı.
step-PASS-PST

'The Central Bank and the interim government hit the brakes in the economy.'
('One stepped on the brake on the economy (*by the Central Bank and the interim government).')

We therefore maintain that the availability of a 'by'-phrase is a valid test for passive agent demotion in Turkish.

Second, while the passive may demote a non-human thematic subject, the impersonal may not. Instead, it patterns like overt impersonal pronouns in requiring a human interpretation (cf Italian *si*, German *Man*, English *one*). Thus, the following cannot be interpreted as passives since they are unergative, and are semantically anomalous as impersonals since the predicate takes a non-human thematic subject.

(22) a. # Dağ-lar-da ulu-n-uyor.
forest-PL-LOC howl-PASS-PROG
'One howls in the mountains.'

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[9]Given that 'by'-phrases in Turkish are medial, rather than final as in Icelandic, we might expect rather that new but phonologically light agents would facilitate inclusion of a 'by'-phrase. The following illustrates that that is also not the case:

(i) Context: What happened when inflation skyrocketed?

Ekonomi-de (*biri tarafından) fren-e bas-ıl-dı.
economy-LOC someone by brake-DAT step-PASS-PST

'Someone hit the brakes on the economy.'
('One stepped on the brake on the economy (*by someone).')

b. # Çöl-ler-de   hısla-n-ıyor.

desert-PL-LOC hiss-PASS-PROG

'One hisses in the deserts.'

Passives, on the other hand, do allow nonhuman thematic subjects, even without a 'by'-phrase.[10] In 23, the most natural interpretation of the thematic subject is nonhuman.

(23)   Ali orman-da yürü-r-ken   ısır-ıl-dı.

Ali forest-LOC walk-AOR-WHILE bite-PASS-PST

'While walking in the forest, Ali was bitten.'

A reviewer points out that impersonal passives in, for example, Dutch and German have also been claimed to require a human agent. This is not a plausible alternative analysis for the Turkish pattern. The two Turkish speakers mentioned above that allow impersonal passives do allow nonhuman agents of these impersonal passives. The following illustrates (see also the example in footnote 38) (Again, this is ungrammatical for our primary consultants.)

(24)   % Çöl-ler-de   yılan-lar tarafından hısla-n-ıyor.

desert-PL-LOC snake-PL by   hiss-PASS-PROG

'It is hissed by snakes in the deserts.'

In addition, as noted by the reviewer, nonhuman agents of impersonal passives are possible in Dutch and German, provided that the nonhuman agents have control over the event (Primus 2011), as illustrated in the following.

(25)   a. Dutch

Maar goed, gepiept wordt er al lang niet meer. De muizen hebben zich, met de rest van de muizenfamilie, met stille trom uit mijn leven teruggetrokken.

'Well, there has long been no squeaking any more. The mice and all the rest of the mouse family have disappeared from my life silently.'

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[10]Cf Kiparsky 2013, which claims that a nonhuman thematic subject of the passive crosslinguistically is only possible when specified through a 'by'-phrase. Note that the most natural interpretation of the English translation is also with a nonhuman thematic subject, indicating that the claim is also incorrect for English.

b. German

Gestunken wird bei starkem Erschrecken, in Situationen der Panik. Der Gestank soll eine abschreckende Wirkung auf Feinde haben [über Frettchen.] 'Stinking occurs as a reaction to strong fright, in panic situations. The ill smell is supposed to have a repelling effect on enemies [about ferrets].' (Primus 2011, 91)

Such examples in Turkish, in contrast, are semantically anomalous, as we predict.

(26) a. # Burada uzun zamandır ciyakla-n-mı-yor.   Fare-ler   ve   öteki bütün
          here   long time   squeak-PASS-NEG-PROG mouse-PL and other all
          kemirgen-ler hayat-ım-dan sessizce yok ol-du-lar.
          rodent-PL   life-1SG-ABL quietly disappear-PAST-PL
          'There hasn't been squeaking here in a long time. The mice and all the other rodents have disappeared from my life silently.' ('One hasn't squeaked here in a long time.')

b. # Büyük bir korku karşısında koku sal-ın-ır.   Bu kötü koku-nun
      big   a   fright against   smell release-PASS-PAST this bad smell-GEN
      düşman-lar-a   karşı   püskürtücü bir etki   yarat-ma-sı
      enemy-PL-DAT against repelling   a   effect create-NMLZ-POSS
      bekle-n-ir.
      expect-PASS-AOR
      'Stinking occurred as a reaction to strong fright. The bad smell is expected to create a repelling effect against enemies.' ('One released a smell against a big fright')

Thus, the demoted agent of the passive may be nonhuman in Turkish, but the impersonal pronoun must be human. This test patterns with our 'by'-phrase test in diagnosing passivization.

The third argument comes from control. The impersonal agent may be controlled PRO, supporting its analysis as syntactically projected. Two examples follow. Note that

14

these involve control rather than restructuring. The embedded predicates cannot undergo passivization, as the first has a dative object and the second is an unergative. Furthermore, while 'want' in the first example can function as a restructuring predicate, 'get used to' in the second cannot.[11] It is also worth pointing out that both 'want' and 'get used to' are not in the class of predicates that are expected to exhibit predicative control,[12] and that predicative control is not expected with an embedded temporal adverb distinct from the matrix as in 27c (cf Chierchia 1995b on Italian impersonal *si*); see Landau 2015 for recent discussion.[13]

(27)

   a. IMP$_i$ [PRO$_i$ otobüs-e bin-il-mek]   iste-n-di.

       [PRO bus-DAT board-PASS-INF] want-PASS-PST

   'One wanted to board the bus.'

   b. IMP$_i$ [PRO$_i$ dans ed-il-me]-ye   alış-ıl-dı.

       [PRO dance do-PASS-INF]-DAT get.used.to-PASS-PST

   'One got used to dancing.'

   c. IMP$_i$ [PRO$_i$ yarın   ayrıl-ın-mak] iste-n-di,   ama yarın   için

       [PRO tomorrow leave-PASS-INF] want-PASS-PST but tomorrow for

    hava   tahmini çok   kötü.

    weather forecast much bad

   'One wanted to leave tomorrow, but the weather forecast for tomorrow is too bad.'

As expected, 'by'-phrases cannot be added to 27, whether related to the embedded or the matrix predicate.

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[11]Specifically, it does not pattern as restructuring according to the tests established for Turkish in George & Kornfilt 1977, cited above. Also note that 'get used to' is not a predicate that is crosslinguistically expected to pattern as a restructuring verb, see e.g. Wurmbrand 2001, 6-9.

[12]that is, a structure that achieves the semantics of control without a controlled PRO.

[13]Control is indeed required here, rather than this being accidental identity of two subjectless clauses. For example, in the natural context in which the tour bus drivers want the passengers to board the bus, 27a cannot be used, since the 'wanters' (bus drivers) and 'boarders' (passengers) differ.

Note that the Turkish impersonal here provides us an important glimpse into the properties of impersonal pronouns. McCloskey 2007, 835 reports that "[o]ne of the threads which runs all through the literature on arbitrary [impersonal] pronouns is the intuition that such pronouns are similar to, or identical with, the 'arbitrary' understanding of PRO". He demonstrates that the Irish null impersonal pronoun can act as a controller (McCloskey 2007, 829) and that in finite contexts impersonal pronouns can only serve as antecedents for impersonal pronouns, not personal (McCloskey 2007, 835); these two facts together suggest that PRO is impersonal when controlled by an impersonal pronoun. He further demonstrates that the Irish null impersonal pronoun is treated as equivalent to arbitrary PRO for the identity condition required for ellipsis licensing (McCloskey 2007, 835). In Irish, though, it is not possible to directly demonstrate that the null impersonal pronoun can be PRO, since the presence of the impersonal pronoun is identified through designated agreement with finite T.[14] In Turkish, however, the morphology identifying the presence of the impersonal pronoun is independent of finiteness (see below for its low placement within the clausal spine). We therefore have the rare opportunity to confirm that the impersonal pronoun can indeed serve as controlled PRO. (See below for our analysis of impersonals, which explains this property of the impersonal pronoun.)

The thematic subject of a passive, in contrast, cannot be controlled PRO, indicating that it is syntactically unprojected. (Note that these verbs do not have an exceptional case marking use in Turkish, see Kornfilt 1997, and so these are not grammatical as such.)

(28) a. *Hasan [kitap hızlı oku-n-mak]   iste-di.
           Hasan book quick read-PASS-INF want-PST
           'Hasan wanted to read the book quickly.'

      b. *Hasan [kitap hızlı oku-n-ma]-ya   alış-tı.
           Hasan book quick read-PASS-INF-DAT get.used.to-PST
           'Hasan got used to reading the book quickly.'

While the nominative case on the theme could also be a source of ungrammaticality in 28, control remains ungrammatical when the theme has an independent source of case.

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[14]In many other languages, of course, the impersonal pronoun is overt and does not trigger designated morphology within the clausal spine, so also cannot be visible in nonfinite control clauses.

Nominalization of the embedded clause above the passive morpheme provides genitive case for the theme, but the resulting structure does not involve control, as illustrated by the felicitous continuation.

(29) Hasan kitab-ın   oku-n-ma-sı-nı   iste-di,   ama (o) kendisi oku-mak
      Hasan book-GEN read-PASS-NMLZ-POSS-ACC want-PST but he himself read-NMLZ

      iste-me-di.
      want-NEG-PST

      'Hasan wanted the book to be read, but he himself didn't want to read it.'

Fourth, consider binding of the reciprocal *birbirleri*.[15] As background, we point out that while the reflexive *kendi* is logophoric, the reciprocal *birbirleri* is not (Kornfilt 1997, 2001). For example, Kornfilt provides 30a as illustration of the logophoric licensing of *kendi*; in 30b we see that *birbirleri* cannot be so licensed.

(30) a. [Oya-nın kendi-si-ni$_i$ beğen-me-si]   Ahmed-in$_i$
          Oya-GEN self-3POSS-ACC admire-NMLZ-3POSS Ahmet-GEN

          hoş-un-a   git-ti.
          liking-3POSS-DAT go-PST

          'Oya's admiring self$_i$ was to Ahmet$_i$'s liking.' (Kornfilt, 2001, 204)

      b. *[Öğrenci-nin birbirleri-ni$_i$ beğen-me-si]   öğretmen-ler-in$_i$
          student-GEN each.other-ACC admire-NMLZ-3POSS teacher-PL-GEN

          hoş-un-a   git-ti.
          liking-3POSS-DAT go-PST

          'The student's admiring each other$_i$ was to the teachers$_i$' liking.'

Further illustration is provided in the following examples, using typical logophoric contexts (see Sells 1987 i.a.); these examples use the reciprocal in the dative benefactive, 31, and postpositional benefactive, 32, constructions that we employ in our test cases below.[16]

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[15]This can also appear as *birbiri*, without the plural suffix, to our knowledge without consequence.
[16]These are grammatical on the irrelevant interpretations 'Their mothers$_k$ won't cook pilaf for each other$_k$' and 'The children are afraid that their mothers$_k$ won't cook pilaf for each other$_k$'.

(31) a. Zavallı [Hasan ve   Ali]$_i$. *Anne-ler-i$_i$ birbirleri-ne$_i$ pilav pişir-me-yecek.

       poor   Hasan and Ali   mother-PL-POSS each.other-DAT pilaf cook-NEG-FUT

       'Poor [Hasan and Ali]$_i$. Their$_i$ mother won't cook pilaf for each other$_i$.'

   b.   * Çocuk-lar$_i$ [anne-ler-i-nin   birbirleri-ne$_i$ pilav

        child-PL   mother-PL-POSS-GEN each.other-DAT pilaf

        pişir-me-yeceğ-i-nden]   kork-uyor-lar.

        cook-NEG-FUT-POSS-ABL fear-PROG-PL

        'The children$_i$ are afraid that their$_i$ mother won't cook pilaf for each other$_i$.'

(32)

   a. Zavallı [Hasan ve   Ali]$_i$. *Anne-ler-i$_i$ birbirleri$_i$ için pilav pişir-me-yecek.

       poor   Hasan and Ali   mother-PL-POSS each.other for pilaf cook-NEG-FUT

       'Poor [Hasan and Ali]$_i$. Their$_i$ mother won't cook pilaf for each other$_i$.'

   b.* Çocuk-lar$_i$ [anne-ler-i-nin   birbirleri$_i$ için pilav

        child-PL   mother-PL-POSS-GEN each.other for   pilaf

        pişir-me-yeceğ-i-nden]   kork-uyor-lar.

        cook-NEG-FUT-POSS-ABL fear-PROG-PL

        'The children$_i$ are afraid that their$_i$ mother won't cook pilaf for each other$_i$.'

Note that, as expected, 31b and 32b are both grammatical with the logophoric reflexive 'kendileri' in place of the non-logophoric reciprocal 'birbirleri'. Given that the reciprocal is not a logophor, but rather an anaphor that requires a syntactic binder, we use binding of the reciprocal as a test for syntactic projection.

The thematic subject in the impersonal behaves as syntactically projected in that it can bind the reciprocal. One illustration contrasts oblique themes with themes that are accusative in the active and nominative in the passive. The following attested example involves the idiomatic expression *birbiri-ne gir-* 'fight tooth and nail' which consists of the lexical verb 'enter' and its dative reciprocal object 'each other'. With the passive morpheme the structure must be impersonal, given the oblique object, and the reciprocal is bound by the impersonal subject.

(33) Herkes-in   gör-eceğ-i   şekil-de   birbiri-ne   gir-il-ir   mi?

everyone-GEN see-NMLZ-ACC manner-LOC each.other-DAT enter-PASS-AOR Q

'Why would people fight tooth and nail in a way everyone could see?'[17]

In contrast, the verb 'beat' takes an accusative theme in the active; with the passive suffix the structure is a passive and so the reciprocal theme is not bound, resulting in ungrammaticality.

(34)   * Birbirleri   döv-ül-dü-(ler).

each.other beat-PASS-PST-PL

'Each other was/were beaten.'

Another illustration uses reciprocal beneficiaries. In 35, the structures must be impersonal: in 35a 'pilaf' is pseudo-incorporated, in 35b 'dance' is unergative. The impersonal pronoun binds the reciprocal, and the sentences are grammatical.

(35)   a. Bayram-lar-da   birbirleri-ne   pilav pişir-il-ir.

          holiday-PL-LOC each.other-DAT pilaf cook-PASS-AOR

          'During holidays, people pilaf-cook for each other.'

    b. Düğün-ler-de   birbirleri-ne   dans ed-il-ir.

          wedding-PL-LOC each.other-DAT dance do-PASS-AOR

          'During weddings, it is danced for each other.'

The structure here is indeed anaphor binding rather than reciprocal predicate formation (cf Chierchia 1995b on Italian impersonal *si*). Reciprocal predicate formation uses the reciprocal suffix -*(I)ş* (Kornfilt 1997, 159 notes that this is 'not very productive'). Furthermore, the reciprocal need not be an argument of the predicate; 36 illustrates it embedded in a PP adjunct.

(36)   a. Bayram-lar-da   birbirleri   için pilav pişir-il-ir.

          holiday-PL-LOC each.other for   pilaf cook-PASS-AOR

          'During holidays, people pilaf-cook for each other.'

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[17]Retrieved October 30, 2019 from `https://www.haber61.net/trabzonspor/sosyal-medyada-trabzonspor-yoneticileri-birbirine-girdi-h298270.html`

b. Düğün-ler-de   birbirleri   için dans   ed-il-ir.
   wedding-PL-LOC each.other for   dance do-PASS-AOR
   'During weddings, it is danced for each other.'

Binding of the reciprocal by the implicit thematic subject in the passive, in contrast, is impossible.[18]

(37) a. *Pilav bayram-da   birbirleri-ne   pişir-il-di.
           pilaf holiday-LOC each.other-DAT cook-PASS-PST
           'During the holiday, pilaf was cooked for each other.'

      b. *Pilav bayram-da   birbirleri   için pişir-il-di.
           pilaf holiday-LOC each.other for cook-PASS-PST
           'During the holiday, pilaf was cooked for each other.'

In the presence of a 'by'-phrase, binding becomes possible, with caveats. Given the generalization in Pesetsky 1995 that PP verb phrase adjuncts behave as c-commanding rightwards, we expect the DP in the 'by'-phrase to be able to bind a reciprocal in a PP to its right. This is correct:

(38) Pilav bayram-da   komşu-lar   tarafından birbirleri   için pişir-il-di.
      pilaf holiday-LOC neighbour-PL by   each.other for cook-PASS-PST
      'During the holiday, pilaf was cooked by neighbours for each other.'

Binding leftwards, in contrast, is not possible through this mechanism. However, there is an additional source for leftward binding. As discussed by Kural 1992 and Öztürk 2005 (see also Kornfilt 2005), Turkish leftward scrambling may reconstruct in the presence of contrastive focus. Notably, it is not the scrambled element itself that is focused, but rather an element that is scrambled over. The following examples illustrate. In 39a, the theme

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[18]Note that the reciprocal is not subject-oriented:

(i) Ben çocuk-lar-a$_i$ birbirleri$_i$-ni   göster-di-m.
     I   child-PL-DAT each.other-ACC show-PST-1SG
     'I showed the children$_i$ each other$_i$.'

'picture' and the location 'in its frame' are in their base orders, and 'picture' can bind the possessive pronoun. Scrambling 'in its frame' over 'picture' in 39b eliminates the bound interpretation, but this interpretation is restored in 39c through contrastive focus on 'I'.

(39) a. Resm-i$_i$ çerçeve-sin$_{i/j}$-e koy-du-m.
          picture-ACC frame-3SG-DAT put-PST-1SG
          'I put the picture in its frame.'

      b. Çerçeve-sin$_{j/*i}$-e resm-i$_i$ koy-du-m.
          frame-3SG-DAT   picture-ACC put-PST-1SG
          'I put the picture in his/*its frame.'

      c. Çerçeve-sin$_{i/j}$-e resm-i$_i$ BEN koy-du-m.
          frame-3SG-DAT picture-ACC I   put-PST-1SG
          'I put the picture in his/its frame.' (Öztürk 2005, 154-155)

Similarly, in 40, scrambling of 'each other' causes a Condition A violation, but addition of intervening focussed 'yesterday' in 40c allows reconstruction, and hence the necessary binding.

(40) a.   Adam-lar birbirleri-ni   gör-müş.
            men-PL   each.other-ACC see-EVID.PST
            'The men saw each other.'

      b. * birbirleri-ni$_i$ adam-lar$_i$ gör-müş.
            each.other-ACC men-PL   see-EVID.PST
            'The men saw each other.'

      c.   birbirleri-ni$_i$ adam-lar$_i$ DÜN   gör-müş.
            each.other-ACC men-PL   YESTERDAY see-EVID.PST
            'The men saw each other YESTERDAY.' (Öztürk 2005, 153-154)

Given this background, consider 41. This sentence involves scrambling of 'for each other' over 'by neighbours', and is ungrammatical with neutral intonation. With the indicated contrastive focus on 'by neighbours', though, reconstruction of the scrambled 'for each other' becomes possible, and the sentence is grammatical.

(41)   Pilav bayram-da   birbirleri   için KOMŞU-LAR   TARAFINDAN pişir-il-di.
        pilaf holiday-LOC each.other for NEIGHBOUR-PL BY   cook-PASS-PST
        'During the holiday, pilaf was cooked for each other BY NEIGHBOURS.'

In sum, the thematic subject in the impersonal behaves as syntactically projected in that it can bind a reciprocal, while the thematic subject in the passive behaves as syntactically unprojected in that in cannot. In addition, the 'by'-phrase in the passive may only bind under specific syntactic configurations.

Fifth, we find a contrast between the thematic subject of passives and that of impersonals in the licensing of depictives.[19] The thematic subject of the impersonal licenses a depictive; this is illustrated here with a dative object verb and an unergative verb.

(42)   a. Tatil   merkez-ler-i-nde,   otobüs-e sarhoş bin-il-ir.
           vacation center-PL-CM-LOC bus-DAT drunk board-PASS-AOR
           'At vacation spots, one boards the bus drunk.'

        b. Sahil-ler-de,   hep   sarhoş koş-ul-ur.
           beach-PL-LOC always drunk run-PASS-AOR
           'On beaches, one always runs drunk.'

The thematic subject of the passive, in contrast, does not license a depictive.

(43)   a. * Mektup (Ahmet tarafından) sarhoş yaz-ıl-dı.
             letter   Ahmet   by   drunk write-PASS-PST
             'The letter was written drunk (by Ahmet).'

        b. * Böylesine önemli   karar-lar   asla   sarhoş tartış-ıl-ma-malı.
             such   important decision-PL never drunk discuss-PASS-NEG-must
             'Decisions of such importance should never be discussed drunk.'

Turkish patterns like English in not allowing depictive licensing by the object of an adposition, so the 'by'-phrase itself cannot license the depictive.

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[19]There is some debate on the licensing of depictives by the thematic subject of English passives; see for example Roeper 1987, Landau 2010, Pitteroff & Schäfer 2019.

(44) Ben araba-yı Murat için sarhoş sür-dü-m.

I   car-ACC Murat for drunk drive-PST-1SG

'I drove the car drunk for Murat.'

NOT: Murat was drunk / YES: I was drunk.

The pattern of depictive licensing provides further evidence for projection of the thematic subject in the impersonal but not in the passive.

For our sixth argument, consider adverbial gerundives expressing simultaneity in which the verb is suffixed with -*arak*, henceforth ArAk clauses (see Özkaragöz 1980, Knecht 1985, Biktimir 1986, Kornfilt 1997).[20] The interpretation of the grammatical subject of the ArAk clause is determined by the grammatical subject of the matrix clause. The previous literature on the construction investigates restrictions related to the status of the subject as underlying versus derived, without fully resolving the issue. Examples that match in voice and in the status of the subjects as underlying or derived, however, are uniformly accepted as grammatical. The following illustrate active predicates with thematic subjects, transitive and unergative.

(45) a. Çocuk [sakız çiğne-yerek] anne-sin-i   öp-tü.

child   gum   chew-ARAK mother-3SG.POSS-ACC kiss-PST

'The child kissed his mother (while) chewing gum.'

b. Kız [(top) oyna-yarak] şarkı söyle-di.

girl ball   play-ARAK song sing-PST

'The girl (while) playing (ball), sang.' (Özkaragöz 1980, 417)

Derived subjects are also possible, the following illustrate with the themes of active unaccusatives and passives.

(46) a. Adam [sayıkla-yarak] öl-dü.

man   rave-ARAK   die-PST

'The man died raving.' (Biktimir 1986, 62-63)

b. Çocuk [okşa-n-arak]   öp-ül-dü.

child   caress-PASS-ARAK kiss-PASS-PST

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[20]Note that there are other uses of -*arak*, see especially Kornfilt 1997.

'The child was kissed (while) being caressed.' (Biktimir 1986, 62-63)

However, when the matrix grammatical subject is the theme of a passive, it does not allow for an ArAk clause with a null theme of an active.[21]

(47)   * Gazete   [anla-yarak]   oku-n-du.
       newspaper understand-ARAK read-PASS-PST
       'The newspaper, (while pro) understanding (it), was read.' (Özkaragöz 1980, 414)

Nor does a matrix theme of an active transitve allow for a ArAk clause with a null theme of an unaccusative:

(48)   * Adam çorba-yı   [kayna-yarak] servis   et-ti.
       man   soup-ACC boil-ARAK   service do-PST
       'The man served the soup (while it was) boiling.'

Crucially for our purposes, the thematic subject of a matrix impersonal allows for an ArAk clause with a null subject of an active verb, whereas the thematic subject of a matrix passive does not. Thus, 49 is grammatical because the matrix verb is unergative 'speak', hence must be an impersonal. 50 is ungrammatical because the matrix verb is transitive 'call', hence must be a passive. [22]

(49)   [Sakız çiğne-yerek] hoca-yla   konuş-ul-maz.
       gum   chew-ARAK teacher-with speak-PASS-NEG.AOR
       'One does not speak with the teacher while chewing gum.' (Biktimir 1986, 64)

(50)   * [Sakız çiğne-yerek] hoca   öğrenci tarafindan çağır-ıl-maz.
       gum   chew-ARAK teacher student by   call-PASS-NEG.AOR
       'The teacher is not called by a student while (student is) chewing gum.'

The animacy of the theme grammatical subject in this example is not the decisive factor; a passive with an inanimate theme as the grammatical subject is also ungrammatical.

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[21]Note that we have changed the verb in these examples to *anla* which is a better choice for 'to understand', in our estimation. (Özkaragöz 1980 uses *anlaş*.)

[22]A reviewer asks if 50 improves if the 'by'-phrase is removed; it does not, unless 'teacher' is pseudo-incorporated, allowing for an impersonal analysis.

(51) * [Kahve iç-erek]   gazete   hoca   tarafından oku-n-ur.
       coffee   drink-ARAK newspaper teacher by   read-PASS-AOR
       'The newspaper is read by a teacher while (teacher is) drinking coffee.'

52 illustrates that the theme of a matrix unaccusative impersonal allows an ArAk clause with a null theme of an unaccusative, again indicating that the theme of the unaccusative impersonal is syntactically projected.

(52) [Sayıkla-yarak] öl-ün-ür.
       rave-ARAK   die-PASS-AOR
       'One dies raving.' (Biktimir 1986, 65)

Next, we examine quantificational variability effects, whereby the interpretation of an argument is determined by a quantificational adverb. (See Lewis 1975, Heim 1982, Diesing 1992, de Swart 1993, Chierchia 1995a.) Quantificational variability effects in other languages are found with impersonal pronouns but lacking with passive implicit agents (see Chierchia 1995b, Malamud 2013, Rezac & Jouitteau 2016, i.a., for discussion and analysis), and the Turkish shows exactly this pattern. In 53, 'bump.into' takes a dative object, and hence forms an impersonal whose subject shows quantificational variability effects. In 54, 'push.around' takes an accusative object in the active, and hence forms a passive whose subject does not show quantificational variability effects.

(53) Istanbul-da, metrobüs durağı-nda genellikle yolcu-lar-a
       Istanbul-LOC metrobus station-LOC usually   passenger-PL-DAT
       çarp-ıl-ır.
       bump.into-PASS-AOR
       'In Istanbul, at metrobus stops, one usually bumps into passengers.'
       (i) YES: most people bump into other passengers
       (ii) YES: people bump into other passengers at most times

(54) Istanbul-da, metrobüs durağı-nda yolcu-lar   genellikle it-il-ir.
       Istanbul-LOC metrobus station-LOC passenger-PL usually   push.around-PASS-AOR
       'In Istanbul, at metrobus stops, passengers are usually pushed around.'

(i) NOT: most people push around other passengers

(ii) YES: people push around other passengers at most times

Finally, we consider sluicing. In line with crosslinguistic patterns (Merchant 2001, i.a.), sluicing in Turkish requires voice matching.[23] When the antecedent is active, the wh-remnant must be a DP, 55a; when the antecedent is passive, the wh-remnant must be a 'by'-phrase, 55b.

(55) a. Dün   biri   Kemal-i   öldür-dü, ama tam olarak kim-di   / *kim
          yesterday someone Kemal-ACC kill-PST   but exactly   who-PST / *who
          tarafından-dı bil-mi-yor-um.
          by-PST   know-NEG-PROG-1SG
          'Someone killed Kemal yesterday, but I don't know who / *by who.'

      b. Kemal dün   öldür-ül-dü,   ama tam olarak kim tarafından-dı / *kim-di
          Kemal yesterday kill-PASS-PST but exactly   who by-PST   / *who-PST
          bil-mi-yor-um.
          know-NEG-PROG-1SG
          'Kemal was killed yesterday, but I don't know by who / *who.'

Strikingly, impersonals pattern as active for sluicing, despite the passive morphology. In 56, the antecedent is unergative, forming an impersonal with the passive morpheme; the wh-remnant must be a DP, and cannot be a 'by'-phrase.

(56) Dün   parti-de   çılgınlarca dans ed-il-di,   ama tam olarak kim-ler-di   /
       yesterday party-LOC crazily   dance do-PASS-PST but exactly   who-PL-PST /
       *kim-ler tarafından-dı hatırla-mı-yor-um.
       *who-PL by-PST   remember-NEG-PROG-1SG
       'Yesterday people danced like crazy in the party, but I don't remember exactly who
       / *by who.'

In summary, we have argued that verbs suffixed with passive morphology have two distinct structures. One is the passive, in which the thematic subject is demoted. The

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[23]Turkish sluicing may retain tense and agreement morphology; see İnce 2006, i.a.

other is the impersonal, in which the thematic subject is syntactically projected as a null impersonal pronoun. We have seen eight tests supporting this analysis. The passive thematic subject may be realized in a 'by'-phrase, may be non-human, cannot be controlled PRO, cannot bind a reciprocal, cannot license a depictive, does not allow for a null subject of an ArAk clause, is not subject to quantificational variability effectsts, and has a 'by'-phrase remnant in sluicing. The impersonal thematic subject, in contrast, cannot be realized in a 'by'-phrase, cannot be non-human, can bind a reciprocal, can be controlled PRO, can license a depictive, does allow for a null subject of an ArAk clause, is subject to quantificational variability effects, and has a DP remnant in sluicing. Of the two constructions, the passive is more restricted in its distribution, applying only to verbs that have a structural case marked object in the active.[24]

Now we return to the prima facie passives of passives, and discover that the thematic subject is demoted through passivization, while the thematic object is syntactically projected as a null impersonal pronoun. Focusing first on the theme, we find that it is necessarily human, 57, and cannot be expressed in a 'by'-phrase, 58.

(57) a. # Burada tamir ed-il-in-ir.

      here   repair do-PASS-PASS-AOR

      'Here one is repaired by one' (Knecht 1985, 74)

    b. # Burada güd-ül-ün-ür.

      here   herd-PASS-PASS-AOR

      'Here one is herded.'

(58) a. Harp-te askerler tarafından vur-ul-un-ur.

      war-LOC soldiers by   shoot-PASS-PASS-AOR

      NOT: 'In war, soldiers are shot by one.' (Knecht 1985, 74)

      YES: 'In war, one is shot by soldiers.'

    b. Bu oda-da   mahkum-lar tarafından döv-ül-ün-ür.

      this room-LOC prisoner-PL by   beat-PASS-PASS-AOR

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[24]We take this to be a low-level, language-particular syntactic fact, as languages differ in this regard; indeed, see footnote 3 for Turkish-internal variation. In the analysis of the passive developed in section 5, such restrictions can be encoded in the selectional properties of the passive Voice head.

NOT: 'In this room, one beats prisoners.'

YES: 'In this room, one is beaten by prisoners.'

The grammatical interpretations of 58 illustrate that the thematic subject, in contrast, can be expressed in a 'by'-phrase. It may also be non-human, 59. 59b is an attested example, in which the speaker is complaining about being bitten repeatedly by mosquitoes.[25]

(59) a. Orman-da (yılan-lar tarafından) sok-ul-un-ur.
          forest-LOC snake-PL by   bite-PASS-PASS-AOR
          'In the forest, one is bitten (by the snakes).'

     b. on defa ısır-ıl-ın-ır   mı?
         ten time bite-PASS-PASS-AOR Q
         'How could one be bitten ten times?'

Thus, in this construction, the theme is syntactically projected as an impersonal pronoun, while the thematic subject is demoted through the passive. It is thus an impersonal of a passive, not a passive of a passive. As predicted, the impersonal theme may be controlled by a matrix impersonal subject. In 60, the impersonal subject of 'want' controls the impersonal theme of 'shoot', whereas the demoted thematic subject of 'shoot' is expressed in a 'by'-phrase.[26]

(60) Harp-te IMP$_i$ [PRO$_i$ kimse   tarafından vur-ul-un-mak]   iste-n-mez.
      war-LOC   [anyone by   shoot-PASS-PASS-INF] want-PASS-NEG.AOR
      'In war, one does not want to be shot by anyone.'

In addition, the impersonal theme in the impersonal of the passive may bind a reciprocal in a PP adjunct, 61.

(61) Hastane-ler-de   doktor-lar tarafından birbirleri-nin   yan-ı-nda   tedavi
      hospital-PL-LOC doctor-PL by   each.other-GEN side-3POSS-LOC treat
      ed-il-in-ir.
      do-PASS-PASS-AOR

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[25]Retrieved Jan 28, 2017 from https://tr.instela.com/bu-mevsimde-hala-ortalikta-gezen-sivrisinek—13409259

[26]Control is indeed obligatory here. For example, this sentence cannot express the natural situation in which the soldiers' loved ones back home do not want the soliders to be shot.

'In hospitals, people$_i$ are treated by doctors beside each other$_i$.'

Finally, the theme in the impersonal of the passive also behaves as syntactically projected in that a depictive may be predicated of the theme.
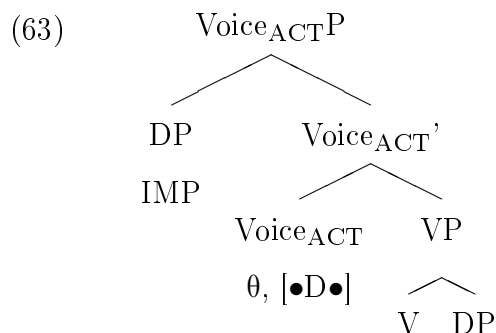
(62) Tatil-ler-de   polis tarafından sarhoş yakala-n-ıl-ır.
      holiday-PL-LOC police by   drunk catch-PASS-PASS-AOR
      'During holidays, people are caught drunk by the police.'

In summary, we have seen that the apparent double passive in Turkish does not involve passivization of a passive, demoting both the thematic subject and the theme. Instead, the language uses a single suffix for both passives, in which the thematic subject of the verb is demoted, and impersonals, which are characterized by the presence of a null, impersonal pronoun syntactically projected in argument position. The apparent double passives have demotion of the thematic subject through the passive, triggering one iteration of the suffix, and an impersonal pronoun as the thematic object, triggering a second suffix. Crucially, the passive applies quite narrowly in the language, demoting only the thematic subject of verbs with a structurally case marked object in the active (for our primary consultants). Therefore, although Turkish appeared to counterexemplify Perlmutter and Postal's proposed generalization that passives may not apply to passives, upon closer inspection it is revealed rather to strongly confirm this generalization.

While not a central concern of this paper, it is interesting to consider further details of the syntactic analysis of the Turkish impersonal marked with the 'passive' morpheme.[27] (The semantics of the impersonal is beyond the scope of this paper; see Rezac & Jouitteau 2016 for a promising approach, which treats the French impersonal *on* as a nonnovel indefinite.) As we have seen, the impersonal involves a null impersonal pronoun generated in argument position; in a transitive clause, it is generated as the external argument. In

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[27] The literature on impersonals in other languages is quite rich; see for example Cinque 1988, Chierchia 1995b, D'Alessandro 2007 on Italian *si*; Dobrovie-Sorin 1998 on several Romance languages; Holmberg 2010 on Finnish; Hoekstra 2010 on Frisian *men*; McCloskey 2007 on Irish, and Malchukov & Siewierska 2011 for a typological overview. Recent syntactic analyses (Egerland 2003, Fenger 2018, Ackema & Neeleman 2018, i.a.) classify impersonals into two types, one with more functional structure including English *one*, Frisian *men*, and Icelandic *maður*; and one with less, including German, Norwegian, and Danish, *man*. Within this bifurcation, the Turkish impersonal marked with the 'passive' morpheme patterns with the latter type that contains less functional structure. Turkish also exhibits a second impersonal pronoun, *insan* 'human', which patterns with the former type, with more functional structure. See Akkuş 2021.

the following tree we adopt the proposal of Kratzer 1996 and much subsequent, whereby the external θ-role is introduced by a functional head Voice;[28] the active Voice selects for a DP specifier; we encode this selection using the feature [•D•].[29]

(63)

```
            Voice_ACT P
            /        \
         DP          Voice_ACT'
         IMP          /      \
              Voice_ACT      VP
              θ, [•D•]       /\
                            V  DP
```

In that the impersonal pronoun may be generated in positions other than the thematic subject, notably the thematic object position, the impersonal may apply to unaccusatives, and to passives, 64. In 64 we assume the analysis of the passive to be developed in section 5, whereby the passive is a Voice head that introduces the external θ-role, but does not select for a DP specifier.

(64)

```
            VoiceP
            /     \
    Voice_PASS    VP
         θ        /\
                 V  DP
                    IMP
```
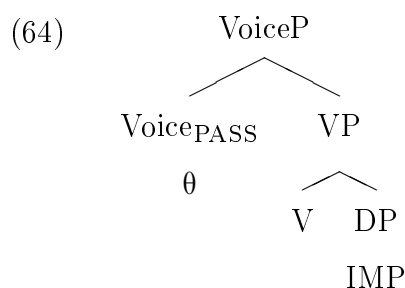
We must now explain the key fact we started with: the appearance, in the impersonal, of morphology syncretic with the passive morphology. Considering the placement of the impersonal morphology with respect to other morphemes in the clause, we find that the impersonal is adjacent to the passive, farther from the verbal root than the causative, and closer to the verbal root than aspect and tense. This is illustrated in 65; note that the causative *-dur* appears directly on the root, followed by the two 'passive' suffixes, followed by the progressive aspect *-uyor*, and finally the past tense *-du*.

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[28]We leave aside as orthogonal, the functional projection vP, which introduces causative semantics; see for example Pylkkänen 2008, Legate 2014.

[29]The use of features for selection appears in Chomsky 1965; an early revival in the Minimalist framework is Adger 2003, with the formalism being adopted by a variety of researchers since; see also Müller 2010 for the bullet notation.

(65) Harp-te asker-ler   tarafından vur-dur-ul-un-uyor-du.

war-LOC soldier-PL by   shoot-CAUS-PASS-PASS-PROG-PST

'In war, one used to be made to shoot by soldiers.'

Assuming the Mirror Principle (Baker 1985), this morpheme ordering is straightforwardly accounted for once we propose a designated impersonal functional projection, ImpersP, dominating VoiceP. The morphology glossed as 'passive' is the realization of $Impers^0$ and of $Voice_{PASS}^0$. 66 illustrates, taking into account the right-headed nature of Turkish (all other trees abstract away from headedness).[30]

(66)

```
                              TP
                          ____/\____
                        AspP        Tense
                     ___/\___
                 ImpersP      Asp
              ___/\___
       Voice_PASS P    Impers
        __/\__
  v_CAUS P   Voice_PASS
    _/\_
  VP   v_CAUS
  _/\_
 DP   V
 IMP
```
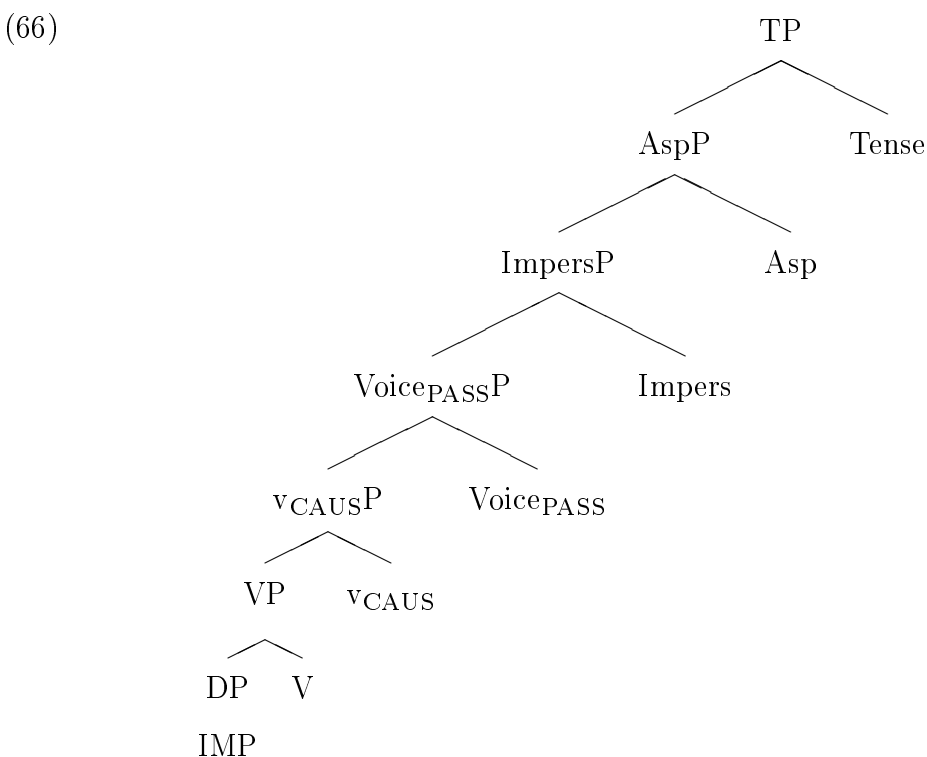
The morphological syncretism between $Impers^0$ and $Voice_{PASS}^0$ is not due to an identity of function in the synchronic grammar. Crosslinguistically, there is a common historical relationship between passives and impersonals, due to the overlap in the appropriate

---

[30]We cannot distinguish the passive morpheme from the impersonal morphophonologically. We place the impersonal above VoiceP to allow it to license the thematic subject, and to capture the generalization that the impersonal pronoun must be the highest argument in the VoiceP. See below for discussion. A reviewer suggests that ImpersP may be a subtype of VoiceP. However, ImpersP is not involved with θ-role assignment, since the impersonal pronoun is not limited to a particular thematic position. ImpersP must also be generated above the VoiceP that introduces the thematic subject to be able to license the highest projected argument, wherever it may be generated. Therefore, we have not pursued a VoiceP approach.

discourse situations for use of each; this can result in an overlap in the morphological realizations of the two constructions. (See Malchukov & Siewierska 2011, as well as the citations in footnote 27.) Unlike $\text{Voice}_{\text{PASS}}{}^0$, Impers^0 is not involved in argument introduction or suppression. Its function is rather to license the impersonal pronoun.

We treat the need for licensing of the impersonal pronoun like the need for licensing of pro by agreement. This is supported by the fact that the overt impersonal in Turkish *insan* does not occur with the Impers^0 licensing head.[31]

(67)   İnsan   oraya gid-(*il)-ir   mi hiç?
       human there go-PASS-AOR Q   ever
       'Why would one ever go there?'

Related also is the designated impersonal agreement that licenses the null impersonal pronoun in Irish in the same way that other agreement licenses pro in Irish (see McCloskey 2007). The literature on pro-drop is quite rich; our conception falls into the class of proposals that treats the phenomenon as involving a null pronoun that requires licensing (including Rizzi 1982, 1986, McCloskey & Hale 1984, Jaeggli & Safir 1989, among many others), as opposed to poor agreement that requires licensing (as in Speas 1994, 2006), or rich agreement itself serving as the interpretable pronoun (e.g. Jelinek 1984, Alexiadou & Anagnostopoulou 1998).[32] Within this class of approaches, various implementations are compatible with our proposal.

For concreteness, we adopt the distinction from Pesetsky & Torrego 2007 between interpretability and valuation of features, whereby an interpretable feature receives a semantic interpretation, while a valued feature is inherently specified on the lexical item rather than being determined in the course of the derivation. This system provides a natural encoding of the licensing relationship in terms of feature valuation.[33] The licenser, Impers^0 (or agreement in the case of pro-drop), bears valued but uninterpretable features,

---

[31]See footnote 27 and Akkuş 2021 on *insan*, which is not an overt realization of the null impersonal pronoun considered here, but rather patterns differently.

[32]We leave aside as not germane, radical pro-drop, that is pro-drop that exists in the absence of identifying morphology. See e.g. Huang 1984, Jaeggli & Safir 1989, Neeleman & Szendröi 2007.

[33]This solves the problem raised by Holmberg 2005 that the traditional idea of pro-drop being licensed by agreement does not mesh well with the features of the pronoun being interpretable and the features of agreement uninterpretable (Chomsky 1995b and subsequent).

while the features of the impersonal pronoun are unvalued but interpretable. In the course of the derivation, Impers^0 undergoes agreement with the impersonal pronoun, and values its features. This allows the pronoun to be properly interpreted in the semantic component. Specifically, Impers^0 bears the uninterpretable valued ɸ-feature [human], while the impersonal pronoun bears interpretable unvalued ɸ-features; agreement between Impers^0 and the impersonal pronoun results in the interpretable ɸ-features of the impersonal pronoun being valued to [human]. We implement this agreement operation through the operation Agree, Chomsky 2000 and subsequent, which operates on closest c-command. Our approach minimally differs from Pesetsky & Torrego 2007 in that we allow both uninterpretable and unvalued features to serve as probes.[34] We assume the operation Agree applies as follows:

(68)   Agree

   a. An underdetermined feature F (uninterpretable or unvalued) on a head H (probe) scans its c-command domain for the closest instance of F (goal) to establish a relation.

   b. The probe-goal relation repairs underdetermined features, marking uninterpretable features for deletion from the LF branch, and sharing the valued features with the unvalued features.

Thus, the uninterpretable valued ɸ-feature of Impers^0 initiates the Agree operation; it probes down the tree and finds the impersonal pronoun, whereupon Impers^0 values the ɸ-feature of the impersonal pronoun, and the impersonal pronoun checks the uninterpretable feature of Impers^0, marking it for deletion from the LF branch.[35]

(69)

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[34]Pesetsky & Torrego 2007 limits probes to unvalued features. This limitation is not crucial to the argumentation of that paper, however, and no empirical facts there hinge on it. A reviewer suggests an alternative whereby the unvalued ɸ-features of the impersonal pronoun initiate the probe operation, which applies upwards. This technical implementation of the agreement relationship between the impersonal pronoun and Impers^0 strikes us as natural if upwards agree is an operation of the grammar; for related discussion, see Zeijlstra 2012, Preminger 2013, Wurmbrand 2014, i.a.

[35]The lack of person/number/gender ɸ-features explains why the impersonal pronoun triggers default third person singular agreement; see Akkuş 2021 for supporting discussion. Our proposal follows e.g. Egerland 2003 and Rezac & Jouitteau 2016 for the impersonal pronoun bearing only [human]; see references in footnote 27 for related alternatives.

ImpersP

Impers   Voice$_{ACT}$P

uϕ value: [human]

         DP   Voice$_{ACT}$'

         IMP   Voice$_{ACT}$ VP

      iϕ value: [ ] θ, [•D•]
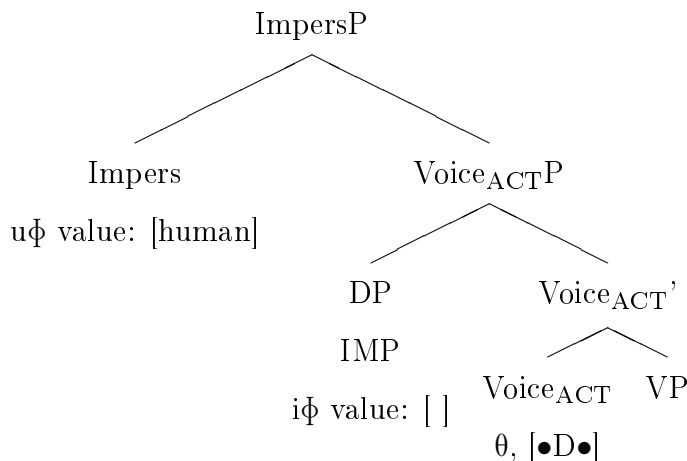
This proposal thus follows Landau 2015, which treats a variety of pronominals, including pro and PRO, as pronouns that lack features and therefore must acquire them in the course of the derivation ('minimal pronouns' in the sense of Kratzer 2009). The features acquired determine the behavior and pronunication of the pronominal. We thereby also explain the fact from 27 above that the impersonal pronoun can be controlled PRO. The impersonal pronoun and PRO are fundamentally the same: pronouns with interpretable but unvalued features that must be valued in the course of the dervation. The impersonal pronoun is valued by Impers^0, and PRO by its controller;[36] when the controller is an impersonal pronoun, as in 27, the features of Impers^0 and the features of the controller are compatible, since the controller is itself an impersonal pronoun.[37]

Finally, we consider restrictions on the distribution of the impersonal pronoun. First, the impersonal pronoun must be the highest argument in the verb phrase; it cannot appear as the thematic object of an active transitive verb. (For this restriction on impersonal pronouns of this type in other languages, see footnote 27.)[38]

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[36]indirectly for Landau 2015; see that work for details.

[37]This discussion predicts that it should be possible for the embedded ImpersP (realized as the 'passive' morpheme) to be omitted in 27, with the [human] value of the ϕ-features coming solely from the controller. This indeed is the case, although the version with the embedded ImpersP is preferred.

[38]This distribution is also reminiscent of the distribution of PRO, which is standardly assumed to be limited to the grammatical subject position (see e.g. Chomsky 1965, Zaenen et al. 1985, Chomsky & Lasnik 1993, Manning 1996, among many others). For our primary consultants, we have not been able to distinguish the highest argument from the grammatical subject; when the highest argument is an oblique, which cannot become the grammatical subject, a lower object simply moves over the oblique, thereby becoming both the highest argument and the grammatical subject. (See Tonyalı 2015 for related discussion.) The two can potentially be teased apart, however, for our two consultants who allow impersonal passives of verbs with oblique objects. One of these consultants suggested the following examples involving the verb 'spit', which takes a dative object in the active, and, for them, allows an impersonal passive with the dative object

(70) Harp-te düşman hızlı   vur-ul-ur.

   war-LOC enemy   quickly shoot-PASS-AOR

   NOT: 'In war, the enemy shoots one quickly.'

   (YES: 'In war, the enemy is shot quickly.')

For the Turkish null impersonal pronoun, we take this distribution to be due to locality – the impersonal pronoun must be the closest DP to its licenser outside the verb phrase (see Landau 2015 for a similar approach to the distribution of PRO). The following tree illustrates how this is captured on our approach. If the impersonal pronoun is generated in the object position of an active, transitive verb, the thematic subject is the most local DP to Impers^0. Hence, when Impers^0 probes for ϕ-features, (again, assuming Agree, which operates on closest c-command) it will find the thematic subject. However, the thematic subject has its own interpretable and valued ϕ-features (here the 3SG of 'enemy' in 70 for illustration), hence the agreement operation fails.[39] Moreover, the impersonal pronoun in object position is left with unvalued features. The result is ungrammaticality.[40]
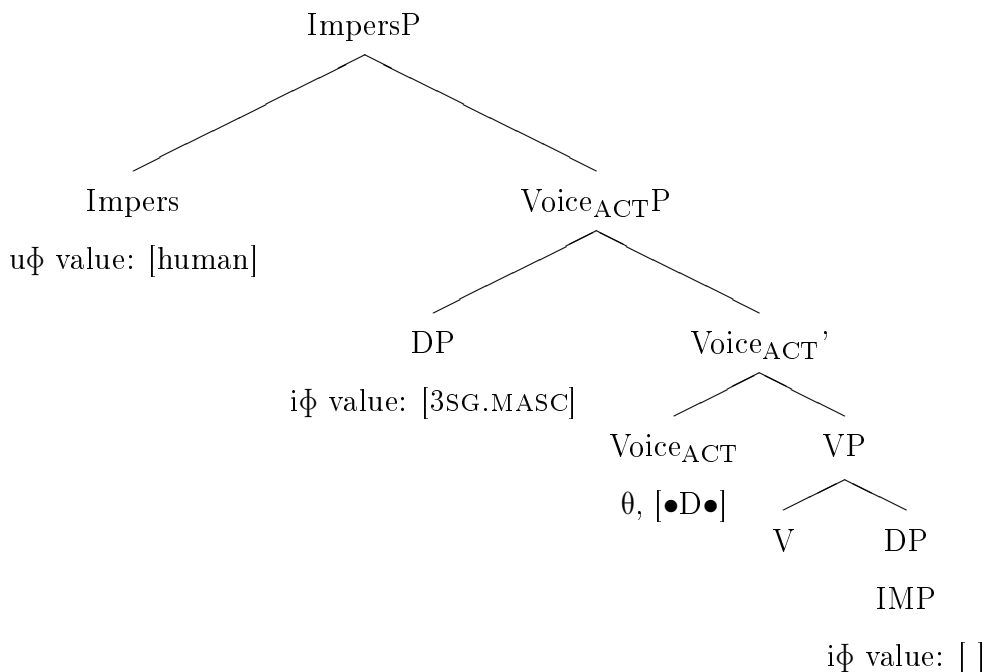
(71)

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retained. The examples involve a visit to a zoo in which a man is angry because a llama spat at his daughter. (i) is the impersonal passive, and (ii) is the impersonal of the impersonal passive – the agent of 'spit' has been demoted and appears as a 'by'-phrase, while the theme is an impersonal pronoun in the dative object position.

   (i) %Ben-im kız-ım-ın   yüz-ü-ne   tükür-ül-dü! Özür   bekl-iyor-um!
        1-GEN.1SG daughter-1SG.POSS-GEN face-3SG.POSS-DAT spit-PASS-PST apology expect-PROG-1SG
        'My daughter's face was spat at! I expect an apology!'

   (ii) %Bura-ya gir-me-yin!   Bura-da lama-lar tarafından tükür-ül-ün-üyor.
        here-DAT enter-NEG-2SG here-LOC llama-PL by   spit-PASS-PASS-PROG
        'Don't go in here! One gets spat at by the llamas here.'

For this speaker, then, the impersonal need only be the highest argument, not the grammatical subject. Our second consultant who allows (i), finds (ii) only marginally possible. We leave further discussion of this issue to future work.

[39]A reviewer suggests that thematic subject here is best characterized as a defective intervener, in the sense of Chomsky 2000. The same reviewer wonders whether a higher oblique argument would similarly act as a defective intervener for a lower object. However, unlike the thematic subject, a higher oblique argument bears inherent case, allowing the lower object to raise past it and become the grammatical subject of the passive. We assume that this involves movement of the lower object over the oblique within the verb phrase (see e.g. McGinnis 2001), and hence no intervention is expected.

[40]Similar considerations rule out an active transitive with both the thematic subject and the thematic object as impersonal pronouns. Assuming that Impers^0 can only license a single DP, the thematic object will fail to be licensed due to the intervention of the thematic subject, even if we allowed ImpersP to iterate, as suggested by a reviewer.

```
                                    ImpersP
                          _____/_____
                         /                        \
                     Impers                     Voice_ACT P
                 uϕ value: [human]          _____/_____
                                           /              \
                                          DP           Voice_ACT '
                                  iϕ value: [3SG.MASC]    ___/\___
                                                         /        \
                                                    Voice_ACT      VP
                                                    θ, [●D●]      _/\_
                                                                 /    \
                                                                V      DP
                                                                       IMP
                                                                 iϕ value: [ ]
```

The second restriction on the distribution of the impersonal becomes apparent in considering verbs with a structurally-case marked object in the active. A reviewer observes an apparent complementarity in the passive and impersonal, in that for verbs with a structurally-case marked object in the active, the 'passive' morpheme must be a realization of passive voice, while for all other verbs, the 'passive' morpheme must be a realization of the impersonal. While this complementarity does hold true for our ten primary consultants, it is not a core property of these constructions. As reported above, we have encountered two speakers that have a more permissive grammar in allowing passive of a broader range of verbal predicate types; importantly, the range of the impersonal is not thereby narrowed for these speakers. For example, these speakers allow 'kick' with a 'by'-phrase, illustrating the availability of a passive structure, or with an agent-licensed reciprocal, attesting to the availability of an impersonal structure. (We annotate the former as %, since it is ungrammatical for our other consultants.)

(72)   % Top-a   çocuk-lar tarafından vur-ul-du.
       ball-DAT child-PL   by   kick-PASS-PST
       'The ball was kicked by the children.'

(73)   Context: describing a particular rule in an altruistic game, in which for each

kicking of the ball, the other person wins points.

Top-a   birbiri   için   vur-ul-ur.

ball-DAT each.other for   kick-PASS-AOR

'People kick the ball for each other.'

It remains a surprising fact, however, that the impersonal structure cannot apply to a transitive verb in the active, retaining accusative case on the object, for any of the speakers we consulted.

(74)   * Bu   kitab-ı   hızlı   oku-n-ur.

this book-ACC quickly read-PASS-AOR

'One reads this book quickly.'

In this, the Turkish null impersonal is unlike impersonals discussed for other languages, and unlike the Turkish overt impersonal, *insan*, (see Akkuş 2021).[41]

The restriction seems related to the syncretism between the impersonal morpheme and the passive morpheme, but needs to be encoded into the grammar. For now we state this as an honest stipulation: Impers^0 selects for a VoiceP lacking accusative case assignment; the VoicePs associated with unergatives, oblique object verbs, CP object verbs, unaccusatives, and passives all meet this criterion. The VoiceP associated with

---

[41]Recent work on the related language Sakha (Turkic: Siberia) that builds on the present proposal (Tan & Kühlert 2019) argues that the Sakha passive morpheme is also syncretic between a passive and an impersonal, but lacks the restriction seen in Turkish against transitive impersonals with accusative case, as shown in (i). This again suggests that the restriction is not a deep principle of (Turkic) grammar, but an unusual quirk of Turkish.

(i)   Sakha
    a.   Passive
        yges-ter-(*ı)   keh-illi-bet-ter
        tradition-PL-(*ACC) break-PASS-NEG-PRES.3PL

        'Customs are not broken.' (Tan & Kühlert 2019, (2a))
    b.   Impersonal
        yges-ter-ı   keh-illi-bet-∅
        tradition-PL-ACC break-IMP-NEG-PRES.3SG

        'One does not break customs.' (Tan & Kühlert 2019, (2b))

regular transitive verbs does not.[42]

To summarize, the null impersonal pronoun in Turkish is generated as the highest argument in the verb phrase and undergoes licensing with a designated functional projection generated above VoiceP. The head of this impersonal projection is syncretic with the passive morpheme, and may cooccur with it.

Returning to the main thread, Turkish was our first potential exemplar of a passive of a passive. We have demonstrated that it is instead an impersonal of a passive, in which the theme is not demoted, but rather syntactically projected as a null impersonal pronoun.

In the following section, we turn to the second oft-cited potential passive of a passive, in Lithuanian. We show that in this case as well, the theme is not demoted, but rather syntactically projected into argument position.

3. LITHUANIAN. In this section, we consider the purported passive of a passive in Lithuanian (Timberlake 1982, Nerbonne 1982, Keenan & Timberlake 1985, Baker et al. 1989, Bruening 2013, Kiparsky 2013), building on recent literature on Lithuanian (Blevins 2003, Lavine 2006, Lavine 2010, Spraunienė et al. 2015) that has not been sufficiently appreciated in the theoretical work on passives. Specifically, Lithuanian exhibits an evidential construction whose morphosyntax partially overlaps with the morphosyntax of the passive. This evidential may combine with both active verb phrases and passive verb phrases; the combination of the evidential with the passive verb phrase is what has been misanalysed as a passive of a passive.[43] We provide additional arguments that the alleged passive of a passive is in fact an evidential of a passive, and additional data supporting the existing arguments.

An example of the Lithuanian construction in question is provided in 75, gloss and translation retained from the source. Note that both the thematic subject and the theme

---

[42]Alternative formulations are possible. In considering options, note that we must prevent verbs that normally take a structurally-case marked object in the active from occurring with an impersonal thematic subject, regardless of the case of the object. If an impersonal thematic subject were possible for these verbs with the object marked as the default nominative rather than accusative, then these verbs would have passed all above tests for a projected impersonal pronoun, contrary to fact. On our approach, we assume that this is handled by a selectional relationship between the verb and Voice.

[43]Nunes 1994 presents a different non-passive analysis that does not consider the empirical arguments presented here. Geniušienė 2006 is a brief descriptive study; see also Ambrazas 1994, Gronemeyer 1997, Holvoet 2001, Aikhenvald 2004, Wiemer 2006 i.a. for the diachrony and for the perspective of the typology and analysis of evidentiality.

appear in genitive case, which is characteristic of the 'by'-phrase in the passive.

(75) To   lapelio būta   vėjo   nupūsto.
      that.GEN leaf.GEN be.PASS.NOM wind.GEN blow.PASS.GEN
      'That leaf was blown down by the wind.'
      ('by that leaf there was blown down by the wind') (Kiparsky 2013, 24)

76 illustrates the active/passive alternation; the theme is promoted to the nominative grammatical subject, and the thematic subject is demoted to a genitive adjunct.

(76) a. Tėv-as   kvieči-a   sveči-us.
          father-M.SG.NOM invite-PRS.3 guest-M.PL.ACC
          'Father invites guests.'

      b. Sveči-ai   yra   (tėv-o)   kviečia-m-i.
          guests-M.PL.NOM be.PRS.3 father-M.SG.GEN invite-PRS.PASS.PTCP-M.PL.NOM
          'Guests are invited (by father).' (Ambrazas et al. 1997, 277)

We begin by distinguishing the evidential from the passive; these overlap morphosyntactically, but are distinct. Both exhibit a lexical verb in the passive participle form, present -m or past -t, in the passive the participle optionally agrees with the nominative grammatical subject,[44] whereas in the evidential the participle must occur in the non-agreeing neuter form. Furthermore, the passive exhibits a finite auxiliary that is optional in present tense, but obligatory in past tense; no finite auxiliary is possible in the evidential.[45] These properties are illustrated for the passive in 77a and the evidential in 77b. The thematic subject is realized in both by 'wind' in the genitive case.[46]

(77) a. T-as   lapel-is   *(buv-o)   vėj-o
          that-M.SG.NOM leaf-M.SG.NOM *(be-PST.3) wind-M.SG.GEN
          nupūs-t-as.
          blow.PST.PASS.PTCP-NOM.M.SG

---

[44]For some speakers this optionality is limited to inanimate grammatical subjects.

[45]The auxiliary in the neuter passive participle form is possible when required by a nominal predicate, and is sometimes optionally found with adjectival predicates. These are illustrated below in 90 and 91.

[46]Evidentials of transitive verbs, like in 77b, are less common than evidentials of intransitive verbs, and are limited to the eastern dialects (Ambrazas et al. 1997, 281).

'That leaf was blown down by the wind.'

b. Vėj-o (*buv-o) nupūs-t-a t-as

wind-M.SG.GEN (*be-PST.3) blow-PST.PASS.PTCP-N that-M.SG.NOM

lapel-is vakar.

leaf-M.SG.NOM yesterday

'The wind must have blown down that leaf yesterday.'

We use examples in the past, where passives may be easily distinguished from evidentials in that the passive has a finite auxiliary and the evidential does not. The two constructions are also distinguished in their interpretation – the evidential is interpreted as inferential based on visual evidence (Ambrazas et al. 1997, 281-284, Lavine 2010, Sprauniené et al. 2015, i.a.), while the passive is neutral with respect to evidentiality.

We provide seven arguments that the genitive in the passive is a PP adjunct, whereas the genitive in the evidential is a DP argument. First, the genitive is obligatory in the evidential, but optional in the passive (Blevins 2003, Lavine 2006). Thus, 78 is felicitous in a context that has not established the identity of the agent, but 79 is not.

(78) Vaik-as buv-o nuramin-t-as.

child-M.SG.NOM be-PST.3 calm-PST.PASS.PTCP-M.SG.NOM

'The child was calmed down.'

(79) # Nuramin-t-a vaik-as.

calm-PST.PASS.PTCP-N child-M.SG.NOM

Lit. 'Must have calmed the child down'

79 is, however, felicitious in a pro-drop context, like the one provided in the question-answer pair below.

(80) a. K-as padary-t-a Ing-os vakar?

what-M.SG.NOM do-PST.PASS.PTCP-N Inga-F.SG.GEN yesterday

'What must Inga have done yesterday?'

b. Nuramin-t-a vaik-as.

calm-PST.PASS.PTCP-N child.M.SG.NOM

'(She) must have calmed down the child.'

This pattern is predicted if the genitive in the passive is a 'by'-phrase, hence an optional PP adjunct, whereas the genitive in the evidential is a grammatical subject, hence obligatory modulo pro-drop.

Second, in the neutral word order, the genitive is initial in the evidential, but occurs final or immediately before the participle in the passive (Ambrazas et al. 1997, 277-284, Lavine 2006).

(81) a. Plyt-os   buv-o   (darbinink-ų)   vež-t-os
          Brick-F.PL.NOM be-PST.3 worker-M.PL.GEN cart-PST.PASS.PTCP-F.PL.NOM
          (darbinink-ų)
          worker-M.PL.GEN
          'The bricks were carted by the workers.'

      b. Darbinink-ų   vež-t-a   plyt-os   vakar.
          Worker-M.PL.GEN cart-PST.PASS.PTCP-N brick.F.PL.NOM yesterday
          'The workers must have carted the bricks yesterday.'

Other placement possibilities receive a marked interpretation:[47]

(82) a. Darbinink-ų   buv-o   vež-t-os   plyt-os
          worker-M.PL.GEN be-PST.3 cart-PST.PASS.PTCP-F.PL.NOM brick.F.PL.NOM
          'By the workers, the bricks were carted.'

      b. Plyt-os   vež-t-a   darbinink-ų   vakar.
          brick-F.PL.NOM cart-PST.PASS.PTCP-N worker-M.PL.GEN yesterday
          'It was the bricks that workers must have carted yesterday.'

Third, the two genitives behave differently for binding of the subject-oriented anaphor *savo* (Lavine 2006, 2010). The following illustrate the subject-orientation. In 83a, *savo* is bound by the grammatical subject 'Domantas', and a pronoun cannot be used instead; in 83b, *savo* cannot be bound by the object 'employees', and a pronoun must be used instead.

---

[47]Geniušienė 2006, 46 characterizes the genitive initial word order in the passive as placing "particular emphasis on the rhematic subject-patient."

(83) a. Domant-as$_i$ rūšiav-o   tarnautoj-us   pagal   savo$_i$ /

              Domantas-M.SG.NOM divide-PST.3 employee-M.PL.ACC according.to self.GEN /

              *jo$_i$ įsitikinim-us.

              *his.M.SG.GEN belief-M.PL.ACC

              'Domantas$_i$ divided employees according to his$_i$ own beliefs.'

     b. Domant-as   rūšiav-o   tarnautoj-us$_i$ pagal   jų$_i$

              Domantas-M.SG.NOM divide-PST.3 employee-M.PL.ACC according.to their.GEN

              / *savo$_i$ įsitikinim-us.

              / *self.GEN belief-M.PL.ACC

              'Domantas divided employees$_i$ according to their$_i$ beliefs.' (Timberlake 1982, 515)

Before applying this test, we must first ensure that *savo* is not a logophor. It may have an inanimate antecedent, hence it at least has a reflexive use (see Charnavel & Sportiche 2016 on inanimates, which cannot serve as logophoric centers).

(84) T-as   lapel-is$_i$ nutrūk-o   nuo savo$_i$ / *jo$_i$

      that-M.SG.NOM leaf-M.SG.NOM come.off-PST.3 from self.GEN / his.M.SG.GEN

      šakel-ės.

      branch-F.SG.GEN

      'The leaf$_i$ came off its$_i$ branch.'

Furthermore, *savo* cannot be bound by the logophoric centre; 85-87 illustrate with several typical logophoric contexts (see Sells 1987, Charnavel 2019 for discussion).

(85) Vargš-as   Domant-as$_i$ nuliūd-o.   Danut-ė

      poor-M.SG.NOM Domantas-M.SG.NOM become.upset-PST.3 Danutė-F.SG.NOM

      kritikav-o   jį$_i$ priešais jo$_i$ / *savo$_i$ motin-ą.

      criticize-PST.3 him.ACC in.front his.M.SG.GEN / self.GEN mother-F.SG.ACC

      'Poor Domantas$_i$ became upset. Danutė criticized him$_i$ in front of his$_i$ mother.'

(86) Danut-ė$_i$ man   pasak-ė, kad jos$_i$ / *savo$_i$ nam-as

      Danutė-F.SG.NOM me.DAT say-PST.3 that her.GEN / self.GEN house-M.SGNOM

sudeg-ė.

burn.down-PST.3

'Danutė$_i$ told me that her$_i$ house burned down.'

(87) Danut-ė$_i$ bij-o, kad jos$_i$ / *savo$_i$ motin-a bus

Danutė-F.SG.NOM afraid-PST.3 that her.GEN / self.GEN mother-F.SG.NOM will.be

pikt-a.

angry-F.SG.NOM

'Danutė$_i$ is afraid that her$_i$ mother will be angry.'

Therefore, *savo* is indeed a subject oriented reflexive, rather than a logophor.

Applying this test to the evidential, the genitive thematic subject behaves as a subject DP in serving as a binder for *savo* (Timberlake 1982; Lavine 2006, 2010; Spraunienė et al. 2015), 88a. The nominative theme, in contrast, cannot bind *savo*, 88b.[48]

(88) a. Vakar Domant-o$_i$ rūšiuo-t-a tarnautoj-ai

   yesterday Domantas-M.SG.GEN divide-PST.PASS.PTCP-N employee-M.PL.NOM

   pagal savo$_i$ / *jo$_i$ įsitikinim-us.

   according.to self.GEN / *his.M.SG.GEN belief-M.PL.ACC

   'Yesterday Domantas$_i$ must have divided employees according to his$_i$ beliefs.'

   b. Vakar Domant-o rūšiuo-t-a tarnautoj-ai$_i$

   yesterday Domantas-M.SG.GEN divide-PST.PASS.PTCP-N employee-M.PL.NOM

   pagal jų$_i$ / *savo$_i$ įsitikinim-us.

   according.to their.GEN / *self.GEN belief-M.PL.ACC

   'Domantas must have divided employees$_i$ according to their$_i$ beliefs.'

In the passive, in contrast, there is variation in judgements. According to Timberlake 1982 and Spraunienė et al. 2015, the genitive thematic subject of the passive can bind *savo*, whereas Lavine 2006, 2010 report this as ungrammatical. All of our consultants agree with the latter judgement: the genitive in the passive cannot bind *savo*, 89a. Furthermore, the nominative theme can bind *savo*, 89b, thus patterning as a grammatical subject.[49]

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[48]Contra Gronemeyer 1997, which claims that the nominative theme is the grammatical subject.

[49]While the pronoun is normally anti-subject-oriented, it can exceptionally be bound by a third person

(89) a. Tarnautoj-ai   buv-o   rūšiuo-t-i

employees-M.PL.NOM be-PST.3 divide-PST.PASS.PTCP-M.PL.NOM

Domant-o$_i$ pagal   jo$_i$ / *savo$_i$ įsitikinim-us.

Domantas-M.SG.GEN according.to his.M.SG.GEN / *self.GEN belief-M.PL.ACC

'The employees were divided by Domantas$_i$ according to his$_i$ beliefs.'

b. Tarnautoj-ai$_i$ buv-o   rūšiuo-t-i

employee-M.PL.NOM be-PST.3 divide-PST.PASS.PTCP-M.PL.NOM

Domant-o   pagal   savo$_i$ / jų$_i$ įsitikinim-us.

Domantas-M.SG.GEN according.to self.GEN / their.GEN belief-M.PL.ACC

'The employees$_i$ were divided by Domantas according to their$_i$ beliefs.'

We hypothesize that the variation in judgments results from the subject-orientation of *savo*. A DP embedded in a 'by'-phrase typically can c-command out, and so is a potential binder (see e.g. Pesetsky 1995). However, for our consultants, and those of Lavine, the subject-orientation of *savo* requires that the binder be the grammatical subject, which the 'by'-phrase is not. For the consultants of Timberlake and Sprauniene, in contrast, a thematic subject suffices, allowing the 'by'-phrase to bind *savo*. Overall, we find a clear contrast between the constructions on this test. The genitive in the evidential may bind the subject-oriented *savo* for all speakers, whereas the genitive in the passive for some speakers may not bind *savo*. The nominative theme in the evidential cannot bind *savo*, whereas the nominative theme in the passive is the grammatical subject, and hence can bind *savo*.

Fourth, the genitive thematic subject in the evidential patterns as a DP argument rather than a PP adjunct in that it triggers case, number, and gender agreement on nominal and adjectival predicates. 90a illustrates an evidential with a nominal predicate; 90b shows the corresponding non-evidential agreeing with its nominative subject. In the evidential example, the nominal predicate requires an auxiliary, but this auxiliary is non-finite, bearing the neuter morphology characteristic of the evidential. 91 illustrates the same pattern for an adjectival predicate.

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theme of the passive, as in 89b, but not by a first or second person theme, nor by a third person theme of an unaccusative. We are not clear on the analysis of this pattern, but see Šereikaitė to appear for discussion. Hence, our argumentation focuses on the behavior of the subject-oriented anaphor, rather than the behavior of the pronoun.

(90) a. Jo   tėv-o   bū-t-a   medžiotoj-o.
          his.M.SG.GEN father-M.SG.GEN be-PST.PASS.PTCP-N hunter-M.SG.GEN
          '(I heard) his father was a hunter.' (Ambrazas et al. 1997, 283)

      b. Jo   tėv-as   buv-o   medžiotoj-as.
          his.M.SG.GEN father-M.SG.NOM be-PST.3 hunter-M.SG.NOM
          'His father was a hunter.'

(91) a. Puš-ų   bū-t-a   stor-ų.
          pine.tree-F.PL.GEN be-PST.PASS.PTCP-N thick-F.PL.GEN
          'The pine trees turned out to be thick.' (Ambrazas et al. 1997, 283)

      b. Puš-ys   buv-o   stor-os.
          pine.tree-F.PL.NOM be-PST.3 thick-F.PL.NOM
          'The pine trees were thick.'

In contrast, nominal and adjectival predicates cannot passivize, regardless of agreement.

(92) a. * Jo   tėv-o   buv-o   medžiotoj-o   /
              his.M.SG.GEN father-M.SG.GEN be-PST.3 hunter-M.SG.GEN /
              medžiotoj-as.
              hunter-M.SG.NOM
              'There was being a hunter by his father.'

      b. * Puš-ų   buv-o   stor-ų   / stor-os.
              pine.trees-F.PL.GEN be-PST.3 thick-F.PL.GEN / thick-F.PL.NOM
              'There was being thick by the pine trees.'

Our fifth argument comes from case transmission in control (see Landau 2008 for a recent analysis of case transmission). In Lithuanian, case transmission is obligatory for subject control, and optional for object control (see Vaikšnoraitė 2015).[50] This is illustrated in 93 for the subject control verb 'promise' and the object control verb 'convince'. 93b also shows that in the absence of case transmission, PRO triggers dative case agreement.

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[50]See Landau 2008 for a similar pattern in Russian.

(93) a. Marij-a*ᵢ*   pažadėj-o   motin-ai   [PRO*ᵢ* grįž-ti   namo

Marija-F.SG.NOM promise-PST.3 mother-F.SG.DAT PRO   return-INF home

rytoj   vien-a   / *vien-ai].

tomorrow alone-F.SG.NOM / alone-F.SG.DAT.

'Marija promised mother to return home tomorrow alone.'

   b. Jon-as   įtikin-o   Marij-ą*ᵢ*   [PRO*ᵢ* grįž-ti   namo

Jonas-M.SG.NOM convince-PST.3 Marija-F.SG.ACC PRO   return-INF home

rytoj   vien-ą   / vien-ai].

tomorrow alone-F.SG.ACC / alone-F.SG.DAT

'Jonas convinced Marija to return home tomorrow alone.'

In 94, we see that the genitive in the evidential behaves as a subject in obligatorily
transmitting its case to the embedded PRO it controls, thereby triggering genitive case
agreement and prohibiting dative case agreement in the embedded clause.

(94) Marij-os*ᵢ*   pažadė-t-a   [PRO*ᵢ* grįž-ti   namo

Marija-F.SG.GEN promise-PST.PASS.PTCP-N PRO   return-INF home

?vien-os*ᵢ*   / *vien-ai*ᵢ*   rytoj]

alone-F.SG.GEN / alone-F.SG.DAT tomorrow

'Marija must have promised to return home alone tomorrow.'

The passive of 'promise' is an impersonal passive, with no grammatical subject; it thus
allows control by the implicit agent (see van Urk 2013, Pitteroff & Schäfer 2019 for related
discussion).

(95) Vakar   buv-o   pažadė-t-a   [PRO grįž-ti   namo rytoj].

yesterday be-PST.3 promise-PST.PASS.PTCP-N PRO return-INF home tomorrow

'Yesterday, it was promised to return home tomorrow.'

The genitive thematic subject, however, cannot transmit its case to the embedded PRO.

(96) Vakar   buv-o   Marij-os*ᵢ*   pažadė-t-a   [PRO*ᵢ* grįž-ti

yesterday be-PST.3 Marija-F.SG.GEN promise-PST.PASS.PTCP-N PRO   return-INF

namo rytoj   ??vien-os$_i$ / *vien-ai$_i$].

home tomorrow alone-F.SG.GEN / alone-F.SG.DAT

'Yesterday, it was promised by Marija$_i$ to return home tomorrow (*alone$_i$).'

Interestingly, dative case agreement on the secondary predicate is also ungrammatical. We hypothesize that as control by a thematic subject, this patterns as subject control, and so case transmission is obligatory. However, the thematic subject is only realized as a PP adjunct, which cannot transmit its case, because it is a PP rather than a case marked DP, and so has no accessible case to transmit.[51] Thus, there is no grammatical morphological form for the secondary predicate.

Our sixth argument comes from predicates in which the highest argument receives non-nominative case in the active. The class of verbs characterized by *trūkti-* 'lack', for example, exhibit a dative-genitive case pattern, where the dative patterns as the grammatical subject. (Other verbs in this class include *užtekti-* 'to have enough', *stigti-* 'to be short of', *pakakti-* 'to suffice'.) 97 serves as a baseline example of 'lack', and illustrates that the dative can serve as a binder for the subject-oriented reflexive *savo*, discussed above. (See Šereikaitė 2020 for additional arguments for the subjecthood status of the dative and further analysis of this class of verbs.)

(97)   Man$_i$ trūk-o   pinig-ų   savo$_i$ reikmėms.

       me.DAT lack-PST.3 money-M.PL.GEN self.GEN needs.DAT

       'I$_i$ lacked money for my$_i$ own needs.'

The evidential form of these predicates exhibits the expected invariant neuter participle, obligatory absence of an auxiliary, and evidential interpretation. The grammatical subject, however, remains dative rather than becoming genitive.

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[51]We note that two of our eight consultants did allow case transmission from the 'by'-phrase. We hypothesize that these speakers allow transmission of case from within a PP in control contexts, but have been unable to construct sentences to test this hypothesis. It is worth mentioning that Lithuanian generally patterns as more permissive in case transmission than Russian as reported in Landau 2008, in that Lithuanian does allow case transmission for control by non-accusative objects.

(i)   Mar-ius   papraš-ė Lin-os$_i$ [PRO$_i$ atei-ti   vien-os   / vien-ai].

     Marius-NOM ask-PST.3 Lina-F.SG.GEN   come-INF alone-F.SG.GEN / alone-F.SG.DAT

     'Marius asked Lina to come alone.' (adapted from Vaikšnoraitė 2015, 40)

(98)   Man   / *mano (*buv-o)   trūk-t-a   pinig-ų   vakar.
       me.DAT / me.GEN (be-PST.3) lack-PST.PASS.PTCP-N money-M.PL.GEN yesterday.
       'I must have lacked money yesterday.'

Thus, grammatical subjects that normally bear nominative are genitive in the evidential, while those that normally bear a marked non-nominative case retain that case in the evidential. This pattern is akin to that found in case stacking and case replacement in other languages (Babby 1980, Moravcsik 1995, Richards 2012, i.a.), and hence expected on the current analysis whereby the genitive in the evidential is a grammatical subject receiving genitive case. It is not expected if the genitive in the evidential is a 'by'-phrase. Indeed, 'lack'-class predicates do not passivize.

(99)   * Pinig-ai   buv-o   trūk-t-i   mano.
       money-M.PL.NOM be-PST.3 lack-PST.PASS.PTCP-M.PL.NOM me.GEN
       'The money was lacked by me.'

   Finally, the evidential may apply to unaccusatives (Timberlake 1982; Lavine 2006, 2010; Spraunienė et al. 2015), while the passive may not. The lack of the past auxiliary disambiguates 100 as an evidential, and it is grammatical with an evidential interpretation. The past auxiliary disambiguates 101 as a passive, and it is ungrammatical.

(100) Jon-o   numir-t-a   praeit-ą   ruden-į.
       Jonas-M.SG.GEN die-PST.PASS.PTCP-N last-M.SG.ACC fall-M.SG.ACC
       'Jonas must have died last fall.'

(101) * Praeit-ą   ruden-į   buv-o   numir-t-a   Jon-o.
       last-M.SG.ACC fall-M.SG.ACC be-PST.3 die-PST.PASS.PTCP-N Jonas-M.SG.GEN
       'Last fall, it was died by Jonas.'

As expected on our analysis, the genitive theme of the evidential unaccusative patterns as a grammatical subject in binding the subject-oriented reflexive *savo*, 102b, just like the nominative theme in the non-evidential unaccusative, 102a.

(102) a. T-as   lapel-is$_i$ nutrūk-o   nuo savo$_i$ / *jo$_i$

that-M.SG.NOM leaf-M.SG.NOM come.off-PST.3 from self.GEN / *his.M.SG.GEN

šakel-ės.

branch-F.SG.GEN

'The leaf$_i$ came off its$_i$ branch.'

b. T-o   lapel-io$_i$ nutrūk-t-a   nuo savo$_i$ /

that-M.SG.GEN leaf-M.SG.GEN come.off-PST.PASS.PTCP-N from self.GEN /

*jo$_i$ šakel-ės.

*his.M.SG.GEN branch-F.SG.GEN

'The leaf$_i$ must have come off its$_i$ branch.'

We conclude that Lithuanian exhibits an evidential in which the grammatical subject bears genitive rather than nominative case. This grammatical subject may be the thematic subject of an active transitive or unergative, or the thematic object of an unaccusative. The passive, in contrast, demotes the thematic subject of a transitive or unergative predicate, with the thematic subject optionally realized as genitive DP inside a PP adjunct.

With this background, we return to the purported passive of a passive, 75, repeated below with our glossing and translation.

(103) T-o   lapel-io   bū-t-a   vėj-o

that-M.SG.GEN leaf-M.SG.GEN be-PST.PASS.PTCP-N wind-M.SG.GEN

nupūs-t-o.

blow-PST.PASS.PTCP-M.SG.GEN

'That leaf must have been blown down by the wind.'

We now recognize this as an evidential of a passive. As a passive, it has an auxiliary and agreement between the lexical participle and its grammatical subject, 'that leaf'. The thematic subject, 'the wind', is realized as a genitive PP adjunct. As an evidential, it has a genitive grammatical subject, and neuter participle morphology on the auxiliary. Thus, the genitive thematic subject is a 'by'-phrase, whereas the genitive theme is the grammatical subject of an evidential. As predicted, the genitive theme can serve as the binder for the subject-oriented reflexive *savo*.

(104) T-o   lapel-io   bū-t-a   vėj-o

that-M.SG.GEN leaf-M.SG.GEN be-PST.PASS.PTCP-N wind-M.SG.GEN

nupūs-t-o   nuo savo$_i$ / *jo$_i$ šakel-ės.

blow-PST.PASS.PTCP-M.SG.GEN from self.GEN / *his.M.SG.GEN branch-F.SG.GEN

'That leaf$_i$ must have been blown off its$_i$ branch by the wind.'

In sum, the purported passive of a passive in Lithuanian is not a passive of a passive, but an evidential of a passive. Is a passive of a passive possible in Lithuanian? It would have a finite auxiliary 'be', an auxiliary participle 'be', and a lexical participle; both participles would be in the non-agreeing neuter, due to the lack of a grammatical subject to trigger agreement. Two genitive 'by'-phrases would be possible. 105 illustrates and is ungrammatical. Passives of passives are in fact not possible in Lithuanian.

(105)   * buv-o   bū-t-a   nupūs-t-a   vėj-o

be-PST.3 be-PST.PASS.PTCP-N blow-PST.PASS.PTCP-N wind-M.SG.GEN

t-o   lapel-io.

that-M.SG.GEN leaf-M.SG.GEN

('Was been blown down by the wind by that leaf')

In summary, carefully distinguishing between passives and evidentials, we have demonstrated that the purported passive of a passive in Lithuanian is in fact a passive of an evidential. The passive in Lithuanian cannot apply to passives, and indeed is limited to applying to verbs with a thematic subject; evidentials do not show this limitation.

Before continuing to our final case study, it is interesting to consider further the syntax of evidentials in Lithuanian. As we have seen, the evidential marks its grammatical subject with genitive, regardless of whether it is a thematic subject, of an unergative or transitive, or thematic object, of a passive or unaccusative. This indicates that the genitive is not an inherent case, associated with a particular θ-position, but rather a structural case assigned by a functional projection to the highest argument in the verb phrase.[52] This is supported by the pattern in 97 and 98 above, whereby a DP with inherent case retains its

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[52]This allows us a unified analysis of the genitive; see Lavine 2010 for an alternative whereby v-Voice assigns genitive to its specifier in transitives, like an inherent case, but under closest c-command in passives/unaccusatives, like a structural case.

case in the evidential, rather than bearing genitive, just as a DP with inherent case retains
its case in finite subject position, rather than bearing structural nominative. Finally, the
genitive also patterns as a structural case for agreement. As seen in 103, the genitive
grammatical subject triggers agreement on the passive participle, identically to the
nominative grammatical subject in 77a. Inherent case marked grammatical subjects, in
contrast, do not trigger agreement on participles. As discussed above (see also Šereikaitė
2020), 'lack'-class verbs in Lithuanian exhibit grammatical subjects marked with inherent
dative case. While 'lack'-class verbs do not passivize, we can test their behavior for
agreement with verbal participles using the agreeing active participle found in the
perfective evidential construction (see Lavine 2010, 121 and Ambrazas et al. 1997, 262-266
for discussion). This construction expresses reported speech or hearsay. 106 shows that the
participle agrees with its nominative grammatical subject; 107 shows that it does not agree
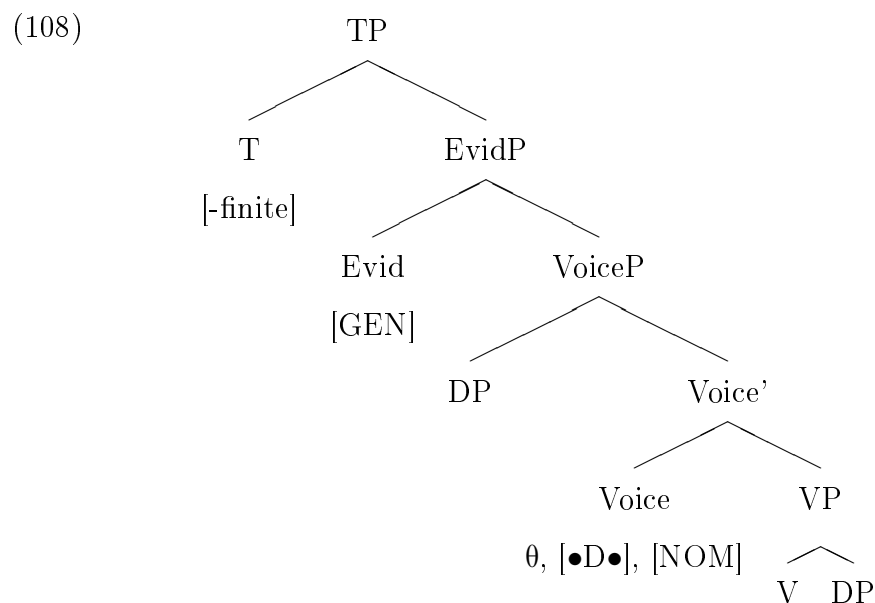with a dative grammatical subject (Ambrazas et al. 1997, 335).

(106) Girdėj-au,   Marij-a   (yra)   gyven-us-i   šiame
       hear-PST.1SG Marija-NOM be.PRS.3 live-PST.ACT.PTCP-F.SG.NOM this
       bendrabutyje.
       dorm
       'I heard that Maria lived in this dorm.'

(107) Girdėj-au,   Marij-ai   trūk-ę   tėv-ų
       hear-PST.1SG Marija-DAT lack-PST.ACT.PTCP.NEUT parent-PL.GEN
       šilum-os.
       warmth-GEN.F.SG
       'I heard that Maria lacked parents' warmth.'

Thus, the evidential genitive behaves like a structural case in triggering agreement on
verbal participles, in contrast with inherent case marked DPs, which do not. This accounts
for the case properties of evidentials of passives, unergatives, and unaccusatives.

Transitive evidentials raise one further analytical issue, in that the grammatical object
of the transitive evidential bears nominative. If the evidential projection is located high in
the clause (Cinque 1999, Speas 2004, i.a., as well as Lavine 2006, 2010 for Lithuanian), it is

difficult to prevent accusative case from being assigned to the object inside the verb phrase.[53] However, recent work on the typology of evidentials (Blain & Déchaine 2006 and subsequent) argues that evidential meaning may be associated with projections appearing in any position in the syntactic spine. Since the Lithuanian construction is characterized by a nonfinite TP combined with a VoiceP that fails to assign accusative case, we tentatively propose that the evidential projection appears between TP and VoiceP, and is thus in a selectional relationship with both.[54] This positioning also allows it to assign structural genitive case to the highest DP in the clause. We analyse nominative as assigned to the object by the Voice^0 that is selected by Evid^0.[55] The following tree illustrates the analysis for transitive evidentials (abstracting away from argument movement).

(108)

```
                    TP
               /          \
             T             EvidP
          [-finite]      /       \
                      Evid        VoiceP
                      [GEN]      /      \
                               DP       Voice'
                                      /        \
                                   Voice        VP
                          θ, [•D•], [NOM]      /  \
                                              V    DP
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Returning to the main thread, in the following section we examine the final oft-cited apparent passive of passive, in Sanskrit.

4. SANSKRIT. The final purported passive of a passive comes from Classical Sanskrit

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[53]Lavine 2010 posits for the evidential a VoiceP lacking accusative case, but does not discuss how the Evidential projection in the CP domain enforces the use of this VoiceP.

[54]Blain & Déchaine 2006 indeed argue that the type of evidentiality exhibited in Lithuanian, which contrasts visual from nonvisual evidence, is anchored low in the clausal hierarchy.

[55]See for example Sigurðsson 2000, 2003 for arguments that nominative objects in Icelandic receive case within the verb phrase, and Sigurðsson 2017 for assignment of nominative by Appl^0 in Icelandic. See also Aldridge 2004 on absolutive assigned to the object by the head that introduces the external θ-role in a subset of ergative-absolutive languages. In contrast, Lavine 2010 analyses the nominative on Lithuanian evidential objects as a default; this is also compatible with our approach.

(Cardona 1976, Ostler 1979, Kiparsky 2013, i.a.), and is illustrated in 109.[56]

(109)   Odan-ena pac-ya-te.

        rice-INS   cook-PASS-3SG

        'The rice is cooking.' (Cardona 1976, 5)

Our discussion is necessarily more tentative, given the lack of native speakers of Classical Sanskrit. The available evidence indicates, however, that 109 in fact does not involve passivization at all. Instead, it is an unaccusative, and the morpheme glossed as passive is more general nonactive morphology. We develop a theoretical description of the construction in this section, but must leave its explanation for future work.

    Of interest in 109 is that the theme 'rice' appears in the instrumental. As illustrated in 110b, this is characteristic of the demoted thematic subject in the passive.

(110)   a. Devadatta   odanaṁ pac-a-ti.

            Devadatta.NOM rice.ACC cook-ACT-3SG

            'Devadatta is cooking the rice.'

        b. Odanaḥ   pac-ya-te   Devadatt-ena.

            rice.NOM cook-PASS-3SG Devadatta-INS

            'The rice is being cooked by Devadatta.' (Cardona 1976, 2)

On a passive of a passive analysis, 109 has two applications of the passive: the first demotes the agent, which is then left implicit in 109, and the second demotes the theme, which then appears in an instrumental 'by'-phrase in 109. The fact that the verb exhibits only one passive morpheme rather than two is attributed to a "morphological bottleneck" Kiparsky 2013, 24.

    The first step in understanding the construction in 109 is to note that the passive suffix in Classical Sanskrit is not dedicated passive morphology, but also marks a subset of unaccusative verbs (a rather unremarkable state of affairs, see e.g. Haspelmath 1990, 36). Henceforth we therefore gloss this morphology as nonactive. The following illustrate

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[56]As is standard in the Sanskrit literature, the judgement of ungrammaticality in this section is used to indicate forms that are neither attested nor generated by the rules in Pāṇini's *Ashtadhyayi* or in the other grammatical literature of the time period; grammaticality is used for the inverse.

unaccusative verbs that have no transitive or simple passive use, but appear suffixed with
the nonactive morphology:

(111) pad-ya-te   (112) ās-ya-te

       fall-NACT-3SG   be.seated-NACT-3SG

       'falls'   'is seated'

Many other verbs are ambiguous in their suffixed form between a simple passive and an
unaccusative:

(113) a. muc-ya-te

          escape-NACT-3SG

          'gets free, escapes' OR 'is freed'

     b. pac-ya-te

          cook-NACT-3SG

          'ripens, softens, cooks' OR 'is cooked'

Interestingly, Vedic Sanskrit distinguishes between the unaccusative suffix and the
passive suffix through accent.[57] Accented *-yá* forms passive presents from verb roots; the
root appears in the zero grade and the stem is inflected for agreement in the mediopassive
rather than the active (e.g. *uc-yá-te* 'it is spoken' from *vac-* 'speak'). Unaccented *-ya*, in
contrast, is used for a small class of intransitive (unaccusative) presents, also inflected in
the mediopassive; 114 illustrates the contrast between passive *-yá* and unaccusative *-ya*.

(114) a. paktíḥ   pac-yá-te.

          cooked.food cook/ripen-PASS-3SG

          'cooked food is cooked.' (RV 6.29.4)

     b. pác-ya-te   yávaḥ

          cook/ripen-UNACC-3SG grain.NOM

          'grain ripens.' (RV 1.135.8)

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[57]Vedic Sanskrit has additional suffixes of the shape *-ya* that form present stems. Unaccented *-ya* forms
underived presents (e.g. *páś-ya-ti* '(s)he sees'); accented *-yá* derives present stems from nominals (e.g.
deva-yá-ti '(s)he serves the gods' from *devá-s* 'god', *manas-yá-ti* '(s)he bears in mind' from *mánas* 'mind').

(Both stems contrast with the basic present *pác-a-* (active *pácati* '(s)he cooks', middle *pácate* '(s)he cooks for him/herself'), well attested at every stage of the language.) An equally clear set follows.[58]

(115)   a. kṣī-yá-te

destroy/perish-PASS-3SG

'it is destroyed'

      b. rā́yo   ná kṣí-ya-nte,   ná‿úpa

wealth.NOM.PL not destroy/perish-UNACC-3PL not‿to.completion

das-ya-nti

be.extinguished-PRES-3PL

'the riches do not perish, they do not give out' (RV 1.62.12)

(Both stems contrast with the basic present, which is nasal-infixed *kṣi-ṇā́-ti* '(s)he destroys'.) In addition to several further contrastive examples, there are a number of unaccusative verbs whose only present is with unaccented *-ya* inflected in the mediopassive; a typical example is *pád-ya-te* 'it falls'.

With the loss of the inherited accent at the end of the Vedic period, the passive *-yá* and unaccusative *-ya* become morphologically indistinguishable as nonactive *-ya*. We therefore need tests to determine whether the nonactive morpheme in 109 marks a passive structure or an unaccusative structure or is ambiguous between the two. A positive test for the unaccusative structure is the adjunct 'by itself', which indicates the lack of an external cause.[59]

(116)   (svayameva) kusūlo   'bhid-ya-ta.

      of.itself   grain.holder.NOM.SG PST.break-NACT-3SG

      'The grain holder broke (of its own accord)'

The construction in 109 can occur with 'by itself', demonstrating that it can have an unaccusative structure:

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[58]The first is unattested in RV, but is common in later Vedic and later Sanskrit.

[59]This test was brought to the attention of linguists by Gennaro Chierchia in a 1989 manuscript; see Chierchia 2004 for the published version. For the Sanskrit, see Cardona 1976, Ostler 1979, Kiparsky 2013, i.a.

(117)   (svayameva)   kusūl-ena‿a-bhid-ya-ta.
     of.itself   grain.holder-INS.SG‿PST-break-NACT-3SG
     'The grain holder broke (of its own accord)'

Furthermore, we noted above that some verbs that appear with nonactive morphology have only an unaccusative use, not a passive. Such verbs can also appear in the construction at hand, with an instrumental theme, again indicating an unaccusative structure.

(118)   a.   sam-a-bhāv-i   kop-ena.
          together-PST-be-AOR.NACT.3SG anger-INS
          'Anger burst forth.' (Bhaṭṭi-Kāvya)

      b.   Devadatt-ena‿ās-ya-te.
          Devadatta-INS‿be.seated-NACT-3SG
          'Devadatta was seated'

A positive test for the passive structure is the cooccurrence with an agentive 'by'-phrase adjunct in the instrumental case, see the passive example in 110b. The construction in 109 cannot occur with a 'by'-phrase, indicating that a passive structure is not possible.

(119)   * Devadatt-ena   kusūl-ena‿a-bhid-ya-ta.
     Devadatta-INS grain.holder-INS‿PST-break-NACT-3SG
     'The grain holder broke by Devadatta'

In summary, the purported passive of a passive in Sanskrit is instead an unaccusative. The verb is marked with nonactive morphology that is syncretic between the passive and unaccusative, which seems to have contributed to the misanalysis. Crosslinguistically, we are left with no known passives of passives.

      Before proceeding, we consider further the properties of 109 in Classical Sanskrit. Specifically, we consider the instrumental case on the theme: is this simply unexpected case on a DP argument, or is the theme in a 'by'-phrase adjunct? If the instrumental theme is a DP argument, then we have another argument against the passive of a passive analysis of 109, since that analysis claims that the instrumental is a 'by'-phrase. If the instrumental is a 'by'-phrase adjunct, the construction in 109 would then be a passive of an unaccusative

(Kiparsky 2013). One piece of evidence for the theme being a DP argument, rather than a 'by'-phrase adjunct, comes from case agreement. If the instrumental is an adjunct, we do not expect it to trigger case agreement on the predicate; if it is an argument, we do expect it to trigger case agreement. The latter prediction is borne out: the instrumental theme triggers instrumental agreement on predicates that undergo case agreement (these predicates being embedded under an auxiliary, in our data either 'be' or 'stand'). Whitney in his Sanskrit grammar states 'A predicate to the instrumental subject of such a construction is, of course, also in the instrumental' (Whitney 1950, §282.a.), providing the following examples. In the first, 'thy companion' is the predicate, agreeing in case with the instrumental 'me', whereas in the second 'attend' is the predicate, agreeing with (dropped) 'you'.

(120)   a. adhunā tava   anucar-eṇa   mayā   sarvathā bhavi-tavyam

          now   you.GEN companion-INS me.INS always   be-PTCP.FUT.NACT.3SG

          'henceforth I shall always be thy companion' (Hitopadeśa)

      b. avahi-t-āir   bhavi-tavyam   bhav-ad-bhiḥ

          attend-PTCP-PL.INS be-PTCP.FUT.NACT.3SG be-PTCP-PL.INS

          'you must be attentive.' (Vikramorvaśī)

Additional attested examples follow. In 121a 'faultless' agrees with 'my sacrifice'; in 121b, 'all trouble enduring' agrees with 'baby'; in 121c, 'lying' agrees with 'me'; in 121d, 'his voice suitable' agrees with 'prowess'; in 121e 'ascetics grove' agrees with 'this'.

(121)

      a. anagh-ena   bhavi-tā   . . . makh-ena   me

          faultless-INS be-FUT.NACT.3SG   sacrifice-INS me.GEN

          'My sacrifice will be faultless.' (Śiśupālavadha 14.8)

      b. bālak-ena sakalakleśasah-ena_a-bhāv-i.

          baby-INS all.trouble.enduring-INS_PST-be-AOR.NACT.3SG

          'The baby endured all this trouble.' (Daśa-Kumāra-Carita 18)

c. mayā na śayān-ena sthī-ya-te.

  me.INS not lying.PTCP-INS stand-NACT-3SG

  'I do not remain lying down.' (Mudrārākṣasa 1)

d. tasya ca śabdānurūp-ena parākram-ena bhāv-yam.

  him.GEN and voice.suitable-INS prowess-INS be-NACT.GER.N.SG

  'And his strength may be adequate to his voice.' (Pañcatantra)

e. abhitas tapovane-na an-ena bhavi-tavy-am

  round.about ascetics.grove-INS this-INS be-GER-NOM.SG.NEUT

  'This must be an ascetics grove round about.' (Bhāsa, Svapnavāsavadatta)

In contrast, the instrumental 'by'-phrase agent in the passive does not trigger case agreement; the predicate agrees with the nominative theme instead. The 'by'-phrase agent of the passive thus exhibits the behavior expected of a PP adjunct. Compare 121c, in which 'lying' agrees with the instrumental theme, with 122, in which 'beat' agrees with the (dropped) nominative, not the instrumental agent.

(122) Devadatt-ena tāḍitas tiṣṭh-āmi

  Devadatta-INSTR beat.PST.PTCPL.NOM stand.PRS-1SG

  'I lie beaten by Devadatta'

We conclude, therefore, that the instrumental theme in the construction under discussion is an argument of the predicate rather than an adjunct. Thus, the purported passive of a passive in Classical Sanskrit involves no passivization at all. Instead a subset of unaccusatives are marked with nonactive morphology syncretic with the passive; the theme of these unaccusatives may (optionally) bear instrumental. What is the source of this instrumental? Note that the theme of unaccusatives with active morphology cannot bear instrumental:[60]

(123) *mayā tava anucar-eṅa bhavati

  me.INSTR you.GEN companion-INST be.PRES.3SG

  'I am your companion'

---

[60]We thank a reviewer for comments on this point, and for providing this example.

This suggests that it is not the lexical verb itself that assigns instrumental to the theme, but rather the functional head realized by *-ya*. In the framework represented by Harley 1995, Marantz 1997, Embick 1998, and much subsequent work, this functional head is appropriately labelled as v. Thus, we have the following structure for the relevant unaccusatives; assignment of instrumental by the v is optional, hence in parentheses.

(124)

```
              vP
             /  \
            v    VP
          -ya   /  \
       ([INSTR]) V  DP
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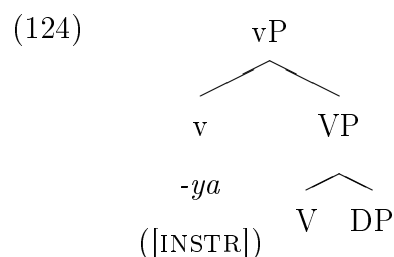
This case assignment is an interesting phenomenon in and of itself; an explanation for its historical development must await future research. For current purposes, the key observation is that these constructions in Sanskrit are not passives of passives, but rather unaccusatives. Moreover, they are not passives of unaccusatives, but rather unaccusatives in which the theme is assigned instrumental case, and the verb bears nonactive morphology that is used for (a subset of) unaccusatives and for passives. Passivization is not involved at all. Perlmutter and Postal's generalization that passives of passives are unattested continues to hold.

5. ANALYSIS.

In the previous sections, we discovered that the constructions that have been cited as evidence for the passive applying to passives had been misanalysed. Careful reanalysis demonstrated that in all three cases, the languages in fact confirm Perlmutter and Postal's generalization that passives may not themselves undergo passivization. This necessitates an analysis of the passive that can capture this generalization. Specifically, the analysis of the passive must predict that the passive cannot iterate: demotion of the thematic subject through passivization cannot make the thematic object accessible for demotion on a second round of passivization.

Perlmutter and Postal's own (1984) account depends on two proposed conditions, both of which must be simply stipulated. The analysis is couched in Relational Grammar, in which a passive involves demotion of an initial subject (referred to as a 1) to a

prepositional adjunct (chômeur) and promotion of another clausal element to subject. The first condition required to rule out passives of passives is the 1-Advancement Exclusiveness Law,[61]

(125)   1-Advancement Exclusiveness Law

   The set of advancements to 1 in a single clause contains at most one member.
   (Perlmutter & Postal 1984, 84)

which prohibits promotion of multiple elements to subject within a clause. While this condition does not follow from anything in the theory, Perlmutter & Postal 1984 do provide considerable empirical argumentation for it. The second condition is the Motivated Chômage Law, which prevents demotion of the subject to adjunct status from applying in the absence of promotion of an element to subject status. This condition should prevent impersonal passives entirely, but instead they posit that impersonal passives involve promotion of a null dummy to subject position, motivating demotion of the subject to adjunct. Thus, in this framework, a passive of a passive would involve promotion of the theme to subject status and corresponding demotion of the agent to adjunct status, followed by a second step with promotion of a dummy to subject status and corresponding demotion of the theme to adjunct status. It is this second step that is ruled out by the combination of the Motivated Chômage Law, which prevents the theme from being demoted without promotion of something to subject status, and the 1-Advancement Exclusiveness Law, which prevents the dummy from promoting to subject status to allow demotion of the theme. This theory has been criticized for its reliance on the dummy, which is required on theory-internal grounds, but is not empirically motivated (Comrie 1977, Blevins 2003, i.a.). The fact that the two conditions that achieve the absence of passives of passives do not follow from independent properties of the theory also make it inadequate for our needs. Furthermore, see Legate 2012, 2014 for arguments against an analysis of the passive involving actual demotion of an argument from a subject position to adjunct status.

   As mentioned above, Kiparsky 2013 considers passivization of passives to be possible,

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[61]We cite here the less technical of the two formulations they provide.

and formulates his theory of passivization accordingly. The approach is couched within Lexical Decomposition Grammar (Stiebels 2002; Wunderlich 1997), which incorporates Optimality-Theoretic constraints. Passive is defined as "an affix that demotes (existentially closes) the most prominent Theta-role that is not already demoted" (Kiparsky 2013, 7). The system thus does not capture the fact that passives of passives are unattested. While the passive could be redefined in this system so as to be sensitive to the thematic subject θ-role rather than the most prominent θ-role, the lack of constraints on the possible definition of the passive eliminates any predictive power of the theory in this regard. Several other theories of the passive also suffer from this issue: the passive is simply defined as a lexical rule, and its formulation either predicts iteration, or could be easily modified to predict iteration. For example, the standard treatment of the passive in Lexical Functional Grammar (Bresnan 2001) defines passive as a lexical rule that suppresses the most prominent role; the most prominent unlinked role after passivization is the theme, so iteration can be predicted.[62] Similarly, Blevins 2003 employs technology from HPSG to directly identify the subject term linked to the first θ-role of a predicate, and to then define the Passive Lexical Rule to specifically eliminate this subject term (Blevins 2003, 512); changing the rule to apply to any subject term would predict passive iteration. Culicover & Jackendoff 2005, 203 in the framework of Simpler Syntax defines the passive as linking the highest ranking grammatical function with an oblique; passive iteration is expected. Examples multiply.

Turning to syntactic analyses of the passive, we begin with Murphy 2014, which discusses the Turkish and Lithuanian constructions. Building on Müller 2014, Murphy 2014 proposes that passivization is a syntactic operation, Slice, which functions as the opposite of the structure building operation Merge (Chomsky 1995a), in that a constituent at the

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[62]An alternative LFG analysis is Kibort 2001. Arguments are assigned features based on their thematic roles; the passive is hypothesized to add [+r] to the highest argument of the predicate. If this argument is a thematic subject, [-o], the result is an oblique, [+r, -o]. If this argument is a thematic object, the result is the impossible [-r, +r]. Hence, passivization can only apply to demote thematic subjects, and passives of passives are not possible. Note that this is accomplished by ruling out demotion of themes, which should thereby also rule out antipassives (see Polinsky 2017 for a recent overview of antipassives) and any passives of unaccusatives, see the discussion in section 6 below. (The prediction for secondary objects, [+r], is less clear, since the passive rule would result in [+r, +r]). Additions to the system to accommodate antipassives or passives of unaccusatives are therefore likely to eliminate the explanation of the impossibility of passives of passives.

top of the tree is removed.[63] As a syntactic operation, Slice can iterate, first removing the thematic subject, then removing the thematic object (after it has raised to VoiceP); this is the analysis provided for the Turkish construction, assumed to be a passive of a passive.[64] The analysis of passives through Slice therefore does not account for the lack of passives of passives crosslinguistically and so is not adequate to our needs. The theory also fails to predict other properties of the passive constructions considered here. The Slice operation is designed to capture the purported generalization that the passive agent behaves as present in the structure for relationships below its merged thematic position (binding, depictive licensing, control), but not above that position. As we have seen above, the passive agent in neither Turkish nor Lithuanian follows this pattern: the passive agent cannot bind into lower arguments/adjuncts, and cannot license depictives.[65] Furthermore, control by the passive agent crosslinguisitically is quite restricted, being limited to impersonal passives (or passives with inanimate subjects) (see van Urk 2013, Pitteroff & Schäfer 2019 for recent discussion); indeed Lithuanian exhibits this pattern, 95 above. Therefore the claimed crosslinguistic generalization does not hold – the passive agent does not pattern for relationships below its thematic position as syntactically projected in the same way as the active agent. We need a difference between the active and passive even at the thematic position, so that low properties can potentially show sensitivity to this difference. Again, an alternative analysis is needed.

Another class of syntactic analyses of the passive that cannot account for our data are based on the claim that the passive agent is not demoted in any sense, but rather syntactically projected as a (potentially null) argument. Collins 2005 is an influential

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[63]In the section of the paper discussing syntax, this is illustrated as removing the element entirely, so as to allow A-movement past it. In the section of the paper discussing the semantic interpretation, this is illustrated as leaving an unbound variable, which may then be subject to Existential Closure (Heim 1982). It is not clear how to reconcile these two conceptions.

[64]The Lithuanian construction is instead analysed as iterative assignment of genitive case by VoiceP, even though 'by'-phrases in this theory are generally analysed as re-merger of the agent as an adjunct (after merger as a thematic subject and removal through Slice). The analysis thus does not capture the properties of the Lithuanian genitive 'by'-phrase in the passive discussed above, nor the differences between the genitive that is the passive 'by'-phrase and the genitive that is the evidential grammatical subject.

[65]The passive agent in Lithuanian indeed cannot license depictives, Šereikaitė to appear, but in Lithuanian the facts are less striking because depictives obligatorily exhibit agreement in both ϕ-features and case, which could provide an alternative explanation for their ungrammaticality; see Pitteroff & Schäfer 2019 on the potential importance of agreement to depictive licensing by passive agents. Turkish depictives in contrast do not agree.

modern proponent of this approach, although Baker et al. 1989 (building on Jaeggli 1986) can be viewed as a precursor, with the passive morpheme treated as an argument itself, receiving case and the subject θ-role. These analyses cannot account for our data, as much of our argumentation above centers on the demonstration that the passive agent in Turkish and Lithuanian behaves as syntactically unprojected, in contrast with the Turkish impersonal agent and the Lithuanian evidential agent which behave as syntactically projected. These also do not fare well regarding passives of passives. Baker et al. 1989 discusses Turkish and Lithuanian, claiming that the passive morpheme in these languages can be generated in argument position, either subject or object or both, and then cliticized to INFL, allowing it to appear as a morpheme on the verb. (Although this does not derive the correct morpheme ordering for Turkish, passive between causative and aspect, see 66 above.) They prevent the passive morpheme from being generated only in the object position (yielding the equivalent of an antipassive, see below) through locality. Specifically with the stipulation that the passive morpheme must move to INFL, this movement can only satisfy locality from the subject position, not from the object position; movement of the object requires prior cliticization of the subject, thereby freeing up the subject position for the object to move through.[66] The ability for the passive analysis in Baker et al. 1989 to generate passives of passives is a serious defect of the theory. Collins 2005 differs from Baker et al. 1989 in not positing cliticization, and does not discuss the Turkish and Lithuanian data. It is not clear how passives and impersonals are to be differentiated in this theory, so we do not speculate on how it would capture the nonexistence of passives of passives, but the existence of impersonals of passives. For additional arguments against the approach of Collins 2005, see Bowers 2010, chapter 2, and Legate 2014, 64-82, among others.

Finally, we turn to syntactic analyses of the passive in which the passive agent is not syntactically projected, as required for our data. Our own analysis will be couched in this tradition, following Bruening 2013, Legate 2014, Alexiadou et al. 2015, i.a., and also following that tradition we will adopt the general semantic framework of Heim & Kratzer 1998. A primary benefit of this style of analysis is the intrinsic ordering imposed by the

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[66]They implement this technically through the version of Government in Baker 1988.

syntactic hierarchy and the compositional semantic interpretation. Specifically, the composition of the verb with its thematic object occurs low in the tree, before introduction of the thematic subject. Therefore, passivization of the thematic subject cannot make the thematic object available for passivization, thereby ruling out a passive of a passive. Consider the following basic tree:[67]

(126)   VoiceP
         /\
      Voice   VP
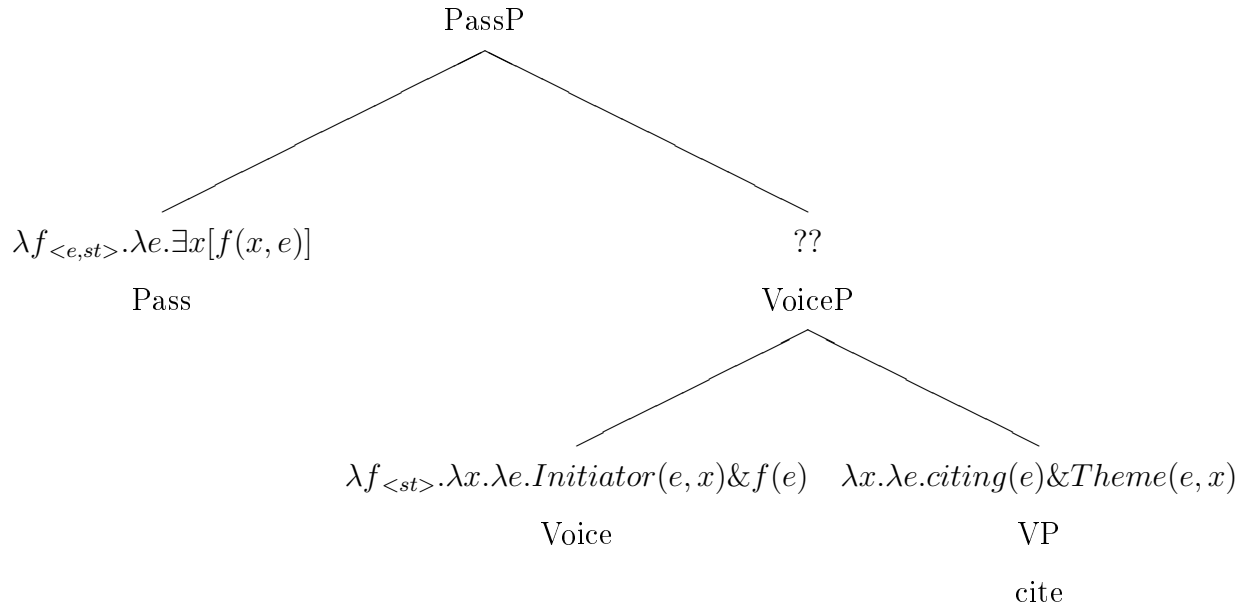   θ   /\
           V   (DP)
                θ
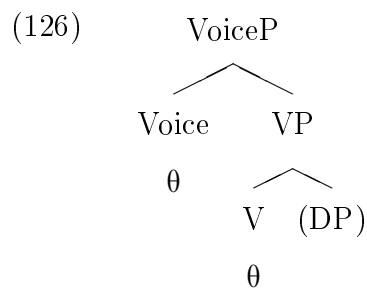
If the thematic object (in parentheses) is present in the structure, then it will be assigned its θ-role by the verb as usual, regardless of whether VoiceP is active or passive, and no passive of a passive can arise. If the thematic object is absent from the structure, a passive of a passive still cannot arise. The thematic object position will be unsaturated, creating difficulty in the semantic composition between the VP and the Voice^0. Assume for simplicity the approach of Bruening 2013, whereby the existential quantification of the passive thematic subject (Bach 1980, Keenan 1980, Williams 1987, Bruening 2013, Legate 2014, Alexiadou et al. 2015, among many others) enters the derivation on a Pass^0 above VoiceP.[68] (For 'initiator' used as the subject θ-role, see Ramchand 2008, Bruening 2013, ia.) Also assume that Voice^0 is of type $<< st >, < e, < s, t >>>$ and so in the active takes VP, of type $< st >$ as its semantic argument.[69] For the construction under consideration, a passive in which the thematic object position is left open, the result would be the following.

(127)   Mary was cited.

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[67]In this tree, we represent the object θ-role as assigned by the lexical verb, as is standard. If however, as suggested by a reviewer, the object θ-role is instead assigned by a functional head dominating the VP, our argumentation proceeds unaffected.

[68]On our approach developed below the existential quantification is located on the passive Voice^0 itself, but the argument remains valid.

[69]In the semantic denotations, the type of individuals is e, the type of events is s, and the type of truth values is t.
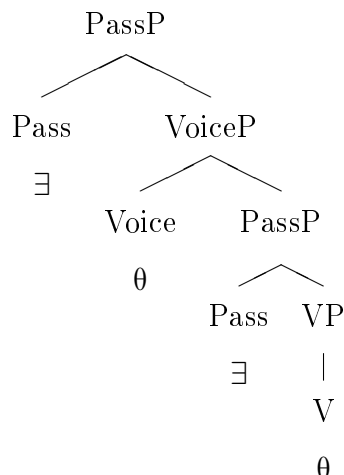
PassP

$\lambda f_{<e,st>}.\lambda e.\exists x[f(x,e)]$??

Pass   VoiceP

$\lambda f_{<st>}.\lambda x.\lambda e.Initiator(e,x)\&f(e)$ $\lambda x.\lambda e.citing(e)\&Theme(e,x)$

Voice   VP

cite

Voice^0, of type $<< st >, < e, < s, t >>>$, and the VP, of type $< e, < s, t >>$, cannot combine. Kratzer's (1996) alternative approach to the general combination of Voice^0 and VP also cannot yield a passive of a passive in this structure. On this proposal the Voice head is of type $< e, < s, t >>$ and combines with the verb phrase, normally of type $< s, t >$, through Event Identification.

(i)   Event Identification

If a is of type $< e, < s, t >>$ and b is of type $< s, t >$, [[a
b]] $= \lambda x.\lambda e.[[a]](e,x)\&[[b]](e)$

Leaving the object unsaturated within the VP on this approach would yield the following.

(128)   Mary was cited.

PassP

$\lambda f_{<e,st>}.\lambda e.\exists x[f(x,e)]$

Pass

??

VoiceP

$\lambda x.\lambda e.Initiator(e,x)\&f(e)$

Voice

$\lambda x.\lambda e.citing(e)\&Theme(e,x)$

VP

cite

$Voice^0$ and VP could combine through Function Composition (Heim & Kratzer 1998). Crucially, this would yield a reflexive interpretation,[70] but not a passive of a passive.

(129) $\lambda x.\lambda e.Initiator(e,x)\&citing(e)\&Theme(e,x)$

Therefore, leaving the object position open within the VP cannot derive a passive of a passive. Positing existential quantification for the thematic object below VoiceP in contrast would yield the correct interpretation. This tree again assumes PassP as the source of existential quantification for simplicity, and the semantics are omitted as trivial.[71]

(130)

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[70]see Alexiadou et al. 2014 for this analysis of reflexives; thank you to a reviewer for bringing this work to our attention.

[71]This structure seems a natural extension of Bruening 2013, and achieves the correct interpretation in that framework; however, while Bruening 2013, 37-38 mentions passives of passives as support for the analysis of the passive, that work does not provide a syntactic structure, and this structure is not compatible with the claim there that "Voice universally selects for V" (Bruening 2013, 37). (This claim seems untenable given proposals in which Voice selects for other projections, including at least (causative) vP and ApplP.)

```
                    PassP
                   /    \
               Pass      VoiceP
                ∃        /    \
                     Voice     PassP
                      θ       /    \
                          Pass      VP
                           ∃        |
                                    V
                                    θ
```

However, this tree structure is not a passive of a passive. Again, the core property of a
passive of a passive is that the first instance of the passive demotes the thematic subject,
whereby the thematic object becomes the most prominent argument and thus available for
demotion on the second instance of the passive (see for example the discussion of Kiparsky
2013 and Murphy 2014 above). In contrast, in 130 the thematic object is demoted by the
lower $Pass^0$, entirely independently of the demotion of the thematic subject by the higher
$Pass^0$. It is then perhaps most accurately described as a passive of an antipassive. The
distinction is important. If a passive of a passive were possible, it would be expected in a
language that independently only exhibits a passive. A passive of an antipassive, in
contrast, could only occur in a language that exhibits demotion of the thematic object
independently, in addition to the passive. We leave aside as orthogonal the potential
existence of passives of antipassives.

    In sum, a syntactic analysis of the passive whereby the passive is built using different
lexical items from the active successfully naturally captures the absence of passives of
passives crosslinguistically, whereas an analysis whereby the passive is an operation that
changes an active into a passive does not. To our knowledge, this is a novel argument
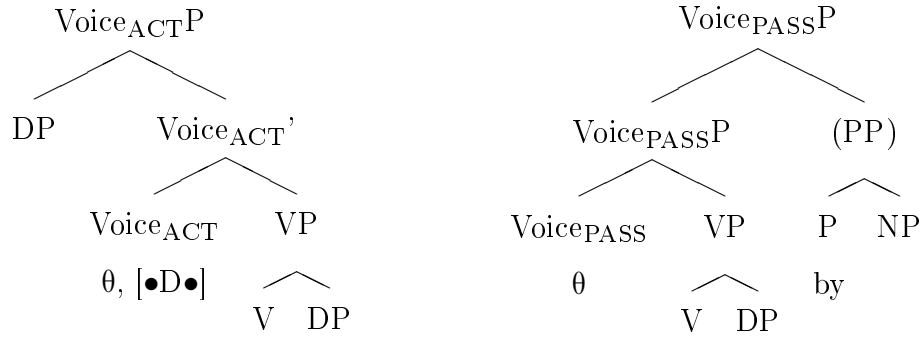against a rule-based analysis of the passive, be it a lexical or syntactic rule.

    Let us develop such a syntactic analysis of the passive in more detail. We continue to
assume that the θ-role for the thematic subject is present in the structure of a passive, on
$Voice^0$, but that this θ-role is not assigned to a DP. In the absence of a 'by'-phrase, the
thematic subject position is existentially quantified (Bach 1980, Keenan 1980, Williams

1987, Bruening 2013, Legate 2014, Alexiadou et al. 2015, among many others). As mentioned, Bruening 2013, as well as Alexiadou et al. 2015 for English, places this existential quantification on a functional projection dominating VoiceP. We do not adopt this approach because of difficulties that arise for passives with 'by'-phrases. When the passive occurs with a 'by'-phrase, the 'by'-phrase closes the thematic subject position, rendering the $Pass^0$ semantically vacuous. To make this $Pass^0$ nevertheless compatible with standard Minimalist theory, which claims that all elements that survive to the interfaces must receive an interpretation (Full Interpretation, Chomsky 1986), Bruening 2013 treats this $Pass^0$ as an identity function. This is technically adequate, if unsatisfying. It also means that PassP must be forced to appear when semantically vacuous, to ensure uniform passive morphology; Bruening 2013 develops a system of featurally-based syntactic selection for this purpose. $Voice^0$ syntactically selects for a nominal specifier, but does not combine with a nominal specifier in the passive. This should result in ungrammaticality, however, it is proposed that $Pass^0$ can itself select for a VoiceP with an unsatisfied selectional feature, and that this avoids the ungrammaticality. This proposal strikes us as having stretched the notion of selection to its breaking point.

Instead, we analyse the passive as a subtype of the Voice head itself, and place the existential quantification there. (For closely related approaches see Chomsky 2000, Legate 2014, and Alexiadou et al. 2015, Schäfer 2017 for Greek.[72]) Syntactically, the $Voice_{PASS}$ head introduces the external θ-role, but does not syntactically project this argument into its specifier. It is therefore compatible with a 'by'-phrase adjunct, which optionally adjoins to VoiceP to specify the thematic subject. We indicate the difference in specifier selection between active and passive voice featurally, again using [●D●] to indicate selection of a DP specifier (Müller 2010).

(131)

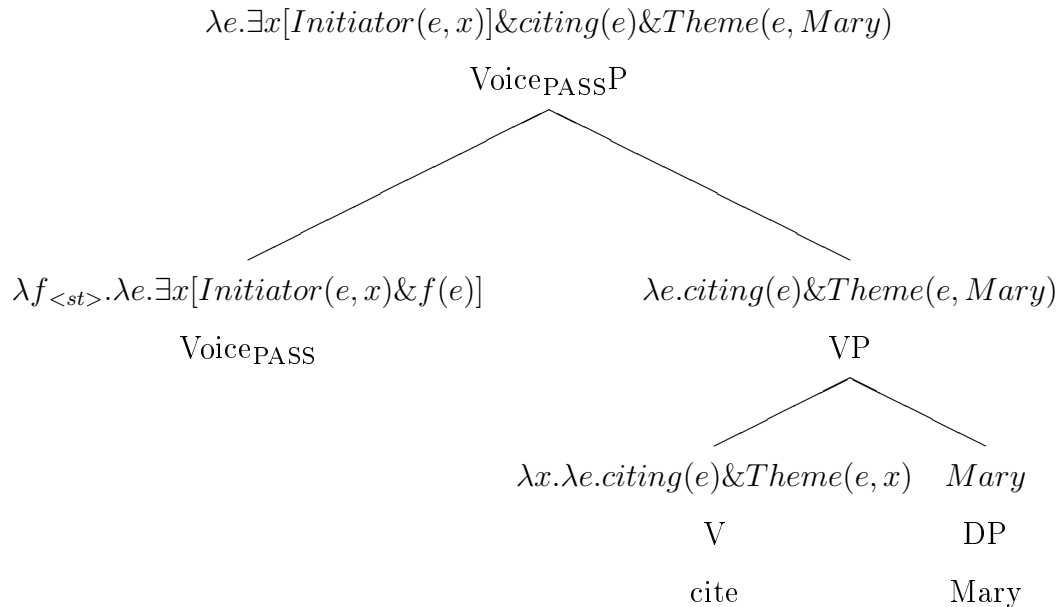[72]Alexiadou et al. 2015 analyse the Greek passive as structurally different from the English on the grounds that the Greek is unproductive, while the English is productive. An alternative is that the difference in productivity is due to learning, not syntactic structure; see Yang 2016 for a learning approach to productivity.
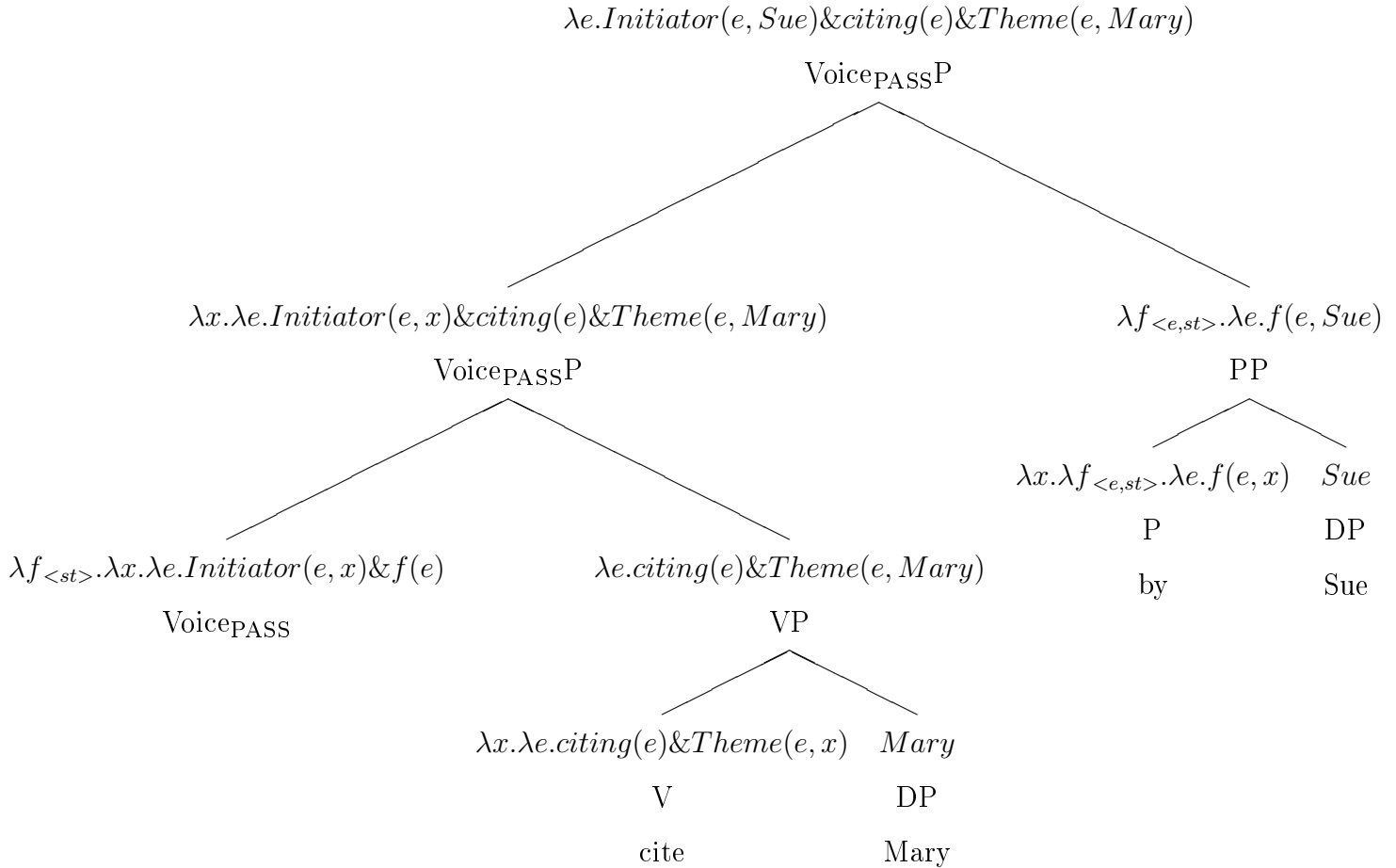
```
          Voice_ACT P                              Voice_PASS P
          /        \                               /          \
        DP      Voice_ACT'                   Voice_PASS P        (PP)
                /        \                     /      \          /  \
          Voice_ACT      VP            Voice_PASS     VP       P    NP
          θ, [●D●]      /  \               θ         /  \      by
                       V    DP                      V    DP
```

Semantically, the passive needs to allow the external θ-role to be satisfied by the 'by'-phrase, when present, and to otherwise be interpreted existentially. We therefore propose that Voice$_{PASS}$ has two associated semantic denotations. The first, which does not combine with a 'by'-phrase, is illustrated in the derivation below. Irrelevant details are omitted. Notice that the initiator is existentially bound on the Voice$_{PASS}$ head itself.

(132) Mary was cited.

$$\lambda e.\exists x[Initiator(e,x)]\&citing(e)\&Theme(e,Mary)$$

```
                         Voice_PASS P
                        /           \
                       /             \
  λf_<st>.λe.∃x[Initiator(e,x)&f(e)]    λe.citing(e)&Theme(e,Mary)
           Voice_PASS                              VP
                                                  /  \
                                                 /    \
                              λx.λe.citing(e)&Theme(e,x)    Mary
                                        V                    DP
                                       cite                 Mary
```

The second semantic denotation of Voice$_{PASS}$ leaves the initiator position open to be accessed by the 'by'-phrase (see Bruening 2013 for this denotation of the 'by'-phrase).

(133) Mary was cited by Sue.

$$\lambda e.Initiator(e, Sue)\&citing(e)\&Theme(e, Mary)$$

Voice$_{\text{PASS}}$P

$$\lambda x.\lambda e.Initiator(e, x)\&citing(e)\&Theme(e, Mary)$$
$$\lambda f_{<e,st>}.\lambda e.f(e, Sue)$$

Voice$_{\text{PASS}}$P
PP

$$\lambda f_{<st>}.\lambda x.\lambda e.Initiator(e, x)\&f(e)$$
$$\lambda e.citing(e)\&Theme(e, Mary)$$
$$\lambda x.\lambda f_{<e,st>}.\lambda e.f(e, x) \quad Sue$$

Voice$_{\text{PASS}}$
VP
P $\quad$ DP

by $\quad$ Sue

$$\lambda x.\lambda e.citing(e)\&Theme(e, x) \quad Mary$$

V $\quad$ DP

cite $\quad$ Mary

It is important to note that we do not expect the morphological relatization of the passive to be sensitive to the two semantic denotations of Voice$_{\text{PASS}}$. We adopt a Y-model of grammar with a post-syntactic morphology, following Halle & Marantz 1993, Chomsky 2000, and much following literature. The syntactic derviation bifurcates into the PF branch, which determines the pronunciation and is fed the syntactic structure and the morphosyntactic features of the heads, and the LF branch, which determines the interpretation and is fed the syntactic structure and the semantic properties of the heads. The morphological realization of the elements that make up the tree is determined in the morphological component, located on the PF branch. On this approach, the morphological realization of Voice$_{\text{PASS}}$ is determined based only on the morphosyntactic features, semantic denotations being unavailable on the PF branch. Since the morphosyntactic features of Voice$_{\text{PASS}}$ are uniform, including the external θ-role but no [●D●] feature to select a DP specifier, the realization of Voice$_{\text{PASS}}$ is also uniform, regardless of the

presence/absence of the 'by'-phrase.[73]

This is the core syntax and semantics of the passive in contrast with the active. Other properties are language-specific, superimposed on this basic structural difference – the (non)availability of passives of unergatives and of pseudopassivization, the presence/absence of object promotion to the grammatical subject position, and so on (for recent related discussion, see Bruening 2013, Legate 2014, Alexiadou et al. 2015, inter alia).

To summarize, in this section we have argued that the absence of passives of passives crosslinguistically supports an analysis of the passive that involves not a passivization rule, be it lexical or syntactic, but rather alternative syntactic structure building. Such a syntactic analysis benefits from the intrinsic ordering imposed by the syntactic tree and its compositional interpretation, whereby the relationship between the verb and its thematic object is determined lower than and prior to introduction of the thematic subject. Demotion of the thematic object, then, must be accomplished independently from demotion of the thematic subject (as for example in an antipassive). A passive of a passive, in which demotion of the thematic object is dependent on prior demotion of the thematic subject, is precluded. Further, we have developed a specific instantiation of this type of analysis, proposing that passive is a subtype of Voice^0, the syntactic head that introduces the thematic subject. The passive Voice head does not select for a specifier to assign the subject θ-role to, but rather either existentially quantifies over the thematic subject position, or leaves it open to be accessed by a 'by'-phrase adjunct.

6. CONCLUSIONS AND EXTENSIONS. Work of David Perlmutter and Paul Postal in the 1970s and 1980s claimed that the passive cannot apply to passives. Three languages are often cited as counterexamples to this generalization: Turkish, Classical Sanskrit, and Lithuanian. In this paper, we carefully examined each of these in turn, and in each case we discovered that the languages in fact strongly support Perlmutter and Postal's claim. The Turkish construction is an impersonal of a passive, and the passive itself can only apply to verbs with a thematic subject and structurally case marked object in the active. The Lithuanian is an evidential of a passive, with the grammatical subject receiving structural

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[73]There is much related work; see for example Embick 2004, which argues that the nonactive morphology in Greek is sensitive only to the lack of a DP specifier, and so encompasses unaccusatives, passives, and related constructions, and Kallulli 2007.

genitive case. The Sanskrit construction is not a passive at all, but rather instrumental case assignment to the thematic object of an unaccusative. We argued that the generalization that passives cannot passivize is naturally captured on an approach to the passive which involves alternative syntactic structure building, rather than a lexical or syntactic rule. We developed a specific analysis of this type, whereby the passive is a type of Voice head that introduces the external θ-role but does not project a DP into its specifier. When the passive occurs with a 'by'-phrase, the thematic subject position is left open to be accessed by the 'by'-phrase; when it does not, the thematic subject position is existentially quantified on Voice^0.

Finally, we briefly note that Perlmutter and Postal's work included an additional claim that unaccusatives also cannot passivize. Turkish, Lithuanian, and Sanskrit have also been cited as exceptions to this generalization, but the argumentation in the previous sections also illustrated that unaccusatives in fact do not passivize in these three languages. This was shown for Turkish in 9b, and for Lithuanian in 101. For Sanskrit, this was illustrated by the presence of instrumental agreement on predicates in 120-121 when the theme of an unaccusative is in the instrumental; as discussed there, a passive analysis would have predicted no agreement, since 'by'-phrases do not trigger case agreement. Prima facie counterexamples are more widely attested, however. For example, Primus 2011 and Kiparsky 2013 point to passive constructions with unaccusative verbs in several Germanic languages, including German, Dutch, and Swedish. Indeed, Perlmutter & Postal 1984 also discussed such examples, but claimed that these have a marked agentive or volitional interpretation, and hence constituted passives of unergatives rather than passives of unaccusatives. This interpretation is evident in the following example they provide.[74]

(134) German

Für den lieben König und Herrn wird alles   getan, wird treulich gekämpft,
for the beloved King and lord is   everything done is   faithfully battled,

---

[74]Along the same vein, German speakers we consulted allowed passivization of 'die' in the context of a coma patient only if the patient inside of the coma chose to give up on life. Not all of Primus' examples are amenable to this characterization, though, indicating variation or some additional factor not yet understood. It is perhaps also worth noting that Primus' examples do not include 'by'-phrases. Further research is required.

wird willig **geblutet**, wird freudig in den Tod gegangen, für ihn wird mehr

is willingly bled, is happily in the death gone, for him is more

als **gestorben**.

than died (Perlmutter & Postal 1984, 111)

This type of interpretation is also reported as required for apparent impersonal passives of unaccusatives in Icelandic; see Thráinsson 2007, 268 and Sigurðsson 2017, 366-368, i.a.

An alternative possibility raised by our discussion of Turkish is that prima facie passives of unaccusatives in some languages are in fact impersonals of unaccusatives with morphology overlapping between the passive and the impersonal. This would allow for a non-agentive, non-volitional interpretation of apparent passives of unaccusatives, which seems to be required for some languages. A reviewer provides the following attested example from Swedish, describing a drunken party:

(135)   Det snubbla-de-s,   det ramla-de-s   och somna-de-s
        it stumble-PST-PASS it collapse-PST-PASS and fall.asleep-PST-PASS
        'It was stumbled, it was collapsed, and it was fallen asleep'

In this vein, it is perhaps significant that impersonal passives in Swedish cannot appear with an *av* 'by'-phrase, and are only attested in the *-s* passive, but are excluded from the passive formed with the auxiliary *bli* 'be' and a perfect participle (Engdahl 2006). The *-s* morpheme is also used for reciprocals and middles in the language, and is cognate with morphemes in other languages that have a variety of uses, including reflexives, reciprocals, middles, passives, and impersonals; this has led to analyses more nuanced than simple passivization (see, for example, Cinque 1988, Chierchia 1995b, Dobrovie-Sorin 1998, D'Alessandro 2007, Wood 2014, MacDonald 2017, Schäfer 2017, among many others).

A particularly striking alternative comes from Irish, analysed by McCloskey 1996. The passive construction in question is passive in form but is used to express perfective aspect.

(136)   Tá   teach ceannaithe agam.
        be.PRS house bought   by.me
        'I have bought a house' (McCloskey 1996, 254)

McCloskey 1996 demonstrates that a subset of unaccusative predicates, salient unaccusatives, have a PP as their sole argument, and yet for some varieties of Irish may occur in the perfective passive, retaining the interpretation of perfective aspect, while involving no argument demotion at all. The following illustrates with the predicate 'rise with' meaning 'do well', first in the active progressive, then in the perfective passive.

(137)   a. Bhí ag éirí   réasúnta   maith liom   i líníocht.
            was rise.PROG reasonable well   with.me in drawing
            'I was doing fairly well in drawing' (McCloskey 1996, 248)

        b. go bhfuil éirighthe leis   sa   n-obair
            C   is   rose   with.him in.the work
            'that he has done well in the business' (McCloskey 1996, 257)

See that work for additional details and argumentation. This case serves an an important reminder that when the morphosyntax of the passive is extended to a wider class of predicates, its function may differ accordingly. This fact is of course clear from the pervasive syncretism between the passive and other morphemes crosslinguistically, but bears emphasizing in this context.

An additional alternative, of course, is that certain languages do have true passives of unaccusatives, requiring the analysis of passives to extend to them. On our analysis, this would perhaps be most naturally captured by positing a variant of the v^0 'be/become' that dominates unaccusative verbs (Marantz 1997, and much following work), a variant that introduces the existential quantification. Thorough investigation of apparent passives of unaccusatives in these and other languages must await further work.

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