

The syntax of generics and the absence of generic articles

E. Matthew Husband*

Abstract. Cross-linguistically, no language has a dedicated generic article. To address why this is, I decompose GEN into its quantificational and modal components and locate them inside nominal structure. Adopting an event licensing analysis of pre- and post-verbal bare subjects in Modern Hebrew, I use the restriction of pre-verbal bare subjects to generic interpretations and unacceptability of pre-verbal bare singulars to argue that the quantificational component of GEN is best analyzed as a D-quantifier. Evidence from adnominal conditionals further identifies a modal source for GEN within the nominal, which I suggest is adjectival and derived from a reduced relative clause source. I propose that the formation of generic articles is blocked by the non-local (e.g. non-spanning) relationship between these quantificational and modal components.

Keywords. adnominal conditionals; event licensing; generic interpretation; modality; strong/weak nominals

1. Introduction. This paper addresses two questions. First, where is GEN located syntactically, and second, why are there no generic articles cross-linguistically (Gerstner-Link 1998; Carlson 2011)? This paper argues that these two questions are related, and that answers to the first shed light on the second. The first question is addressed in two parts. First, while most analyses invoking GEN for generic interpretations adopt the approach that GEN is a covert adverb of quantification, part of the extended projection of VP (Krifka et al. 1995), the evidence that GEN is an A-quantifier has been relatively indirect, and an alternative is to take GEN to be a D-quantifier, a part of the nominal. I propose in this paper that evidence from a puzzle concerning generic pre-verbal bare nominal subjects and event licensing supports a D-quantifier analysis. Second, in addition to its quantificational elements, GEN also has a modal component. Observing that modal elements that are generic and overt within the nominal are adjectival, and appear to derive from reduced relative clauses, I propose that GEN's modal component, which also appears to be restricted to the nominal, also derives from an adjectival reduced relative clause source. These two structural claims are summarized in (1).

- (1) a. *The Quantificational Proposal:* GEN is a D-quantifier, forming part of generic nominals.
- b. *The Modal Proposal:* The source of generic modality in nominals is a reduced relative modal adjective.

Adopting this analysis sheds light on the second question, why no language has a generic article. I propose that the structural relationship between the quantificational and modal components of GEN prevents the formation of an article form, as stated in (2).

- (2) *No Generic Articles:* The formation of a generic article is blocked by the inability to lexicalize GEN's quantificational and modal components together due to their syntax.

* I would like to thank the 2021 Hilary Term Linguistics, Philology, and Phonetics Faculty Brown Bag and the audience of the Syntax III (In-Person) panel at the LSA 2022 Annual Meeting for their questions and comments on earlier presentations of this work. Note that much of the data from Modern Hebrew is drawn from Borer (2005a,b). University of Oxford (matthew.husband@ling-phil.ox.ac.uk).

This paper is organized as follows. Section 2 will begin our investigation of the quantificational components of GEN by raising a puzzle about generic interpretation and event licensing that comes out of Borer’s (2005b) analysis of pre-verbal and post-verbal bare nominals. Section 3 considers two options to handle this puzzle: an A-quantifier analysis and a D-quantifier analysis. Adopting a syntactic approach to strong and weak nominals, I will use weak nominals, in particular Hebrew bare singulars, to argue in favor of a D-quantifier approach. Section 4 considers how overt generic nominal modality is encoded in adjectives which appear to derive from a reduced relative clause source. I use adnominal conditionals to demonstrate that GEN’s modality is also internal to the nominal, and suggest that it likely derives from the same adjectival reduced relative clause source. Section 5 then joins these two analyses together and proposes that the quantificational and modal components of GEN do not form a span, and therefore cannot be lexicalized. Section 6 summarizes the argument and offers a brief conclusion.

2. Bare nominals and event licensing.

2.1. BARE NOMINALS, PRE-VERBALLY. Languages like like Modern Hebrew permit bare nominals like those in (3) to surface pre-verbally as unfocused arguments (cf. also Dutch, Oosterhof 2008), but they limit those arguments to a generic interpretation (Borer 2005b).^{1,2} Post-verbal bare nominals like those in (4), however, must be weak and only have an existential interpretation.

- (3) a. dinozaurim ’aklu ʿeseb a-boqer. (generic only)
 dinosaurs ate.PL grass in-the.morning
 ‘Dinosaurs ate grass in the morning.’
 b. klabim nobxim kol boqer.
 dogs bark every morning
 ‘Dogs bark every morning.’

¹ Languages differ in whether bare nominals can occur pre-verbally as unfocused arguments, and if pre-verbal bare nominals are possible, whether they can receive an existential or a generic interpretation. Empirically, we find three types of languages, with a fourth unattested as far as I am aware.

| | | Type I (English) | Type II (Dutch, Hebrew) | Type III (Italian, Spanish) | Type IV (<i>unattested</i>) |
|--------------------------|-------------|---------------------|----------------------------|--------------------------------|----------------------------------|
| pre-verbal bare nominals | existential | yes | no | no | yes |
| | generic | yes | yes | no | no |

Given Borer’s (2005b) analysis of pre-verbal existential interpretations being derived from (covert) locatives, it may be that Type I and Type II languages are not relevantly distinct. Though I do not explicitly review or argue for such an analysis, I assume that adopting one like it extends the arguments made here to Type I languages.

² Bare nominals with generic interpretations are also found in copular constructions like (i), noted in Greenberg (1998). He observes that constructions with an obligatory overt pronominal copula (those that require, e.g. *hem*) only allow a generic interpretation.

- (i) ʾorvim hem (yecurim) Sxorim. (generic only)
 ravens 3M.SG (creatures) black
 ‘Ravens are black.’

- (4) a. ba-boqer 'aklu dinozaurim 'eseb. (existential only)
 in-the.morning ate.PL dinosaurs grass
 'Dinosaurs ate grass in the morning.'
 b. 'etmol nabxu klabim kol ha.layla.
 yesterday barked dogs all night
 'Dogs bark every morning.'

2.2. EVENT LICENSING. Following from work by Diesing (1992) and Benedicto (1997), Borer (2005b) argues that this distribution of pre- and post-verbal bare nominals reflects the licensing of EP, a functional projection for the event(uality) argument above TP that determines the domain of existential closure.³

- (5) [EP E [TP T ... [VP V ...]]]

Her analysis of post-verbal and pre-verbal cases is shown in (6) and (7), respectively. Post-verbal subjects, regardless of whether they are weak or strong, are ruled out when there is no element available to license the projection of EP. The grammaticality of pre-verbal subjects, however, depends on their strength. Given their referential force, strong pre-verbal subjects shown in (7a) can license EP via their spec-head relation. Weak pre-verbal subjects in (7b) lack some kind of referential force on their own and are, therefore, unable to license projection of EP. However, these cases can improve in acceptability if some other licenser is available, e.g. via the locative clitic *šam* 'there' in (7c).

- (6) *^cabdu (ha.)ganim ko ha.boqer. *_{[EP V.T.E[?]} _{[TP DP_{str}[∃]/_{wk}[?] V.T}
 worked (the.)gardeners all the.morning
 (7) a. ha.ganim ^cabdu kol ha.boqer. _{[EP DP_{str}[∃] V.T.E[∃]} _{[TP DP V.T}
 the.gardeners worked all the.morning. └──────────┐↑
 b. *ganim ^cabdu kol ha.boqer. *_{[EP DP_{wk}[?] V.T.E[?]} _{[TP DP V.T}
 gardeners worked all the.morning.
 c. ?ganim ^cabdu šam kol ha.boqer. ?_{[EP DP_{wk}[∃] V.T.E[∃].loc[∃]} _{[TP DP V.T}
 gardeners worked there all the.morning. ↑────────┐↑

While this analysis addresses the distribution of pre- and post-verbal existential bare nominals, it raises a puzzle:

³ Borer (2005a,b) proposes that the head of a functional projection is a (typed) open variable, $\langle e \rangle$, which can be assigned a value either (i) directly by an abstract head feature or functional morpheme (which form a head-pair with the variable), or (ii) indirectly by an adverb of quantification, discourse operator, or specifier-head agreement.

- (i) *Direct range assignment*
 a. Abstract head feature _{[#P N.⟨fⁱ⟩.⟨eⁱ⟩_#} _[NP N]] (obligatory head movement)
 b. Functional morpheme _{[#P f-morphⁱ.⟨eⁱ⟩_#} _[NP N]] (head movement blocked)
 (ii) *Indirect range assignment*
 a. Quantificational adverb _{adv_Qⁱ} _{[#P ⟨eⁱ⟩_#} _[NP N]] (head movement not forced)
 b. Discourse operator _{D-Opⁱ} _{[TP ⟨eⁱ⟩_T} _[VP V]]
 c. Specifier-head agreement _{[DP [DP the N's]ⁱ ⟨eⁱ⟩_D} _[NP N]]

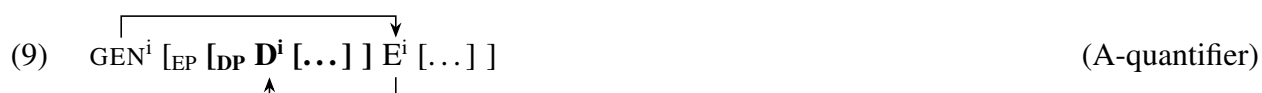
Assigning range to an open variable requires that head to project, and each functional element must assign range to its specified open variable(s), a version of the general ban on vacuous quantification. In this paper, I stick to the more familiar term *licensing* for ease of exposition.

- (8) Puzzle: How is EP licensed in (3) given that pre-verbal bare nominals in (7b) are unable to license EP on their own?

The question then is what solution we have to (8). What we will find is that the solution points to a particular structure for GEN.

3. Licensing EP generically. To start formulating a solution to (8), let us return to a key observation about (3). Pre-verbal bare nominal subjects in (3) require a generic interpretation. This suggests that generic interpretation of bare nominal subjects and event licensing are intimately connected. From the perspective of Borer's (2005b) theory of event licensing, there are two possibilities for how this connection can come about. On the first, GEN itself licenses EP as an A-quantifier, with the bare noun receiving a generic interpretation indirectly via spec-head relation with E. On the alternative, GEN licenses a generic interpretation of the bare nominal as a D-quantifier, with EP licensed indirectly via spec-head relation with DP. Let's consider each of these in more detail.

3.1. OPTION 1: GEN AS AN A-QUANTIFIER. The idea that GEN directly licenses EP is in line with standard assumptions that GEN is a covert quantificational adverb, similar to *usually*, *typically*, or *in general* (Farkas & Sugioka 1983; Krifka et al. 1995; Schubert & Pelletier 1989). Under this account, GEN licenses the projection of EP as in (9). Having been licensed, EP can license the projection of DP in Spec-EP via a spec-head relation. Such an approach is tempting given that elements like locative clitics can license EP and rescue weak pre-verbal nominals (7c), providing them with an existential interpretation. Here, the idea is that weak pre-verbal nominals receive a generic interpretation in the specifier of EP because E is generic.



3.2. OPTION 2: GEN AS A D-QUANTIFIER. The alternative analyzes GEN as a D-quantifier like *all* or *most* which licenses DP in the nominal (Borer 2005a), as in (10). Having been licensed, the subject DP indirectly licenses EP by a spec-head relation. This approach looks much more like licensing by strong nominals in (7a) where the referential force of the strong DP is able to license EP.



3.3. DISTINGUISHING BETWEEN ANALYSES. Examining (9) and (10), it is not immediately clear how to empirically distinguish between them. In both the A-quantifier approach and the D-quantifier approach, the licensing of EP and the licensing of DP are bound up with one another, with only the directionality of the relationship at stake.

Disentangling these two approaches empirically will require us to take a detour into different types of weak nominals.⁴ I will start with a brief review of Borer's (2005a) syntactic approach to strong and weak nominals that builds on Fodor & Sag (1982) and link this approach to the distribution of generic interpretations. I then turn to examine the distribution of Hebrew bare singulars as a key piece of evidence favoring a D-quantifier approach.

⁴ There may be a second line of evidence available concerning the licensing of telicity in unergative and

3.3.1. SYNTAX OF STRONG AND WEAK NOMINALS. Borer (2005a), following Ritter (1991) and many others, proposes several functional projections inside nominals. Here, I focus on two functional projections, shown in (11).⁵ The DP projection hosts functional elements that specify reference. These include definite articles and many quantifiers. The #P projection hosts functional elements that specify count functions. These include, e.g., the English indefinite article and all quantifiers.

- (11) [DP D [#P # [NP N]]]

Borer (2005a) proposes that strong and weak quantifiers differ in terms of their ability to supply reference, and thus also differ in terms of their structure. Strong quantifiers as analyzed in (12) are portmanteau, licensing both DP and #P because they provide both reference and count functions. Weak quantifiers, however, only provide count functions and therefore only license #P in (13). For weak quantifiers to qualify as arguments, their DP must be licensed in some other way (e.g. by existential closure). Some quantifiers like *some* and bare numerals are structurally ambiguous, allowing for either a strong or weak interpretation.

- | | | | | | |
|------|----|-----------------------------------|-----------------------------|--------------------|----------|
| (12) | a. | [DP every/each _D | [#P every/each _# | [NP stone]]] | (strong) |
| | b. | [DP all/most _D | [#P all/most _# | [NP stone(s)]]] | |
| | c. | [DP some _D | [#P some _# | [NP stone(s)]]] | |
| | d. | [DP three _D | [#P three _# | [NP stones]]] | |
| (13) | a. | ∃ ⁱ [DP D ⁱ | [#P some _# | [NP stone(s)]]] | (weak) |
| | b. | ∃ ⁱ [DP D ⁱ | [#P three _# | [NP stones]]] | |

Rounding out the paradigm, bare plurals and mass nouns in (14) are unambiguously weak, providing no reference function, and furthermore also supply no count functions. #P, therefore, is not licensed to project and DP must again be licensed externally (e.g. by existential closure).

homogeneous-object transitive generics. Some A-quantifiers license telic interpretations as shown by their acceptability with *in-X-time* in (i), providing evidence for a quantized event even in the absence of a quantized argument (e.g. against Burzio's Generalization).

- | | | | | |
|-----|----|------------------------------|------------------|------------------|
| (i) | a. | John smiled | *in two minutes. | |
| | b. | John smiled twice | in two minutes. | |
| | c. | John smiled often/frequently | in two minutes. | |
| | d. | John often/frequently smiled | #in two minutes. | (inceptive only) |

Depending on its analysis, we may also predict that GEN can license telicity as an A-quantifier. However, as shown in Van Geenhoven (2005), the classes of adverbial quantifiers is richer than typically observed, with some quantificational adverbs able to license telicity, but not others, requiring a more careful analysis of the quantificational component of GEN which I do not pursue in this paper.

- | | | | | |
|------|----|----------------------------------|--|----------------------|
| (ii) | a. | Joe discovered a flea on his dog | *twice/*several times for a month. | (Van Geenhoven 2005) |
| | b. | Mary | *always/*usually discovered a flea on her dog for a month. | |

⁵ Borer (2005a) also includes a DivP between #P and NP that is responsible for dividing functions, including English plurals, indefinite *a*, and classifiers. DivP is responsible for distinguishing count from mass, with failure to project DivP leading to mass interpretations. As DivP is not relevant for this talk, I will leave it aside.

- (i) [DP D [#P # [DivP Div [NP N]]]]

- (14) a. \exists^i [DP Dⁱ [NP stones]] (weak)
 b. \exists^i [DP Dⁱ [NP stone]]

Borer's (2005a) analysis therefore distinguishes two types of weak nominals. There is the weak quantifier and bare numeral type which provides a count function and licenses #P, and there is the bare plural and mass noun type which cannot license #P.

3.3.2. WHAT DO WEAK NOMINALS HAVE TO DO WITH GEN?. The distinction between the two types of weak nominals becomes relevant when we consider the distribution of generic interpretations. Borer (2005a) observes that bare plurals and mass nouns in (15a) can receive a generic interpretation, but weak quantifiers and bare numerals in (15b) block generic interpretations.⁶

- (15) a. Hummingbirds drink from our fountain in the summer. (generic possible)
 b. Three/Some hummingbirds drink from our fountain in the summer. (existential only)

To account for this restriction on generic interpretations, Borer (2005a) proposes that bare numerals/weak quantifiers are in complementary distribution with generic interpretations because both compete to license #P, suggesting that generic interpretations supply not just generic reference but also a count function.⁷

Adopting the proposal that generic interpretations involve both reference and a count function inside the nominal suggests an amendment to the A-quantifier and D-quantifier analyses to focus not just on the licensing of DP inside the nominal but also on the licensing of #P. The structures in (16) and (17) update those in (9) and (10) to include #P. As indicated, the A-quantifier analysis of GEN continues to license EP (and possibly other verbal projections⁸), with DP indirectly licensed by its spec-head relation with E. #P, on this analysis, appears to be optional, requiring some means of licensing other than GEN itself if it is to project. The D-quantifier analysis of GEN licenses DP and #P, and EP is licensed indirectly by its spec-head relation with D.

⁶ I leave aside here the generic interpretations of the English indefinite *a* and the possibility of a subkind (taxonomic) interpretation for bare numerals as cases that require further investigation within this system (see Husband (2019) for some discussion).

⁷ The structure that Borer (2005a) proposes for GEN, given in (i), is proposed to put GEN on par with other adverbs of quantification (see fn. 3).

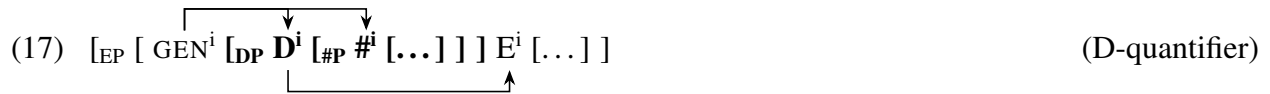
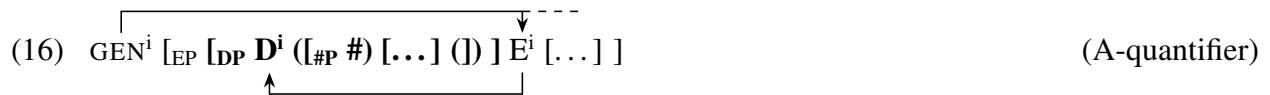
- (i) GENⁱ [DP Dⁱ [#P #ⁱ [NP N]]]

Concerning an A-quantifier approach to GEN, it should be noted that adverbials argued to be structurally similar to GEN show effects of quantificational variability that are sensitive to, e.g. bare plural/bare numeral distinction and thus appear to potentially be sensitive to the presence of #P when licensed by nominal elements.

- (ii) a. Hummingbirds often breed in the summer. (most hummingbirds)
 b. #Three hummingbirds often breed in the summer.
 (iii) a. Hummingbirds often drink from our fountain in the summer. (most hummingbirds)
 b. Three hummingbirds often drink from our fountain in the summer. (most drinking events)

The quantificational variability effect itself however has come under some scrutiny, with proposals that its effects ultimately reflect quantification over events/situations, not individuals (Ebert & Hinterwimmer 2010), potentially weakening the appeal of taking A-quantifiers to directly license nominal structure.

⁸ Just as I am suggesting that GEN licenses several functional projections on a D-quantifier analysis, on a A-quantifier analysis, GEN could license other functional verbal projections in addition to EP, like AspP (the verbal equivalent of nominal #P). See fn. 4 for further discussion.



The inclusion of #P provides a way to distinguish between A-quantifier and D-quantifier approaches for GEN. The A-quantifier analysis predicts weak nominals in general to be permitted pre-verbally with a generic interpretation. The D-quantifier analysis predicts only weak bare plural/mass noun nominals to be permitted pre-verbally with a generic interpretation.

Given this difference, it seems we may already have evidence for the D-quantifier analysis over the A-quantifier analysis from (15b). However, it is difficult to determine whether the possibility of a strong interpretation for the subjects in (15b) interferes with generic interpretation (e.g. ambiguously strong/weak nominals may prefer strong readings pre-verbally, and therefore outcompete GEN to license DP). A stronger case would come from nominals that are obligatorily weak, having no ability to license DP themselves, but have a count function, and thus means to license #P. For this, we turn to Hebrew bare singulars.

3.3.3. BARE SINGULARS IN MODERN HEBREW. Unlike English, where bare nouns can only receive a mass interpretation,⁹ bare nouns in Modern Hebrew, shown in (18), are ambiguous between a weak singular and a weak mass interpretation, with context and world knowledge often disambiguating the two.¹⁰

- (18) a. 'etmol nold tinoq ba-škuna. (bare noun, singular)
 yesterday born.PASS.PST baby in-the.neighborhood
 'A baby was born in the neighborhood yesterday.'
 b. kol ha.yom nazlu maim min ha.tiqra. (bare noun, mass)
 all day trickled water from the.ceiling
 'Water trickled from the ceiling all day.'

Borer (2005a) also provides a structural analysis of this ambiguity. Bare singular interpretations arise from a head feature, $\langle \text{SG} \rangle_{\#}$, which supplies a (singular) count function, requiring #P to project.¹¹ Mass interpretations of Hebrew bare nouns emerge when #P fails to project.

- (19) a. \exists^i [DP Dⁱ [#P tinoq. $\langle \text{SG} \rangle_{\#}$ [NP tinoq]]] (bare singular)
 b. \exists^i [DP Dⁱ [NP maim]]] (bare mass)

⁹ Or a proper interpretation, an additional ambiguity I set aside here.

¹⁰ Borer (2005a,b) proposes that 'exád 'one' nominals share a distribution with bare singulars, suggesting that these too are obligatory count but weak. However, my informants were less clear about the scope of these nominals, so I shall put them aside for future consideration.

- (i) dag 'exád \exists^i [DP Dⁱ [#P dag. $\langle \text{SG} \rangle_{\#}$ ['exád [NP dag]]]
 fish one

¹¹ Adopting the richer nominal structure in ft. 5, Borer (2005a) proposes that bare singulars actually carry a more complex head feature, $\langle \text{div-}\# \rangle$, responsible for both dividing the nominal, licensing DivP, and counting it as singular, licensing #P. As we are ignoring DivP throughout, I simplify this feature to $\langle \text{SG} \rangle$ here.

Importantly given this analysis, bare nouns are obligatorily weak on either interpretation, requiring DP to be licensed by external means. On their singular interpretation, bare nouns furthermore have an obligatorily (singular) count function, also licensing #P to project. Therefore, bare singulars appear to meet the requirements for our stronger case. To substantiate this position, evidence for both obligatorily weakness and (singular) count is given in the next two sections, respectively, following Borer (2005a).

Obligatory weak interpretations Evidence for the obligatory weakness of bare singulars in Modern Hebrew comes from two sources. The first concerns existential *yeš* constructions. Unlike obligatorily strong nominals, bare singular are permitted in existential constructions, as are bare numerals with their weak reading.

- (20) a. *yeš xatulá ba-gan.* (bare singular, weak)
 EXT cat in-the.garden
 ‘There is a cat in the garden.’
 b. *yeš šaloš xatulut ba-gan.* (bare numeral, weak)
 EXT three cats in-the.garden
 ‘There are three cats in the garden.’

The second concerns their scope behavior. Bare singulars only allow for narrow(est) scope, while bare numerals permit a wide scope interpretation. This wide scope interpretation emerges when the bare numeral itself licenses DP, as in (12). Bare singulars, derived as they are by ⟨SG⟩, are unable to license a strong structure, permitting only a weak reading.

- (21) a. *kol geber raqad ʿim baxura (ve-hi nišqa raq ʿoto/*=rina).* (every > bare /
 every man danced with woman (and-she kissed only him/*=Rina). *bare > every)
 ‘Every man danced with a woman (and she kissed only him [*wide scope]).’
 b. *kol geber raqad ʿim šaloš baxurot (=rina, dina, ve-mina / (every > three /
 every man danced with three women (=Rina, Dina, and-Mina / three > every)
 ve-hen nišqa raq ʿoto).
 and-they kissed only him).
 ‘Every man danced with three women (and they kissed only him [✓wide scope]).’*
- (22) a. *kol bamay_i qidem kol saxqan še-pagaš mepiqa še-hu_i makir.*
 every director advanced every actor who-met *producer* that-he knows.
 ✓narrowest, *widest, *intermediate
 b. *kol bamay_i qidem kol saxqan še-pagaš šaloš mepiqa še-hu_i makir.*
 every director advanced every actor who-met *three producer* that-he knows.
 ✓narrowest, ✓widest, *intermediate

Obligatory (singular) count function Evidence for the singular count function of bare nouns in Modern Hebrew also comes from two sources. The first comes from the licensing of telicity. Telic interpretations are unavailable with English bare noun objects. Bare noun objects in Hebrew, however, license a telic interpretation when they are assigned a singular (quantized) interpretation. An atelic interpretation can emerge with bare noun objects when they receive a mass interpretation.

- (23) a. Rina ate fish *in an hour. (English)
 b. Rina ate fish for an hour.
- (24) a. rina 'akla 'dag tok ša^ca. (Modern Hebrew)
 Rina ate fish in an.hour
 'Rina ate a single whole fish in an hour.'
 *'Rina ate fish-stuff in an hour.'
- b. rina 'akla 'dag be-mešek ša^ca.
 Rina ate fish for an.hour
 'Rina ate fish for an hour.'
 less salient: 'Rina was eating a single whole fish for an hour.'
 (incompletive)

The second concerns *xaci* 'half' constructions. Again, in English, bare nouns are incompatible with *half*, but Hebrew bare nouns can occur with *xaci* 'half' when they are assigned a singular interpretation.

- (25) a. *half apple(s) (English)
 b. half an apple
- (26) xaci tapuax (Modern Hebrew)
 half apple
 'half an apple'

3.3.4. BARE SINGULARS, PRE-VERBALLY. Having established that Hebrew bare singulars are obligatorily weak but carry a singular count function, we turn back to the question at hand: can bare singulars receive a generic interpretation? Evidence that they can would fall in favor of an A-quantifier analysis, while evidence that they cannot would provide further evidence in support of a D-quantifier analysis.

In general, bare singulars are known to not occur pre-verbally in episodic contexts, as seen in (27). This, however, is much like the behavior of bare plurals which, as shown in (28), also cannot surface pre-verbally in episodic contexts.

- (27) a. *more katab_u seper ha.šana ^cal zilum 'avir. (bare singular)
 teacher wrote book the.year about pollution air
 b. *xatul yašab_u ^cal ha.gader.
 cat sat on the.fence
- (28) a. *morim katabu ha.šana sparim ^cal zilum 'avir. (bare plural)
 teachers wrote the.year books about pollution air
 b. *xatulim yašabu ^cal ha.gader.
 cats sat on the.fence

However, we have seen that bare plurals are acceptable with a generic interpretation, repeated in (29a). The main question then is what about bare singulars? As seen in (29b), unlike bare plurals, bare singulars are incompatible with generic interpretations.¹²

¹² The possible mass interpretation of *dinosaur* is set aside as highly implausible in this context. Mass nouns – not

- (29) a. dinosaurim 'aklu 'eseb a-boqer. (bare plural)
 dinosaurs ate.PL grass in-the.morning
 'Dinosaurs ate grass in the morning.'
 b. *dinosaur 'akl 'eseb a-boqer. (bare singular)
 dinosaur ate.SG grass in-the.morning
 Intended: 'A/One dinosaur ate grass in the morning.'

The D-quantifier approach to GEN captures this difference. Bare plurals (and mass nouns, see ft. 12) cannot themselves license either DP or #P. GEN can rescue these weak nominals, licensing DP with its reference function, but to do so also requires that it license #P with its count function, as shown in (30a). Bare singulars, shown in (30b), out-compete GEN, licensing #P internally via $\langle SG \rangle_\#$. GEN, therefore, is unavailable with #P licensed internally, but this leaves the DP of bare singulars unlicensed, predicting their ungrammaticality. This lack of referential force from an unlicensed DP also means that bare singulars are unable to license EP.

- (30) a. $[_{EP} [GEN^i [_{DP} D^i [_{\#P} \#^i [_{NP} dinosaurim]]] E^i [\dots]]$
 b. $*[_{EP} [_{DP} D^? [_{\#P} dinosaur. \langle SG \rangle_\# [_{NP} dinosaur]]] E^? [\dots]]$

3.4. SUMMARY. The unacceptability of generic bare singulars bolsters the evidence from (15) that GEN is better analyzed as a D-quantifier. If GEN were an A-quantifier, it should have been able to license EP which in turn could have licensed DP in bare singulars. Instead, elements which license the projection of #P (or DP for that matter) are found to be in complementary distribution with GEN, and thus incompatible with generic interpretation.

4. Modality and GEN. Thus far, we have argued that GEN is best analyzed as a D-quantifier. In what follows, I wish to show that adopting the D-quantifier approach to GEN in (17) also sheds light on why no language has a generic article (Gerstner-Link 1998; Carlson 2011). The proposal I will make follows the idea that something about the structure of GEN makes it incompatible with overt realization as an article. Importantly, this something cannot be about the quantificational components of GEN, since D and # are often lexicalized as articles and quantifiers.

Instead, let us consider the following observation: In addition to being a strong quantifier like *all* or *most*, licensing both DP and #P, GEN also carries a modal interpretation. The modal interpretation of GEN is often glossed as in (31b) with adjectives like *normal*, *usual*, and *typical*.¹³ This suggests that the structural source of generic modality is adjectival in nature, raising the question of where this adjectival modality is located structurally within nominals.¹⁴

singular, and therefore carrying no count function and unable to license #P on their own – are found pre-verbally with a generic interpretation, as shown in (i).

- (i) basar nimkar be-qilogramim. GENⁱ [_{DP} Dⁱ [_{\#P} \#ⁱ [_{NP} basar_N]]]
 meat sell.PASS in-kilograms
 'Meat is sold in kilograms.'

¹³ While Cohen (2012) argues against the common assumption that generics express universal quantification over *normal* individuals, he does not argue that GEN is not modal. Instead, he proposes that generics are evaluated with respect to *uniform* possible worlds, leaving open the structural source of this modality.

¹⁴ To note, modal adjectives in nominals do not take sentential scope, such that (i) is not interpreted like (ii).

- (31) a. Cats land on their feet.
 b. All/Most normal/usual/typical cats land on their feet.
 (32) $[_{DP} Q_D [_{\#P} Q_{\#} [\dots Adj_{Modal} P \dots [_{NP} cats]]]]$

4.1. THE STRUCTURAL SOURCE OF ADJECTIVAL MODALITY. Continuing an older tradition, Cinque (2010) argues that adnominal adjectives emerge from two distinct structural sources. Adnominal adjectives are either base generated (in the specifier of a functional projection) shown in (33), or derived from a reduced relative clause that originates post-nominally, as in (34a), or pre-nominally, as in (34b). Adjectives with a predicative use are proposed to derive from a reduced relative clause source.

- (33) $[_{DP} the_D [_{FP} Adj F [_{NP} N]]]$
 (34) a. $[_{DP} the_D [_{CP} [_{XP} t_i AdjP]_j C [_{IP} NP_i I [t_j]]]]$ (Kayne 1994)
 b. $[_{DP} the_D [_{FP} [_{IP} PRO I AdjP] F [_{IP} NP]]]$ (Cinque 2010)

While the idea that predicative adjectives derive from reduced relative clauses has a long history, it is often met with surprise if not skepticism. However, evidence from reflexive binding, for example, demonstrates that adjectival phrases can constitute a binding domain, much like relative clauses (Fanselow 1985; Leu 2015). While the original evidence comes from German, this can also be seen with the binding of *self* anaphora attached to adjectives in English. Thus in (35) it is the employee, not John, who is self-motivated and in (36) it is the partner, not Mary, who is self-obsessed.

- (35) a. John_j appreciates a self_{i/*j}-motivated employee_i.
 b. John_j appreciates an employee_i who is self_{i/*j}-motivated.
 (36) a. Mary's_j self_{i/*j}-obsessed partner_i
 b. Mary's_j partner_i who is self_{i/*j}-obsessed

When it comes to generic adjectives, we can see in (37a) that they have predicative uses, which can be analyzed as deriving from a reduced relative source using Kayne's (1994) approach in (37b).

- (37) a. All cats that are normal/usual/typical land on their feet.
 b. $[_{DP} all_D [_{\#P} all_{\#} [_{CP} [_{AdjP} NP normal_{Adj}] C [_{IP} cats_{NP} I [AdjP]]]]]$

This suggests that modality of GEN itself may be internal to the nominal, though evidence for a modal element inside nominals licensed by GEN would buttress this idea.

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- (i) Mary interviewed (all) typical candidates.
 (ii) a. Mary typically interviewed (all) candidates.
 b. It was typical for Mary to interview (all) candidates.

4.2. THE MODALITY OF GEN. A key source of evidence for generic modality being inside nominals comes from adnominal conditionals. Adnominal conditionals are conditionals that restrict modality within a nominal (Lasersohn 1996; Frana 2017). For example, the conditionals given in italics in (38) do not restrict the modality of the clause, but rather restrict the modality of the overt modal adjective. In (38b), the precautionary measures are not necessary in general, but rather are taken to be necessary when the tropical cyclone warning signals are in force.

- (38) a. A possible location for the party *if it rains* is 20 miles away.
 b. The necessary precautionary measures *when tropical cyclone warning signals are in force* are listed on the web.

Lasersohn (1996) and Frana (2017) use constituency tests like those in (39) to show that adnominal conditionals form part of nominal constituents.¹⁵

- (39) a. [The location if it rains] and [the location if it doesn't rain] are within five miles of one another.
 b. The [[consequences if we fail] that he mentioned] are not nearly as bad as the [[consequences if we fail] that he didn't mention].

Frana (2017) also demonstrates that adnominal conditionals do not restrict modals outside of the nominal. Given the context, (40a), which has its conditional adnominally, is acceptable, but when fronted as in (40b), the conditional restricts the clause and is thus odd in context.

- (40) *Context:* After talking to a woman who has an Italian accent, I am informed by a journalist that the woman I was just talking to will become the new president if John resigns. I tell the journalist. . .
 a. The president of the committee if John resigns must be Italian.
 b. #If John resigns, (then) the (new) president of the committee must be Italian.

She also shows that adnominal conditionals can restrict a modal auxiliary inside a nominal's a relative clause, as they do in (41).

- (41) a. The fee that you must pay if you park in a handicapped spot is higher than the fee that you must pay if your meter expires.
 b. The paper that you can write if you follow the TA's suggestions is going to be easier than the problem you must solve if you take the exam.

Overt generic adjectives can also be restricted by adnominal conditionals, as seen in (42). In (42a), for example, the enforcement procedures are normal for facing down riots, and might not be appropriate for other situations.

¹⁵ When an overt modal is absent, Frana (2017) proposes that adnominal conditionals restrict a covert necessity modal adjective, given in (i).

(i) $\llbracket \text{NECESSARY} \rrbracket^{w,f,g} = \lambda B_{\langle s,t \rangle} \lambda P_{\langle s,et \rangle} . \lambda x \forall w' \in \text{Max}_{\langle g(w) \rangle}(B) : P(w')(x)$

A similar modal adjective may underlie covert generic modality, though there are questions concerning its strength and flavor, see fn. 13.

- (42) a. The normal enforcement procedures when facing down a riot are taught to officers in their initial training.
 b. A typical outcome if Republicans are in the majority is a conservative's confirmation as justice to the high court.

Finally, adnominal conditionals may also restrict the modality of GEN. In (43a), the generic emergency procedures are restricted to those procedures for riots, and is not synonymous with (43b) where the conditional restricts when the teaching takes place.

- (43) a. Emergency procedures if a riot breaks out are taught to every officer.
 b. If a riot breaks out, emergency procedures are taught to every officer.
 (44) a. Judicial nominees when a Republican is president are celebrated by the Federalist Society.
 b. Judicial nominees are celebrated by the Federalist Society when a Republican is president.

This evidence is consistent with there being a modal element of GEN residing inside nominals. Taking this element to be on par with overt generic adjectives, repeated in in (45a), I propose that GEN's modal source is also adjectival in nature, shown in (45b) together with GEN's quantificational components.

- (45) a. $[_{DP} all_D \quad [_{\#P} all_{\#} \quad [_{CP} [_{AdjP} NP \text{ normal}_{Adj}] \quad C \quad [_{IP} cats_{NP} \quad I \quad [\text{AdjP}]]]]]$
 b. $GEN^i \quad [_{DP} D^i \quad [_{\#P} \#^i \quad [_{CP} [_{AdjP} NP \text{ Adj}^i_{GEN}] \quad C \quad [_{IP} cats_{NP} \quad I \quad [\text{AdjP}]]]]$

5. The absence of generic articles. Having established the structural sources of quantification and modality arising from GEN, we are now in a position to propose why languages systematically lack generic articles (Gerstner-Link 1998; Carlson 2011). The proposal is a one of structural locality and assumes that the functional structures argued for above that divide up and mediate the computation of quantification and modality is uniform (to some interesting extent) across grammars. Because the adjectival source of generic modality is buried in a reduced relative clause while its quantificational elements reside on the structural spine of the nominal, the local structural relationship required for lexicalization cannot be established between the quantificational elements, D and #, and the modal element, Adj_{GEN} .

Recent work has proposed that local structural relationships are necessary for elements to be spelled out together. For example, adopting (46) from Svenonius (2016), the elements D, #, and Adj_{GEN} of GEN do not together form a span. While D and # form a span, Adj_{GEN} cannot be included because it is not in a head-complement relationship with # or D.

- (46) *Span*: A contiguous sequence of heads in a head-complement relation

The absence of generic articles cross-linguistically is not, therefore, a typological accident, but rather emerges from the syntactic structure encoding the component parts of a decomposed GEN.¹⁶

¹⁶ The consequences of this analysis may extend beyond GEN. To my knowledge, no language lexicalizes modality in articles or nominal quantifiers. This may be unexpected if nominal articles are to be similar to verbal modals, as proposed by Abney (1987). Note, however, that verbal modals for Abney are heads of IP, not Aux. He also proposed that the nominal equivalent of verbal auxiliaries, which can be modal, are pre-nominal adjectives, which we have proposed here as general sources of nominal modality.

6. Summary and conclusion. In this paper, I have argued that the syntax of the component parts of GEN explains the absence of generic articles cross-linguistically. Using the connection between pre-verbal bare nominals and their restriction to a generic interpretation, I argued that the quantificational component of GEN is best analyzed not as an A-quantifier, but as a D-quantifier – a part of nominal structure. This D-quantifier approach better explains why generic interpretations are available for pre-verbal bare plurals (and mass nouns), but unavailable for pre-verbal bare singulars and nominals with # (and/or D) independently licensed, even when weak. GEN is unavailable for pre-verbal bare singulars because they license #P and are thus in complementary distribution with GEN.

I then proposed that GEN has a modal component that derives from an adjectival reduced relative clause source inside the nominal. I noted that overt generic modality takes the form of predicative adjectives which can be analyzed as deriving from reduced relative clauses. I then examined how adnominal conditionals, which restrict modality inside nominals, can restrict overt modal adjectives and overt generic adjectives, and, importantly, can also restrict the modality of GEN, suggesting that the (covert) modality of GEN is also internal to nominals and, by analogy with overt adjectives, located in an adjective with a reduced relative clause source.

Finally, I observed that the quantificational and modal components of GEN, i.e. D, #, and Adj_{GEN}, do not form a local spanning relationship, and thus cannot be spelled out together as a single article form. Assuming that the structural components of GEN are universal, then, accounts for why generic articles are syntactically unavailable cross-linguistically.

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