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A Specific Role for AGR

Jeffrey T. Runner

University of Massachusetts, Amherst

0. Introduction¹

This paper is concerned with providing an account of the syntax and semantics of specificity. Section 1 begins with some data which illustrate an unusual restriction on a certain type of discourse anaphora in English. It turns out that the pronouns cannot be anteceded by an existential indefinite DP introduced within the same sentence. However, they can be coreferent with a specific indefinite or definite DP within that same domain. Thus begins the search for the relevant differences between existential indefinites on the one hand and specific indefinites and definites on the other. As Enç (1991) points out, one type of specific--the partitive specific--and definite DPs have something in common: they both refer back to something already present in the discourse. I argue that novel specific indefinites, like novel definites (see Heim 1982), while being new to the discourse, carry a presupposition of existence which is enough to create a discourse referent which can then be updated as if it had already been present in the discourse. Ultimately, I suggest that being linked to the discourse representation is what specific indefinites and definites have in common; that *is* specificity.

Having established informally what specificity is semantically, I then ask the question what is the relationship, if any, between the syntax and specificity. A cross-linguistic survey in Section 2 suggests strongly that specificity often correlates with AGR. Thus we find that in many languages DPs associated with AGR end up with a specific interpretation. This association manifests itself in at least the following ways: (1) the DP itself bears a certain Case, as in Turkish; (2) the DP triggers object agreement on the verb, as in Porteño Spanish and Hindi; (3) both the DP and the verb show AGR, as in

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Greenlandic Eskimo; (4) the DP overtly surfaces in Spec,AGR, as in Spanish, Catalan and Dutch; and (5) the verb overtly moves to AGR, as in Hungarian. In each of these cases, the association with AGR correlates with a specific interpretation of the DP.

The question arises, then, why AGR? In Section 3 I explore an extension of the hypothesis of Borer (1989), that AGR can be anaphoric. Her cases involve anaphoric AGR in control complements; AGR is anaphoric like a reflexive: it has to be bound within its sentence. I suggest that AGR can also be pronominal, that is "discourse anaphoric"; it must be bound, but within its discourse. This has the automatic result that any DP associated with AGR will be associated with the discourse since AGR must be associated with the discourse. This seems correct given the cross-linguistic correlation between specific (discourse-related) DPs and AGR. The result is that AGR appears to mediate between the discourse and the DPs in a sentence. Ultimately, I return to show how the proposed solution to the specificity problem leads to the correct account of the problem of the discourse anaphora which started out the paper.

In Section 4 I address several interesting general questions this proposal raises. There I discuss some of the broader questions about DP licensing and the function of AGR.

1. Specificity and Discourse Anaphora

1.1 *The Puzzle*

The indefinite noun phrase (which I will call determiner phrase, DP) in an existential sentence in English can license a discourse referent picked up by a pronoun in a later discourse (see Karttunen 1976); intended coreference is marked by italics:

(1) There is/will be *a firefighter* available and *s/he*'s well-trained.

In a Heim-style account (Heim 1982), an indefinite DP creates a new "file card" when it is introduced into the discourse. The file card is updated by further references to the indefinite. Thus, the first sentential conjunct of (1) creates a file card for *a firefighter*; further references to the firefighter update its file card, as the second conjunct of (1) does.

However, a pronoun embedded in certain types of adverbial clauses cannot be linked to the indefinite in such a sentence:

- (2) There is/will be *a firefighter* available
- a. #because *s/he's* paid.
 - b. #after *s/he* punches in.
 - c. #after Mary finds *her*.

The feeling one gets reading the sentences in (2) is almost a garden path-type effect. The first line of (2), before coming to the adverbial, seems to be introducing *a firefighter* into the discourse (as in (1), above); however, adding the adverbial containing a coreferent pronoun like (a-c) results in a sort of clash. The pronoun in the adverbial seems to "want" to refer to something already in the discourse.

It seems that while an indefinite does introduce a discourse referent (creates a new file card), it does not do so immediately. ((2)c shows this is not simply a Condition C binding effect.) The descriptive generalization seems to be that a new file card is created only after the utterance of a complete sentence (=IP).

- (3) An indefinite DP creates a new file card (new discourse referent) only after its minimal IP is uttered.

So, although the indefinite in the first line of (2) introduces a discourse referent for later sentences (as in (1)), this discourse referent is not available for a pronoun within its own sentence (see (2)a-c).

It is not the case that a pronoun in an adverbial clause can never be linked to an indefinite within the same sentence:

- (4) *A firefighter* will be available
- a. after *she* eats.
 - b. because *she'll* be in town for the weekend.

(4) appears to violate the generalization in (3). A pronoun embedded within an adverbial can pick up the referent of an indefinite within its clause. However, the interpretation of the indefinite in a sentence like (4) followed by (a-b) is a special one: it must be *specific*, in some sense to be defined below. The first line of (4) favors an existential reading, one which can be paraphrased, "there will be some firefighter (or other) available." If (4) is followed by (a) or (b), though, the existential reading is unavailable; the sentence indicates that the speaker has a specific firefighter in mind who will be available e.g. after she eats.²

² Besides the specific indefinite, a generic indefinite subject can co-occur with a pronoun in an adverbial clause:

- (i) A firefighter is available because *s/he* is paid to be.

The same appears to be true of indefinite objects:

- (5) John bought *a book*
a. after he saw *it* was about fish.
b. before he read *it*.

A natural reading of the first line of (5) is an existential one: "John bought some book (or other)." However, following (5) with (a) or (b) blocks the existential reading in favor of a specific reading.

The facts in (4) - (5) suggest that the generalization in (3) is not quite correct since we see indefinite DPs apparently creating a discourse referent to be picked up by a pronoun within their clause. More accurately, (3) should refer to "existential" indefinites:

- (6) An existential indefinite DP creates a new file card (new discourse referent) only after its minimal IP is uttered.

While (6) seems to be accurate, it is simply a descriptive generalization. Below, I will attempt to derive it from independent considerations. For now, though, I will refer to it as is.

1.2. *Definite DPs*

To better understand the nature of the specific indefinite it will be useful to compare it to the definite DP. The definite DP is interesting partly because at first glance it is much like the specific indefinite: it does not have an "existential" reading.

First, as is well-known, it is impossible to have an existential reading of a definite in a *there* sentence in English (Milsark 1974):

- (7) *There will be *the firefighter* available.

Only the existential reading of the indefinite was possible in the same position.

Second, while an indefinite is ambiguous--being either specific or existential--as the preverbal subject of *available*, only a specific reading is available for the definite:

Note that the same is true of a strong quantified subject:

- (ii) Every firefighter is available because s/he is paid to be.

In these cases the pronoun is a bound variable pronoun, not discourse anaphora as in the text examples. See Runner (in progress) for further discussion.

(8) *The firefighter* will be available.

Third, the definite DP, like the specific indefinite, can corefer with a pronoun in an adverbial clause. Follow (8) with (a) and (b):

- a. after *she* eats.
- b. because *she*'ll be in town this week.

The same is true for the definite direct object; no existential reading, only a specific reading, is possible:

(9) John bought *the book*.
a. after he saw *it* was about fish.
b. before he read *it*.

Upon initial inspection, then, the definite appears to be like the specific indefinite in always having a specific reading and also being able to corefer with intrasentential pronouns.

There is an important difference between definites and specific indefinites which might independently explain the coreferent pronouns in (8) and (9) which we must discount before continuing.

As we know from Heim (1982) and others, definite DPs must be "familiar" in the discourse while indefinites must be "novel". What that means is that indefinites create new file cards while definites, like pronouns, serve to update existing file cards. Thus, somewhere in the discourse preceding the examples in (8) and (9) there had to have been a firefighter and a book introduced, respectively. So, the pronouns in those examples could then actually be referring back to the file card, independently of the definite DP.

This situation differs from the case of the specific indefinite: while the speaker has a specific referent in mind, the specific indefinite DP itself is novel to the discourse. Thus, the pronouns in (4) and (5) apparently are really associated with the indefinite itself.

I suggest that this is actually the wrong way to look at things. The explanation just given falls through because of the case of "novel definites" discussed in Heim (1982, Ch.3). Consider the following sentence uttered out of the blue to a stranger in the street:

(10) *My car* broke down.

First, note that the subject is a typical definite DP. Secondly, note that this sentence is perfectly acceptable even in the situation as described in which I am talking to a stranger

who has no knowledge about me or whether I have a car. What the stranger has to do in a case like this is "accommodate" the presupposition that I have a car (Stalnaker 1979). Using the file card metaphor, the hearer must pull out a card to represent my car, then update it by adding the information that it broke down. What this shows is that it is possible to create and update a card with one DP. Also, this same novel definite can corefer with the intrasentential pronouns we have been looking at; follow (10) with:

- a. before *it* ran out of gas.
- b. because I didn't take good care of *it*.

This shows that the intrasentential pronouns can corefer with a definite DP, whether it is familiar or novel, suggesting that it is something about the definite DP which allows such pronoun antecedence, independently of whether a file card for said DP was previously in the discourse. The most obvious candidate is the presupposition of existence associated with the definite DP, an idea which will receive more support below.

These examples are quite close, I believe, to what happens with the specific indefinite. Recall that, being indefinite, it must be novel to the discourse; but being specific, the speaker has a certain presupposed individual in mind. A presupposition of existence accompanies the specific indefinite, much like the presupposition of existence associated with the novel (and the familiar) definite DP.

We might think of definites, specific indefinites, and existential indefinites in the following terms. An existential indefinite is used to *assert* the existence of its (discourse) referent. That assertion then gets incorporated into the context and is then a shared presupposition in the discourse (in the form of a file card). A definite DP is usually used to refer back to a previously asserted (now presupposed) DP, though we see in the novel definite case that it can also bring along the presupposition of existence itself. What is special about the specific indefinite is that it must be new to the discourse like an existential indefinite, but it also carries along a presupposition of existence, like the novel definite.

Now, it is the definite (novel or familiar) and the specific indefinite which are able to corefer with an intrasentential pronoun. It is also this group which is associated with a presupposition of existence. I suggest that it is something about this presupposition of existence which allows for the coreference possibilities discussed above.

If we assume that discourse anaphora (like the pronouns in the adverbial clauses we discussed above) serves to update file cards already present in the discourse, and we assume that definites and specific indefinites are associated with file cards (either by referring back to a pre-established file card as in the case of the familiar definite, or by creating a file card and updating it immediately as in the case of the novel definite and specific indefinite), and that existential indefinites create new file cards but not until after

their IP is uttered, then we can understand why only definites and specific indefinites can "antecede" intrasentential pronouns and existential indefinites cannot.

Enç (1991) in her study of specific DPs discusses another type which I have not mentioned here. I would like to subsume these under my account as well. She calls these "partitive specifics". These are indefinite DPs which are used to refer to some subset of a set of referents already prominent in the discourse. Since they refer back to something in the discourse, they are like definite DPs in having a presupposition of existence. They differ from the other specific indefinites discussed above since those were completely novel in the discourse. Enç offers the following example.

- (11) a. Several children entered the museum.
b. I saw two boys at the movies.

First, assume that the domain of discourse is empty before the utterance of (a). This discourse is appropriate in two different situations: first, if two boys choose to go to the movies instead of the museum, then 'two boys' is not included in the set of children related to 'several children'. In this case, 'two boys' is a nonspecific, or existential indefinite: it creates *new* discourse referents; second, if two boys who are members of the set of children who entered the museum perhaps later go to the movies, then 'two boys' is part of a set already uttered in the discourse; they are specific boys: they do not create new discourse referents, but serve to update ones already in the discourse. This is precisely the sort of behavior the specific indefinites under discussion above exhibited.

1.3 Other Similarities

There are several other important similarities between definites and specific indefinites which make them different from existential indefinites. We will need to explain these as well. First is their ability to take apparent "widest scope" (see Fodor & Sag 1982). Syntactic islands are thought to constrain the scope of quantifiers:

- (12) a. If *a/the friend of mine from Texas* had died in the fire, I would have inherited a fortune.
b. But if *his* brother, who is also from Texas and a friend of mine, had died instead, I wouldn't have inherited anything. [Fodor&Sag: 370]
- (13) a. If *somebody* had died in the fire, I would have...
b. *But if *his* brother had died instead...

In (12) we see that a specific indefinite, like a definite, can have scope outside of a syntactic island. This is not the case for a standard indefinite existential, as (13) shows.

Another way in which specific indefinites differ from other indefinites and behave

more like definites is their behavior around adverbs of quantification. A typical indefinite DP can get its "quantificational force" from an adverb of quantification (Lewis 1975); this has been argued to be due to the fact that indefinites contain variables that need to be bound (Heim 1982).

- (14) a. *A linguist is always intelligent.*
= all linguists are intelligent.
- b. *A linguist is never intelligent.*
= no linguist is intelligent.
- c. *A linguist is seldom intelligent.*
= few linguists are intelligent.
- d. *A linguist is often intelligent.*
= most linguists are intelligent.

In e.g. (a), the indefinite subject gets universal quantificational force from the universal quantificational adverb *always*. The analysis given for these is parallel to the account of generics outlined above: the adverb acts as an operator, adjoining to IP at LF, and binds the variable in the indefinite.

Interestingly, this is completely impossible if the indefinite is understood specifically (a), or if a definite is used (b):³

- (15) a. **A linguist I met last year at the LSA is always/never/seldom/often intelligent.*
- b. **The linguist I met last year at the LSA is always/never/seldom/often intelligent.*

The reason for the ungrammaticality of these examples is linked to the presence of the adverb of quantification, since without it the examples are fine:

³ Note that a definite can get a generic reading:

(i) The linguist is always intelligent.

This slightly different reading has to be understood as stating a property of linguists as a "breed" or something. Cf. *The lion always has a mane*. This suggests that even the variable in a definite can under certain circumstances be bound by an adverb of quantification.

- (16) a. *A linguist I met last year at the LSA* is intelligent.
b. *The linguist I met last year at the LSA* is intelligent.

Kratzer (1989) attributes the ungrammaticality of examples like the above to a ban on vacuous quantification. Adverbs of quantification must bind a variable. In a sentence with an individual level predicate (which contains no spatiotemporal variable) the adverb can bind the variable in the indefinite in examples like (14). But (15) is ungrammatical. That suggests strongly that specific indefinites, like definite DPs, do not have a variable open for binding by the adverb.

This does not imply that a specific indefinite does not contain a variable, since definites are assumed (by Heim 1982) to contain a variable; it just implies that if it does, its variable has been "closed off" before the adverb of quantification can get to it.

To summarize: like other indefinites, specific indefinites must be novel to the discourse; but like definites, they are "specific" and can have widest scope; they also presuppose the existence of their (discourse) referent and contain no open variable free to bound by an adverb of quantification.

1.4 *Existential Indefinites*

First it will be useful to have an account of the existential reading of the indefinite. Recall that an indefinite can introduce a referent into the discourse, which can then be picked up by a pronoun in a later sentence:

- (17) There is/will be *a firefighter* available and *s/he*'s well-trained.
(18) *A firefighter* will be available and *s/he*'s well-trained.

The account of this I will more or less adopt is given in Heim (1982, Ch.2) and modified in Diesing (1992). Since the existential indefinite contains an open variable, it must end up being bound by an existential quantifier. Diesing argues that this existential quantifier has scope over VP only; the process of binding the "leftover" variables in the VP is called "existential closure". Existential closure is how the discourse referent is introduced into the discourse structure; essentially it is the process that creates Heim's file card.

Example (17), then, follows straightforwardly: the VP-internal indefinite *a firefighter* contains an open variable; existential closure over VP binds that variable, creating a discourse referent. What about the existential reading of (18)? Diesing argues that this type of example requires lowering of the subject back into VP, so it can be bound under existential closure (see Kratzer 1989 and Diesing 1992 for substantial motivation for this account).

The existential reading of an indefinite is derived by letting its variable be existentially closed VP-internally. What about the specific indefinite and the definite? On the assumption that they too contain variables (cf. Heim 1982), they will have to escape existential closure by exiting VP by LF.⁴ Where do they go? For now, let us simply assume that they raise out of VP and leave open the question of where to. This treatment is essentially that of Diesing's (1992) Mapping Hypothesis, half of which states that VP-internal material maps onto the nuclear scope of a quantifier in the semantic representation; I will remain neutral for the moment on the other half: that VP-external material maps onto the restrictor clause of a tripartite structure.

Summarizing, existential indefinites are in VP at LF, their variables bound by existential closure; specific indefinites and definites are outside VP at LF, their variables escaping existential closure.

2. On Definites, Indefinites and Specificity

Leaving aside specific indefinites for the moment, let us think a bit more about definite DPs. Traditionally, definites have been assumed to have the semantic property that they presuppose the existence of their referent (Russell). This is certainly true of the definites we have looked at, familiar and novel ones. This has been thought to be a property of the meaning of the determiner itself; it could be stated as: D [+def] (e.g. *the*, *this*, etc.) presupposes the existence of its complement NP. Whatever the exact nature of this property is, the effect it has is that the definite updates a file card/discourse referent, either by updating one currently in the discourse (in the standard case of the familiar definite) or by creating and updating a new one (as in the case of the novel definite).

Our discussion of specific indefinites suggests that this is the wrong way to look at this property. That is, if this presuppositional property should actually be a feature of definite D, then why is it that some indefinites share this property? An unattractive solution might be to say that the indefinite article is ambiguous between having this presuppositional property or not. I will argue that this would miss a relevant generalization. In what follows I will call this "presuppositional property" specificity. That is, what definites and specific indefinites share is specificity: they presuppose the existence of their referent.

As it turns out, cross-linguistically definite DPs and specific indefinite DPs often share another property, a morphosyntactic one. I will suggest that this morphosyntactic property is where lies the key to the proper understanding of the semantic similarity between the definite and specific indefinite DPs. Specifically, cross-linguistically specific

⁴ Thanks to Angelika Kratzer (personal communication) for pointing out that definites would have to escape VP to escape existential closure.

indefinite DPs and definite DPs are associated with AGR in a way that existential indefinites are not. I will argue that this association with AGR is what accounts for the specificity of these DPs, and not anything about the DPs themselves.

What do I mean by associated with AGR? Here I follow Chomsky (1991, 1992), who suggests there are two AGR projections in the phrase structure tree of a sentence: subject AGR and object AGR. Agreement and Case are triggered when a DP fills the specifier position of the AGR head. This is called spec-head agreement. According to Chomsky, subject AGR (AGRs) is the highest projection in what used to be called IP; the subject DP gets nominative Case and triggers subject-verb agreement in Spec,AGRs. Object AGR (AGRo) is a projection dominating VP; the object DP gets objective/accusative Case and (potentially) triggers object agreement in Spec,AGRo. The level at which the spec-head relation is realized varies from language to language, but it is assumed to hold at least at LF for all languages.

My claim is that association with AGR is a property of definite and specific indefinite DPs, but not one of existential DPs. This suggestion is contra Chomsky who assumes that all DPs are licensed in Spec,AGR. In what follows I hope to show that Chomsky's assumption cannot be maintained. I will begin by surveying a number of languages where definite and specific indefinite DPs are arguably associated with AGR and existential DPs are not. This supports the idea that AGR might be implicated in specificity.⁵

Because AGR is associated with both agreement and Case, evidence for a correlation between AGR and "specific" semantics can be of several types: (1) a correlation between overt Case and a specific/definite interpretation; (2) a correlation between overt agreement and a specific/definite interpretation; (3) a correlation between a DP being in Spec,AGR (with or without overt manifestation of agreement/Case) and interpretation; and (4) a correlation between verb movement to AGR and object interpretation. In what follows we will see evidence of each type.⁶

2.1 Case and Specificity

TURKISH. A well-known example comes from Turkish (Enç 1991). Specific indefinite and definite objects in Turkish are marked with accusative Case, while nonspecific indefinites are unmarked.

⁵ See Section 4 for discussion of the licensing of the VP-internal existential DPs.

⁶ A subset of this data will be familiar from Runner (1993) which was arguing for a somewhat different hypothesis which some of the same facts appeared to support.

- (19) a. *Ali bir piyano-yu* kiralamak istiyor (Turkish)
Ali one piano-ACC to-rent wants
'Ali wants to rent a certain piano.'
- b. *Ali bir piyano* kiralamak istiyor
Ali one piano to-rent wants
'Ali wants to rent a (non-specific) piano.'
- c. *Zeynep Ali-yi/on-u/adam-i/o masa-yi* gördü.
Zeynep Ali-Acc/he-Acc/the-man-Acc/that table-Acc saw
'Zeynep saw Ali/him/the man/that table.'
- d. *Zeynep *Ali/*o/*adam/*o masa* gördü. (Enç 1991)

Enç makes a comment which might sum up what I am doing here: "We must conclude that specificity is a phenomenon distinct from definiteness and that the definiteness of the DP can be determined from the determiner...whereas specificity cannot be so determined. We must assume that *the specificity of DPs is determined by an independent mechanism* (p.16) [emphasis mine, JTR]." The independent mechanism I am proposing is the AGR system, rather than the determiner system.

Is there evidence that these DPs involve different positions? The DP marked accusative can occur VP-externally, while the unmarked DP can only occur adjacent to the verb (de Hoop 1992, citing Kornfilt 1990; see also Enç 1991):

- (20) a. *Ben dün akşam* [_{VP}*çok güzel bir biftek* yedim] (Turkish)
I yesterday evening very nice a steak ate
'Yesterday evening, I ate a very nice steak.'
- b. **Ben çok güzel bir biftek dün akşam* [_{VP}yedim]
I very nice a steak yesterday evening ate
- c. *Ben bifteg-i* dün akşam [_{VP}yedim]
I steak-ACC yesterday evening ate
'I ate the steak yesterday evening.'

If the VP-external position is Spec, Agr-o then the correlation between Case and interpretation follows from the present hypothesis. Consider the LFs of the two sentences:

- (21) a. I..._[VP] [a very nice steak] ate] (LF)
- b. I..._[AGRO][a steak]_i [_{VP} t_i ate] (LF)

If Chomsky (1991, 1992) is correct, all object DPs must be in Spec,AGRO; that assumption would not explain why AGR seems to be triggered in one case and not in the other (AGR here surfaces as overt Case morphology). One might suggest that at LF even the nonspecific object is in Spec,AGRO; however, then exactly the *semantic* contrast between the two DPs will be lost. If LF is the level from which the interpretation of DPs is derived, it is precisely at this level that there should be a difference between specific indefinites/definites on the one hand and existential indefinites on the other. If we take a clue from the morphology and believe that it really is indicating a difference in position between the two types of DP, then we are on our way towards an explanation of their semantic differences.

2.2. Agreement and Specificity

PORTEÑO SPANISH. Specific indefinite and definite objects in Porteño Spanish trigger clitic doubling, which is arguably a result of Spec,Head agreement with AGR (Suñer 1988):

- (22) a. Diariamente, *la* escuchaba a *una mujer que cantaba tangos*.
daily, 3sg.f he/she-listened a woman that sang tangos
'Daily, he/she listened to a woman who sang tangos.'
- b. *La* oían a *Paca/la niña/la gata*.
3sg.f they-heard Paca/the child(f)/the cat(f)
'They listened to Paca/the girl/the cat.'
- (23) a. No (**lo*) oyeron a *ningún ladrón*.
not 3sg.m they-heard any thief
'They didn't hear any thieves.'
- b. (**La*) buscaban a *alguien que los ayudara*.
3sg.f they-looked-for someone who 3pl.m help
'They were looking for someone who could help them.'
- c. (**Lo*) alabarán a *el niño que termine primero*.
3sg.m they-will-praise A the boy who finishes first.
'They will praise the boy who finishes first.' (Porteño Spanish)

As (22)a shows, the clitic *la* agrees with an indefinite direct object in person, number and gender. The object is interpreted specifically. In (b) the clitic agrees with the definite DP. However, in (23), the direct objects are interpreted nonspecifically and no agreement

- (25) A: Katenje wa-ndí-úza kutí a-na-gúlá mabúkú ámbîri ndiyé nd-a-mú-
Katenje SM.PERF-me-tell that he-REC.PAST-buy books many so I-PERF-him-
úza kutí a-ti-bwéréts'éré límôdzi
tell that he-us-bring one
'Katenje has told me that he bought a lot of books, so I have told him to
bring us one.'
- B: Koma wa-bwera, ali panjâpo.
but he.PERF-arrive, he.be outside
'But he's arrived, he's outside.'
- C: Chábwino, ndi-ká-mú-funsa. Katenje, mw-a-lí-bwéretsa búku?
fine I-go-him-ask. Katenje, you-PERF-OM-bring book
'Okay, I'll go ask him. Katenje, have you brought us one, a book?'

2.3. *Case and Agreement and Specificity*

GREENLANDIC ESKIMO. De Hoop (1992), borrowing from Bittner (1988), notes the following contrast in Greenlandic Eskimo:

- (26) a. Jaaku-p *umiarsuaq* taku-sima-nngissaannar-as
Jacob-erg ship-nom see-past-never-ind-3s-erg/3s-nom
'Jacob, ship, he never saw it.'
- b. Jaaku *umiarsuar-mik* taku-nni-sima-nngissaannar-p-uq
Jacob-nom ship-ins see-ap-past-never-ind-3s-nom
'Jacob, he never saw ship.'

(25)a is compatible with a situation in which Jacob has seen all but one of some understood set of ships; (b), though, is not compatible with such a situation but rather, one in which Jacob hasn't seen any ships at all. Syntactically, in (a), *umiarsuaq* 'ship', has nominative Case and triggers nominative agreement on the verb. Semantically, it is understood specifically. In (b), 'ship' is marked with instrumental Case and triggers no agreement on the verb. Semantically, it is understood nonspecifically.

Again we see a correlation between specificity and AGR, this time surfacing on both the DP and the verb.

2.4. *Spec,AGR and Specificity*

CATALAN AND SPANISH. Another type of evidence for a correlation between AGR and specificity is a correlation between a DP in Spec,AGR and a specific interpretation. Indefinite subjects in Spanish and Catalan in Spec,AGRs (preverbal subjects) are specific, not existential ((a) examples from Solà 1992):

- (27) a. Un roc ha caigut. (Catalan)
a rock has fallen
'One (of the) stone(s) fell.'
(not: a stone fell.)
- b. Ha caigut un roc.
has fallen a rock
'A stone fell.'
- (28) a. Una cotxe ha passat.
a car has passed
'One (of the) car(s) went by.'
(not: a car went by.)
- b. Ha passat una cotxe.
has passed a car
'A car went by.'

The (a) glosses are Solà's and they suggest a partitive specific reading as discussed above (Section 1.2). He clearly states that the existential reading is blocked. The (b) examples, where the DP is not in Spec,AGR, receive such a reading.

DUTCH. Like Spanish and Catalan, Dutch indefinite subjects in Spec,AGRs are specific (Rullmann 1989):⁷

- (29) Ik hoorde dat een jongen uit mijn klas gisteren gearresteerd was.
I heard that a boy from my class yesterday arrested was
'I heard that a (specific) boy from my class was arrested yesterday.'

This contrasts with examples in which an expletive subject fills Spec,AGRs and other interpretations are available for the VP-internal subject. Rullmann states that this example differs from the English counterpart precisely in allowing only a specific reading for the indefinite.

⁷ Dutch indefinite subjects can also get a generic reading; however, crucially the existential reading is always blocked in Spec,AGRs.

Thus it appears that in languages like Catalan, Spanish and Dutch, the S-structure position of the subject DP is directly relevant to its interpretation. Spec,AGRs is a position associated with specificity, further supporting the correlation between AGR and specificity.

2.5. *Verb Movement to AGR and Specificity*

HUNGARIAN. On the assumption that AGR is a functional head dominating VP to which the verb moves (Chomsky 1991, 1992), we expect verb movement to correlate with the presence of AGR. Perhaps if there is no AGR, there is no verb movement. And if AGR is associated with specificity, such verb movement should be associated with specificity. Hungarian appears to show such evidence. Radó (this volume) cites contrasts like the following:

- (30) a. Tibor olvasta *az újságot*.
Tibor read the paper-Acc
'Tibor read/was reading the paper.'
- b. Tibor *újságot* olvasott.
Tibor paper-Acc read
'Tibor read/was reading a paper.'

The point of interest is the placement of the verb with respect to the direct object. In (a) the verb precedes the object, which is definite; and in (b) the verb follows the object, which is indefinite. As it turns out, the SVO order is only possible with definite (29)a and specific (30)a DPs; SOV order ((b) examples) results in an existential nonspecific indefinite reading:

- (31) a. Tibor olvasott *egy újságot*.
Tibor read a paper-Acc
'Tibor read a (particular) paper.'
- b. Tibor *egy újságot* olvasott.
Tibor a paper-Acc read
'Tibor read a paper.'

I follow Radó (and others) in assuming that the VP is head final underlyingly. I further assume that the SVO order is derived from the more basic SOV order by verb movement

to AGRO.⁸ One type of evidence in favor of this is that under certain circumstances, overt agreement is triggered on the verb. The agreement is triggered by definite accusative objects and it correlates with verb movement deriving the SVO order:

- (32) a. Pista lát-ja a lányt.
Pista sees-AGR the girl-Acc
'Pista sees the girl.'
- b. Pista lát-ja egy barát-ját.
Pista sees-AGR a friend-his-Acc
'Pista sees a friend of his.'
- c. Pista lát-ja valamelyik lányt.
Pista sees-AGR some(spec.) girl-Acc
'Pista sees some (specific) girl.'

While this "definiteness agreement" is triggered by obviously definite DPs (those bearing the definite article or certain other "definite" morphemes), as (b) and (c) show, certain specific indefinites trigger this agreement as well.

What we see then, is a correlation between verb movement to AGR, and a specific reading of the verb's direct object. If verb movement to AGR triggers AGR's specificity properties, and assuming a Spec,head relation between AGR and the direct object (at LF), we see another case of a correlation between AGR and specificity.

Summary: various types of association between AGR and DP correlates with specificity. This can be seen when: (1) the DP itself bears a certain Case, as in Turkish; (2) the DP triggers object agreement on the verb, as in Porteño Spanish and Hindi; (3) both the DP and the verb show AGR, as in Greenlandic Eskimo; (4) the DP overtly surfaces in Spec,AGR, as in Catalan, Spanish and Dutch; and (5) the verb overtly moves to AGR, as in Hungarian. In each of these cases, the association with AGR correlates with a specific interpretation of the DP.

3. Discourse Anaphoric AGR

⁸ I do not follow Radó's carefully argued analysis in part because it fails to account for the observed cross-linguistic correlation between AGR and specificity pointed out above. Secondly, one of the strongest arguments she puts forth against the present approach comes from the ever-elusive double object construction, the appropriate account of which is still quite up for debate (see e.g. the recent Larson vs. Jackendoff discussions in *Linguistic Inquiry*).

3.1. Towards an Account

Let us regroup. In Section 1, we informally characterized the property of specificity, using Heim's (1982) file card metaphor in the following way: a specific DP--either an indefinite or definite--updates a file card already present in the discourse representation. In the case of familiar definite DPs, they serve to update a card introduced by an existential indefinite at some earlier point in the discourse. In the case of novel definite DPs, they first introduce a card, then update that card immediately. In the case of specific indefinites, like novel definites, they introduce and update a card with one DP. And in the case of partitive specific DPs, they, like familiar definites, update cards previously introduced into the discourse. A specific DP, then, serves to update a file card in the discourse.

We also argued that AGR was implicated in this interpretation, in Section 2. It looks like DPs associated with AGR are able to be specific, while those not associated with AGR are nonspecific. How exactly does this work? It seems that DPs must associate with AGR in order to "hook up" to the discourse representation. Why AGR?

What I will explore is an extension of the hypothesis of Borer (1989), that AGR can be anaphoric.⁹ In that paper, Borer argues that the AGR node in infinitival Control complements is "anaphoric" and that it must be bound by the matrix AGR. The reference of the null subject in the infinitive is fixed to that of the subject of the matrix (in subject Control cases) by a series of coindexations: the null subject is coindexed with its AGR; that AGR is anaphoric and must be coindexed with the matrix AGR; the matrix AGR is also coindexed with the matrix subject. Thus, the null subject is indirectly coindexed with the matrix subject, accounting for its reference. On Borer's account, infinitival AGR is anaphoric much like a reflexive pronoun is anaphoric: it must be bound within a small (clause-like) domain. In that sense it is like a reflexive anaphor.

My hypothesis is that AGR can also be like a discourse anaphor, that is, have pronominal features. Like a pronoun it must be bound, but within its discourse, rather than within its sentence. What would that mean? It would mean that AGR would always have to be "hooked up" to the discourse representation, since it is anaphoric to it. It would also mean that any DP associated with AGR would automatically be associated with the discourse representation. This goes some way towards explaining our problem of specific DPs. As we argued above, specific DPs (definite and indefinite ones) cross-linguistically appear to be associated with AGR; if AGR is anaphoric to the discourse, then we know why these DPs are also associated with the discourse.

The following representation schematizes what I have in mind. DR_i stands for

⁹ Thanks to Tohru Noguchi (personal communication) who suggested Borer's account might be extended in such a way.

some discourse referent in the discourse (a previously uttered DP, or a presupposed one):

(33) DR_i [... [$_{AGRP}$ DP_i [$_{AGR_i}$] ... t_i ...] ...]

AGR is anaphoric so it must be bound by something in the discourse. In this case it is bound by DR_i ; it is thus coindexed ($_{AGR_i}$). The DP which ends up in Spec, $_{AGR_i}$ becomes associated with $_{AGR_i}$ via Spec,head agreement; DP is also coindexed ($_{DP_i}$). It is not clear which way to think about the order temporally. For example, we might think of the coindexing happening the other way around: DP_i moves to $_{AGR}$; $_{AGR}$ is then coindexed ($_{AGR_i}$). $_{AGR_i}$ is anaphoric and must be bound by something in the discourse. It needs a DR with subscript i . Two different things might happen. If DP_i is a "familiar" definite, then there will be a DR_i already in the discourse. If DP_i is a "novel" definite, or a specific indefinite, a DR_i will first be created (recall our informal description of specific) then updated with the information provided by DP_i .¹⁰

What about existential indefinite DPs? Recall my treatment in Section 1.4. There I assumed, following Diesing's (1992) update of Heim (1982), that an indefinite which remained in VP at LF was bound by existential closure. That process serves to create a DR which can then be used to refer back to later in the discourse. Crucially, existential indefinites do not associate with AGR or they would be expected to be related to already existing discourse referents. This is correct, as we have seen that cross-linguistically, existential indefinites do not associate with AGR.

3.2. *Accounting for Other Differences Between Specifics and Existentials*

Recall from Section 1.3 that specific indefinites and definites on the one hand differed from existential DPs on the other in several other ways. The former appeared to be able to have "widest scope" and appeared not to contain an open variable to be bound by an adverb of quantification. The latter tend to have narrow scope and contain such an open variable.

The widest scope possibilities associated with specific indefinites and definites I assume results from their being coindexed with discourse referents in the discourse representation, which in some sense is "higher" than the sentence in which they are found. At least, such coindexing should allow them to have wider scope than other elements whose scope is limited to their sentence, such as the existential indefinite, whose scope is the scope of its binder, the existential closure over VP.

¹⁰ I assume with Heim (1982) that there are still some felicity conditions on discourse representations. Specifically, I assume a familiarity condition which checks to make sure definite DPs are associated with familiar discourse referents. I assume that the DR associated with a novel definite is familiar since what the definite DP really does is update it.

As for the question of the variable, I would like to maintain Heim's (1982) insight that indefinite and definite DPs contain variables. The question, then, is why in some cases these variables are not available for intrasentential binding. The following are a couple of the relevant examples:

- (34) a. A linguist is never intelligent
b. *A/The linguist I met at the LSA is never intelligent

A "typical" indefinite as in (a) can be bound by the adverb *never*. The specific indefinite and the definite DP as in (b) cannot be bound by such an adverb. I will assume that the coindexation between AGR and DP is really a coindexation between AGR and the variable in DP. What that means is that if AGR_i is bound by DR_i and it has DP in its Spec, the variable in DP must be coindexed (DP_i). If DP attempts to get bound by something else, say an adverb of quantification, contra-indexing and thus ungrammaticality will result.¹¹

3.3. *Back to the Puzzle*

Recall the data that lead us on our foray into specific indefinites. First we noted that an existential indefinite could create a discourse referent to be picked up by a pronoun in a later sentence:

- (35) There is/will be *a firefighter* available and *s/he's* well-trained.

Second we saw that the discourse referent apparently was not available intrasententially:

- (36) There is/will be *a firefighter* available
a. #because *s/he's* paid.
b. #after *s/he* punches in.
c. #after Mary finds *her*.

I posited this descriptive generalization:

- (37) An existential indefinite DP creates a new file card (new discourse referent) only after its minimal IP is uttered.

I then pointed out that such intrasentential pronominal anaphora was possible just in case the indefinite was understood specifically:

¹¹ A question still remains: in the case of the indefinite bound by the adverb, why doesn't its coindexation with AGR force it to be conindexated also? I must assume (and leave open for further research) that (some?) quantifiers create a mini-domain of discourse they quantify over and in that domain there are referents for the AGR to associate with.

- (38) *A firefighter* will be available
 a. after *she* eats.
 b. because *she*'ll be in town for the weekend.
- (39) John bought *a book*
 a. after he saw *it* was about fish.
 b. before he read *it*.

To begin, let us note that (37) and (38) are ambiguous alone (without (a) and (b)). The DPs can each have an existential reading or a specific reading. Following Diesing (1992) I supposed the existential reading was derived when the DP was in VP at LF; existential closure binds their variables. The account outlined above will take care of the rest. The specific reading is derived if the subject and object in (37) and (38), respectively, are in Spec,AGR at LF:

- (40) a. $[_{AGRs} \text{ firefighter}(x) \text{ [AGRs]} \dots$ [LF]
 b. $\dots [_{AGRo} \text{ book}(x) \text{ [AGRo]} \dots$ [LF]

The AGR's coindex with the DPs in their Spec's:

- (41) a. $[_{AGRs} \text{ firefighter}(x_i) \text{ [AGRs}_i] \dots$ [LF]
 b. $\dots [_{AGRo} \text{ book}(x_j) \text{ [AGRo}_j] \dots$ [LF]

AGR is anaphoric; it must be bound by something in the discourse. If something is not already available, an appropriate DR is created and coindexation results:

- (42) a. $\text{DR}_i \dots [_{AGRs} \text{ firefighter}(x_i) \text{ [AGRs}_i] \dots$
 b. $\text{DR}_j \dots [_{AGRo} \text{ book}(x_j) \text{ [AGRo}_j] \dots$

As for the intrasentential pronominal anaphora, since it only needs an antecedent in the form of a discourse referent, it is possible in such a situation:

- (43) a. $\text{DR}_i \dots [_{AGRs} \text{ firefighter}(x_i) \text{ [AGRs}_i] \dots$ after she_i eats
 b. $\text{DR}_j \dots [_{AGRo} \text{ book}(x_j) \text{ [AGRo}_j] \dots$ before he read it_j

Summarizing, after noting that the specificity of a DP is semantically a relation between a DP and something in the discourse, and is syntactically a certain relation between the DP and AGR, I suggested that it is AGR that is mediating the relation between the DP and the discourse representation. This was implemented by extending the anaphoric AGR

hypothesis of Borer (1989) to include "discourse anaphoric" AGR as well as the reflexive anaphoric AGR argued by Borer to be implicated in Control. On the current hypothesis, AGR is anaphoric: it must be bound within its clause if reflexive (Control); or it must be bound within its discourse if pronominal (specificity).

4. Conclusion

It was argued that syntactically, specificity correlates with AGR. The evidence comes from a cross-linguistic survey which indicates that in many languages a DP associated with AGR (either by being specially Case-marked, triggering object agreement, surfacing in Spec,AGR, or by overt verb movement to AGR) is interpreted as specific. Semantically, specificity seems to be an association with the discourse representation. The hypothesis I supported was that AGR can be anaphoric to the discourse; this is an extension of Borer (1989) which argued that some types of AGR are anaphoric to a sentence internal binder. The hypothesis thus straightforwardly accounts for the correlation between DPs associated with AGR and the discourse.

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Jeffrey T. Runner
Department of Linguistics
South College
University of Massachusetts
Amherst, MA 01003

jrunner@titan.ucs.umass.edu