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AUTHOR   Adger, David
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ABSTRACT
                An analysis of subject placement in Italian argues
that placement is not determined entirely by case, but also partly by
interpretational considerations. The crucial step in the argument is
that there are independent well-formedness conditions on discourse
structures and that the apparent interpretational effects on preposed
subjects of unaccusatives in Italian are actually effects that derive
from judgments of felicity in discourse. The apparent optionality of
syntactic movement is in fact conditioned by an interface constraint
that requires each well-formed discourse representation structure to
have a set of corresponding terminal syntactic structures. These
considerations interact with a notion of global Economy to derive the
correlation between subject placement, optionality, and
interpretation. This conclusion actually reinforces rather than
threatens the autonomy of syntax. It removes any features from the
syntax that have purely interpretational motivation and leaves a
simple theory of argument licensing that is purely structural.
Contains 23 references. (MSE)

ECONOMY AND OPTIONALITY:
INTERPRETATIONS OF SUBJECTS IN ITALIAN*

David Adger

ECONOMY AND OPTIONALITY:
INTERPRETATIONS OF SUBJECTS IN ITALIAN[*]

David Adger

Department of Language and Linguistic Science
University of York

1. Goals

Optional movement is inconsistent with the notion of Economy. Interestingly, optional movement seems to correlate with different interpretations for the resulting structures; when movement is obligatory, on the other hand, the single resulting structure seems to have both of the possible interpretations assigned to the two structures given by optional movement. Why should these facts hold? I provide an answer which is based on the observation that the 'interpretational' differences noticed are actually not semantic at all, but fall within the purview of a separate field of linguistic competence: the ability that human beings have to assign sentences values as to their felicity in discourses. Given this, it follows that there must be an independently specified set of well-formedness conditions deriving well-formed discourses (see, for example work in DRT, especially Kamp and Reyle 1993). I argue that apparent optionality in syntax arises because of a constraint requiring each well-formed discourse to correspond to a collection of corresponding well-formed syntactic structures. Optionality in syntax then becomes essentially a meta-construct, arising out of the interaction between two independent subsystems of

linguistic competence. The apparent interpretational effects are actually effects that arise because native speakers attempt to construct different discourse contexts to satisfy the principles that map between syntax and discourse. The vitiation of these effects when movement is obligatory arises through the interaction of this theory of the interface and the requirement that the syntax be economical. I illustrate this conceptual framework here by taking two narrow domains: subject placement in Italian and the infelicity of anaphoric linkage in discourse across the scope of a quantificational expression.

2. The Problem
Consider the following well-known paradigm from Standard Italian (I shall ignore throughout this paper cases of so called free-inversion where the post verbal subject is not in its theta-position - see Belletti 1988):

(1)   Tre   leoni   hanno   sternutito.
        three   lions   have-3p   sneeze-pp
        'Three lions have sneezed.'

(2)   *Hanno   sternutito   tre   leoni.
        have-3p   sneeze-pp   three   lions

(3)   Tre   leoni   sono   scappati.
        three   lions   be-3p   escape-pp-3p
        'Three of the lions have escaped.'

(4)   Sono   scappati   tre   leoni.
        be-3p   escape-pp-3p   three   lions
        'Three lions have escaped.'

        Assuming some version of the Unaccusative Hypothesis (Perlmutter 1979; Burzio 1985), this paradigm raises an important question for theories of grammar which incorporate some notion of Economy of movement (Chomsky 1989, 1992, 1995): why, if movement is a 'last resort' operation, is (3) a possible syntactic

structure? Under the Unaccusative Hypothesis, (4) is essentially the base structure (where the subject is in its theta-position) and there appears to be no motivation for the subject to move to result in (3).

Now consider (3) and (4) more carefully. Belletti (1988) has argued that in (4) there is a definiteness effect which can be seen as long as we make sure that the complement is not free-inverted to a position outside VP. She gives examples with ditransitives:

(5)   Ogni studente   era   finalmente arrivato a lezione.
        every student   be-3s   finally   arrived to the lecture
        'Every student finally arrived to the lecture.'

(6)   *Era   finalmente   arrivato ogni studente a lezione.
        be-3s   finally   arrived   every student to the lecture

Interestingly, as noticed by Pinto (1994), the surface subject position of unaccusatives also shows an interpretative effect. Pinto claims that pre-verbal unaccusative subjects have to be interpreted as being D-linked (Pesetsky 1987); that is they have already been introduced in the discourse. This contrasts with the case of the unergative subject, which has no D-linking constraint imposed upon it.

There are three questions then: why can the subject move? Why does this result in an interpretative difference for the two resulting structures whereby the pre-verbal subject of an unaccusative is D-linked? And why, in the case of unergatives (and transitives) are pre-verbal subjects not necessarily D-linked? (I will ignore the definiteness effect in (6) in this paper, since I think it has an independent explanation.)

3. A Potential Solution
A potential solution to the first problem is suggested by Belletti's (1988) analysis of post-verbal subjects and developments of her ideas by de Hoop (1992) among others. Belletti claimed that the definiteness effect in (5) could be explained by the nature of the type of Case assigned by the unaccusative verb. She terms this Case 'partitive', assumes that its assignment is optional, and correlates it with

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5

indefiniteness. De Hoop points out problems with this idea, but essentially develops this line of thought, arguing for different types of Case assignment in the syntax, corresponding with different types of interpretative effect. I shall refer to the hypothesis that the kind of data in (5) and (6) can be dealt with through Case assignment as the Case Determination of Interpretation hypothesis (CDI).

How might the CDI account for the data in (5) and (6)? De Hoop proposes two types of structural Case which she terms 'weak' and 'strong'. For her, these correlate semantically with weak and strong readings of DPs, where a strong reading is essentially a generalised quantifier reading, and a weak one we can take for the moment as existential. Under the CDI we could propose that V-unaccusative assigns weak case to its complement and the auxiliary *essere* assigns strong case to its specifier. This will give us the right interpretative consequences.

What about (1), where the subject can have both interpretations? In this case we could say that the auxiliary *avere* assigns either type of Case to its specifier, which would mean that the subject of an unergative could have either type of reading. Note that if Pinto is right in her semantic characterisation of the readings of subjects in Italian, we can link the notion of D-linked to that of strong Case, and non-D-linked to that of weak Case.

One point of clarification: we cannot actually make the type of Case assigned relate to the auxiliary directly, since the same facts pertain when there is no auxiliary. We must therefore make I bear the Case assigning features, or assume an abstract auxiliary. However, for convenience I will refer to the Case assigning properties of *essere* and *avere* even though actually these properties are instantiated on finite I.

Unfortunately, however, this solution will not generalise effectively to other languages. French is a language which displays similar auxiliary selection facts to Italian and also displays a definiteness effect in impersonal passives:

(7)   Il est   arrivé   trois femmes/   *chaque femme.
        it be-3s arrive-pp   three women/   *each woman
        'There arrived three women/*each woman.'

(8)   Trois femmes/   chaque femme   sont/est   arrivée(s).
        three women/   each woman   be-3p/be-3s   arrive-pp-f(p)
        'Three women/Each woman   have/has arrived.'

However, French does not appear to display an anti-definiteness effect in (8), which is felicitous in contexts where the subject is non-D-linked. To capture the difference between Italian and French under the CDI one would be forced to jettison the claim that the type of Case was related to the type of auxiliary (or finite inflection) since in (8) we see the equivalent of the *essere* auxiliary in French with either a D-linked or non-D-linked subject.

Furthermore, the CDI seems to miss an important correlation which can be stated in the following intuitive terms: if movement to a position is optional then the two possible structures will have different interpretations; if movement to a position is obligatory, then both interpretations are available for the single structure. This correlation would seem to be essentially functional: you move something to a position to achieve an interpretative effect. In Section 5 of this paper I will develop a formal explanation for the correlation.

In the next two sections I want to present the details of an alternative view to the CDI. I'll argue that the interpretation of preposed subjects of unaccusatives in Italian is not simply that they are D-linked, but rather that such subjects behave as though they are required to be discourse anaphoric (in the sense of Discourse Representation Theory (Heim 1982; Kamp 1981; Kamp and Reyle 1993)). I'll do this by showing that preposed subjects of unaccusatives obey the same constraints as other discourse anaphors such as definites with respect to the scope of adverbial quantifiers (which are discourse anaphor islands). To do this I'll present a version of DRT designed to capture these effects.

I'll then argue that a maximally simple view of Case should be maintained, whereby Case has no interpretative force. It is required to license a DP but not sufficient to determine that DP's surface position. This does away with the notion of optional Case assignment as in Belletti's system. It also paves the way for an explanation of the interpretative correlates of subject placement. The idea is that movement of the subject of an unaccusative to pre-verbal position is an

option not because of Case optionality but rather because of conditions regulating the pairing of S-Structures and Discourse Representation Structures. A simple theory of Economy interacts with these conditions to explain the interpretative consequences of optional as opposed to obligatory subject raising.

4. Some Semantics

4.1 A Little DRT

Within Discourse Representation Theory (DRT) indefinites and definites contrast with true quantifiers such as *every* in that they are treated as free variables which only become bound during the interpretation procedure. These free variables are termed discourse referents (DRs) and a Discourse Representation Structure (DRS) consists of a universe of DRs and a collection of constraints on those DRs. An example might make this clearer:

(9) a.   A man entered. He sat down.
    b.   Every man entered. # He sat down.

In (9a) the subject of the first sentence introduces a DR x which is constrained so that the formula $man(x)$ must be true of it. Furthermore, the predicate of the sentence, enter, must also be true of it. This gives the following representation:

(10)

$$\boxed{\begin{array}{l} x \\ \hline man(x) \\ enter(x) \end{array}}$$
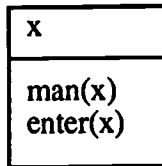
The pronoun in the second sentence of (9a), being a definite, introduces a further DR y, of which the condition that y sat down must hold:

8   6

(10)'

x y
man(x) enter(x) sat-down(y)

Given what I have said so far there does not appear to be any distinction between indefinites and definites. Both introduce DRs and constrain then with formulae. However, in order to capture the fact that the use of a definite pronoun is infelicitous unless there is something for the pronoun to refer back to (I use *refer* here intuitively), Heim (1982) proposes a felicity condition on definites, including pronouns:

(11) Suppose something is uttered under the reading represented by ϕ (where ϕ is an LF) and the discourse preceding ϕ has resulted in a DRS $\mathcal{K}$. $\mathcal{K}$ contains a set of discourse referents $\mathcal{U}$. Then for every chain C in ϕ it must be the case that:

Familiarity Condition: if C is a definite (including a definite pronoun) then there is a discourse referent x associated with C and $x = y$, $y \in \mathcal{U}$.

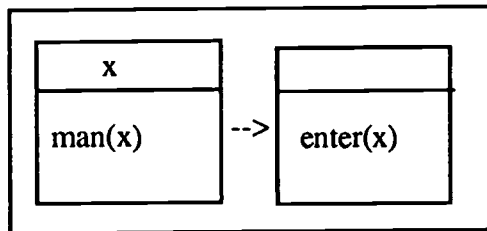otherwise ϕ is infelicitous with respect to $\mathcal{K}$.

This condition does not hold of indefinites like numerals, *some*, *many*, *several* etc. predicting that indefinites can begin discourses while definites cannot. The Familiarity Condition means that the DRS corresponding to (9a) will actually have to look as follows:

(12)

$$
\begin{array}{|l|}
\hline
x\ y \\
\hline
\text{man}(x) \\
\text{enter}(x) \\
\text{sat-down}(y) \\
y = x \\
\hline
\end{array}
$$
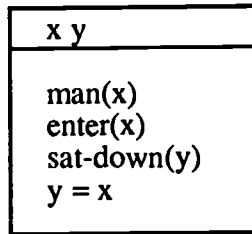
How then does this theory explain the infelicity of (9b)? The answer is in the DRT structures for quantified sentences (including sentences with adverbial quantifiers - this will become important later on). Kamp (1981) argues that sentences which contain a quantifier give rise to a sub-DRS within the main DRS. The extent of the sub-DRS is defined by the scope of the quantifier. Crucially the DRs in this sub-DRS are not accessible for anaphoric linkage from the main DRS:

(13)

$$
\begin{array}{|ccc|}
\hline
& & \\
\begin{array}{|l|} \hline x \\ \hline \text{man}(x) \\ \hline \end{array} & \text{-->} & \begin{array}{|l|} \hline \\ \hline \text{enter}(x) \\ \hline \end{array} \\
& & \\
\hline
\end{array}
$$

If we were to continue the first sentence of (9b) with the second, then the felicity condition on pronouns (12) will require the DR of the pronoun to be anaphorically linked with a DR in the main DRS. But there is no DR in the main DRS, leading to the correct prediction of infelicity of this sentence with respect to this discourse. I have followed Kamp's early notation for universal quantification here, using an implication sign. In actual fact it will turn out that we need to be specific about the quantificational relation between the two sub-DRSs in structures like (13) - see Kamp and Reyle (1993) for discussion.

Some types of DP always enter their discourse referent in the main DRS though, even if they are in the scope of a quantifier. Examples are

proper names and usually definites including demonstratives. So the following is a felicitous discourse:

(14) Every lion in captivity lived in this zoo. We thought it was secure, but they've all escaped now.

Here *it* refers to the zoo, which is possible because demonstratives enter their discourse referents in the main discourse and therefore the felicity condition on *it* can be met. This sentence also illustrates that the plural pronoun *they* seems to be able to pick up a group constructed out of the lions mentioned. The anaphoric properties of plural pronouns lie outside the scope of this paper (but see Kamp and Reyle 1993), but note that *every lion* triggers singular not plural agreement and can be anaphorically picked up by a singular pronoun in its scope, illustrating that something extra is going on with plural pronoun anaphora:

(15) Every lion in captivity wanted its freedom/knew that it needed to be free.

4.2 The Interpretation of Preposed Subjects

Preposed subjects of unaccusatives in Italian[1] appear to behave just like other discourse anaphors, even when they contain a cardinal (indefinite) like *tre* 'three'. Consider the following dialogues:

(16) Questioner: I hear you have lots of cats and dogs staying with you just now. How are they?

Speaker: Tre gatti   sono   · scappati
         three cats   be-3p   escape-pp-3p
         'Three cats have escaped.'

         #Sono   scappati   tre   gatti.
         be-3p   escape-pp-3p   three   cats

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[1] The judgements here are from Standard Northern Italian.

(17)   Questioner: How are you feeling?

Speaker:	Sono preoccupato.	Sono	scappati	tre leoni.
(works in a zoo)	I'm worried.	be-3p	escape-pp-3p	three lions

	#Sono preoccupato.	Tre leoni	sono scappati.
	I'm worried.	three lions	be-3p escape-pp-3p

With the unaccusative verb it appears that when there is a discourse referent available for *tre leoni* 'three lions' then pre-verbal position is the only one allowed. When there is no discourse referent available, then only post-verbal position is felicitous. So far, this squares with Pinto's report and one might imagine an account based on previous mention.

With subjects of unergatives, only pre-verbal position is allowed. We see this below:

(18)   Questioner: I hear you have lots of cats and dogs staying with you just now. Have they been up to anything funny?

Speaker: Si,   ieri   tre gatti   hanno sternutito.
         yes,   yesterday three cats   have-3p sneeze-pp
         'Yes, yesterday three cats sneezed.'

(19)   Questioner: Have you seen anything funny lately?

Speaker: Si,   ieri   tre gatti   hanno sternutito   lungo la strada.
         yes   yesterday three cats   have-3p sneeze-pp   along the street
         'Yes, yesterday I saw three cats sneeze on the street.'

Note that in contrast to (17) the pre-verbal position is fine whether there is an available discourse referent or not. Again this seems to follow Pinto's claim that D-linking is irrelevant for unergative subjects.

However, there is an argument that DRT style accessibility is actually what's at stake here, rather than just previous mention in the discourse. Consider the following two discourses:

(20) a. Ogni volta che le pop-stars e i divi del cinema che vivono al
numero 27 ritornano a casa, mi emoziano.
'Every time the pop-stars and film stars that live at number
27 come home, I get excited.'

b. Ieri,   tre pop-stars   sono   arrivate.
yesterday,   three pop-stars be-3p arrive-3pf
'Yesterday, three of the pop-stars came back.'

b'. Ieri,   sono   arrivate   tre pop-stars.
yesterday   be-3p arrive-3pf three pop-stars
'Yesterday, three pop-stars arrived.'
(must be different pop-stars from those living at no. 27)

(21) a. Ogni volta che delle pop-stars venguno nella mia strada, mi
emoziano.
'Every time pop-stars come to my street, I get excited.'

b. #Ieri,   tre pop-stars   sono   arrivate.
yesterday,   three pop-stars be-3p   arrive-3pf
'Yesterday, three of the pop-stars came back.'

b'. Ieri,   sono   arrivate   tre pop-stars.
yesterday,   be-3p   arrive-3pf three pop-stars
'Yesterday, three pop-stars arrived.'

In both of these sentences we have an adverbial quantifier which
will give rise to sub-DRSs in DRT. This predicts that discourse
referents that are inside the scope of the quantifier are not accessible to
those outside. In (20a), however, we have a definite, which is entered in
the topmost discourse and a pre-verbal subject in (20b) is well-formed.
A post-verbal subject (20b') is also well formed, on the condition that
the pop-stars referred to are not the ones previously introduced (the
familiar definiteness effect). In (21a), the discourse referent of pop-stars
is introduced by an indefinite, it will therefore be interpreted within the
scope of the quantificational adverb predicting that it is not accessible
for anaphoric reference. Given this, to predict the infelicity of (21b), we

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simply need to say that whatever is in the specifier of IP falls under the Familiarity Condition given above in (11) and repeated here.

(22) Suppose something is uttered under the reading represented by ϕ and the discourse preceding ϕ has resulted in a discourse structure $\mathcal{K}$. $\mathcal{K}$ contains a set of discourse referents $\mathcal{U}$. Then for every chain C in ϕ it must be the case that:

Familiarity Condition: if C is definite or in Spec, IP[2] then there is a discourse referent x associated with C and x = y, y ∈ $\mathcal{U}$.

otherwise ϕ is infelicitous with respect to $\mathcal{K}$

The point about (21) is that (21a) creates a sub-discourse $\mathcal{K}$ the discourse referents of which are not accessible except within $\mathcal{K}$. (21b) however, is outside $\mathcal{K}$, but contains an element in Spec, IP. There is no discourse referent in $\mathcal{U}$ which the discourse referent of *pop-stars* can be equated with. (21b) is therefore infelicitous with respect to (21a).

4.3 Mapping between Syntax and DRS

Note that the condition x=y is essentially non-linguistic. Definites behave in exactly the same way with respect to anaphora and deixis (Kartunnen 1976) so if we wish to capture this fact we need to assume that such a condition can be entered into the DRS non-linguistically, by an act of ostension, or something similar. This point is crucial, in that it means that there must be independent well-formedness conditions on the construction of DRSs.

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[2] I have formulated the Familiarity Condition here using the notion Spec IP. This is only for reasons of exposition, and readers will recognise that there is an issue as to exactly what kind of syntactic description should go in here so as to capture the widest variety of data. In Adger 1994 I developed the notion of Agr-Chain, which is a chain with a link in Spec AgrP and argued that by using this notion in the Familiarity Condition one could unify the interpretative effects that arise with subject placement, scrambling, clitic-doubling, wh-agreement and case.

The picture of the grammar built up here claims then that there is some set of well-formedness conditions on DRSs, and an independent set of well-formedness conditions on terminal syntactic structures (TSS), where by terminal syntactic structures I mean structures which satisfy all of the constraints of the syntax. TSS then is LF or SS depending on which you take to be the input to interpretation. Felicity conditions like the Familiarity Condition are essentially relations between DRSs and TSSs. Further mapping principles link other aspects of TS structure to aspects of DRS structure (possibly also stipulated in terms of chains). A minimal theory would relate head-chains to predicates in the DRS, and XP chains to DRs.

Are all of these mapping principles of the form F(TSS)=DRS? Are there any constraints the other way round? That is, are there mapping principles which are of the form F(DRS)=TSS? I would like to suggest that there is at least one and that it is this principle rather than Case which motivates movement of a subject of an unaccusative to Spec IP position. This principle essentially claims that the non-linguistically introduced information in a DRS must also be able to be linguistically introduced.

Assume that the (infinite set) of DRSs given by the DRS well-formedness conditions is $\mathcal{P}$, and the set of TSSs given by the syntax is $\mathcal{L}$, then:

(23) **Effability:** For every member p of $\mathcal{P}$ there is a corresponding member ℓ of $\mathcal{L}$

where ℓ corresponds to p iff for every felicity condition F, $F(\ell)=p$.[3]

5. Some Syntax

5.1 Movement and Economy
Chomsky (1991, 1992, 1995) has recently proposed that a number of grammatical principles might be reduced to principles governing the

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[3] Fabio Pianesi has pointed out to me that this definition as it stands will not halt. This problem can of course be solved trivially by requiring a single pass in whatever algorithm is used to implement it.

complexity of derivations and representations, where complexity is to be theoretically pinned down. For example, the principle of 'least-effort' requires that a derivation must be as 'short' as possible deriving the effects of the ECP under a relativised minimality view of the latter (Rizzi 1990). A further principle of Economy prohibits operations which are not needed to enable the derivation to successfully converge. For my purposes, it is sufficient to propose a rather general theory of Economy, of the following sort:

(24) **Economy:**
Minimise computational operations

Computational operations are copying, insertion and deletion as in the earliest versions of transformational grammar (Chomsky 1955). I will assume that movement consists of (one or more) copying operations, followed by a deletion operation, as argued in Chomsky (1992). Note that deletion may take place at TSS to satisfy the requirements of Full Interpretation (as discussed in Chomsky 1992 for reconstruction effects) or at PF (perhaps for cases of ellipsis, etc.). Deletion is of course subject to recoverability of content.

This theory of Economy should be construed globally, in the sense of Reinhart (1994) and Adger (1995). That is, a derivation leading to a particular TSS will be deemed to be more expensive than another derivation leading to the same structure if the former consists of more computational operations. It is in this sense that computational operations should be minimised.

5.2 Capturing the correlations
Let us return to our original paradigm (repeated here):

(25) Tre   leoni   hanno   sternutito.
     three   lions   have-3p   sneeze-pp
     'Three lions have sneezed.'

(26) *Hanno   sternutito   tre   leoni.
     have-3p   sneeze-pp   three   lions

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(27) Tre   leoni   sono   scappati.
      three   lions   be-3p   escape-pp-3p
      'Three of the lions have escaped.'

(28) Sono   scappati   tre   leoni.
      be-3p   escape-pp-3p   three   lions
      'Three lions have escaped.'

Ideally we would like to capture this with a minimal theory of Case, something like the following:

(29) • V assigns Case to its complement, and not to its specifier.
      • I assigns Case to its specifier.

This theory predicts that an unaccusative subject gets Case in its theta-position (complement of V position in (28)), and an unergative subject must move to Spec IP ((25) - because it cannot get Case in Spec VP, assuming that is its theta-position (Koopman and Sportiche 1991)). Ignoring Economy, it also predicts that a Spec IP subject of an unaccusative verb is well-formed ((27) - since it can receive Case there from I), and that a post-verbal subject of an unergative is bad (since it doesn't get Case - (26)). However, given Economy, why will an unaccusative subject ever raise to Spec IP if it can get Case in its theta position?

The answer Belletti (1988) proposes is that the Case assigned by unaccusatives is always optional. When the option is not taken to assign Case, then the subject must raise to Spec IP to get Case there.

There is an alternative solution which does not involve complicating Case theory in this way. An unaccusative subject will raise if there is some further well-formedness principle that it must obey. Now, note that if (27) were ill-formed there would be no TSS corresponding to the DRS where the DR of the subject is a discourse anaphor. This is in violation of Effability, which requires that for each DRS there be a corresponding TSS. Effability then requires that (27) be a possible TSS of Italian (note that to make this story go through, we have to assume that TSS is S-Structure for Italian. I suspect that it's S-Structure for all languages).

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To see how this works in more detail consider the schematic structures of (27) and (28):

(30) a.   escape three lions   (nothing in Spec IP)
       b.   three lions escape   (*three lions* in Spec IP)

The question is why (30b) is well-formed. (30a) corresponds to a DRS with a single plural discourse referent (say x) and three conditions on that discourse referent: $lion(x)$, $three(x)$ and $escape(x)$. This DRS is given independently by the DRS well-formedness conditions.

(30b) is a possible TSS because Effability requires there to be a TSS corresponding to a DRS where the escaping lions are anaphoric to some previously established lions. This will only be true if there is a TSS of which the Familiarity Condition holds for the three lions. This in turn will only be true if the DP *three lions* is definite or is in Spec IP. But surely this predicts that we can simply make the DP definite, rather than move it to Spec IP.

This conclusion certainly follows given what we have said so far. However, the felicity conditions on definites and those on Spec IP elements appears to be different. Crucially, it is possible to accommodate (that is to use a definite which hasn't itself been introduced in the discourse but is inferable from the discourse) from a definite in post-verbal position but not from pre-verbal position (see also Anagnostopoulou 1994 who first pointed out similar facts concerning clitic doubling in Modern Greek, and see Delfitto 1994 for scrambling of objects in Dutch):

(31)   Ieri ho visto un film su Fellini,
        'Yesterday I saw a film about Fellini,'

     a.   e oggi   e   arrivato   il regista   a casa mia.
        and today be-3s arrive-3s   the director   to my house
        'and today the director (of the film) arrived at my house.'

b. e oggi   il regista   e   arrivato   a casa mia.
    and today the director be-3s   arrive-3s   to my house
    'and today the director (Fellini) arrived at my house.'

Given this we need to tease apart the Familiarity Condition into two sections, where one part regulates Spec IP elements and the other regulates definites.

Then Effability forces the syntax to generate (27), even though (28) is well-formed.

The next question is why (27) is only felicitous with a discourse anaphoric reading for its subject, while (25) is felicitous with a discourse anaphoric reading or not. The answer to this question is the interaction of Economy with Effability.

Note that there are actually two chains that result from raising an unaccusative subject into Spec IP (30b) under the copy-and-delete view of movement outlined above, depending upon which copy is deleted. I will for the moment stipulate that (30b) itself is not a TSS and that either the link in Spec IP or the link in Compl VP must be deleted. This requirement is probably derivable from the different Mapping Conditions on VP internal and VP external objects, but I shall not go into that here (see Adger 1994, 1995; Diesing 1992). If we delete the copy in complement of V position we have an element in Spec IP, while if we delete the copy that is in Spec, IP position we obviously have nothing in Spec IP:

(32) a.   ~~a lion~~ escape a lion
      b.   a lion escape ~~a lion~~

This would appear to predict that a preposed subject of an unaccusative would have two readings, since there appear to be two TSSs for this sentence, contrary to fact.

However, note that the derivation of (32a), the variant where three lions is not discourse anaphoric involves two computational operations: Copy α, followed by Delete α. Note also that the result of this two-step derivation is exactly the result of not raising the subject in the first place. Given the theory of Economy discussed above, we predict that (32a) is not actually a TSS for (30b). So a raised subject of an

unaccusative verb does not have a non-discourse anaphoric reading, because the derivation that would give rise to that reading is blocked by the existence of an alternative structure which involves less computational steps.

In contrast consider the schematic form of an unergative:

(33) a. three lions sneeze
      b. * sneeze three lions

The simple Case theory outlined in (29) rules out (33b). Given the discussion above, however, we still have two putative TSSs for (33a):

(34) a. ~~three lions~~ sneeze three lions   (nothing in Spec IP)
      b. three lions sneeze ~~three lions~~   (*three lions* in Spec IP)

Note that there is no competing derivation in this case for (34a) since (33b) is ruled out anyway. This predicts that the subject of an unergative verb will have both readings, as it does.

5.3   A potential problem

The system outlined so far predicts that when movement to a position is optional then a structure involving the moved element will have a different interpretation from the structure involving the *in-situ* element. Specifically, with subject placement, it predicts that when a VP internal position for the subject is available, as well as Spec IP, then Spec IP subjects will be discourse anaphoric. An empirical problem for this prediction appears to arise in Catalan. In Catalan the canonical subject position for all verbs appears to be VP-internal (Vallduví 1993). An unergative verb like *trucar*, 'phone', allows a post-verbal subject and is felicitous in discourses where the subject is discourse anaphoric or not (again controlling for right dislocation):

(35) a. Deuran trucar   alguns convidats, oi?
          must-3p call   some guests, right
          'Some (of the) guests will probably call, right?'

Note that there is no definiteness effect here, even though the subject is VP internal. This contrasts with Italian, suggesting that the definiteness effect in Italian relates to a null expletive in subject position, which is not present in Catalan. The subject can also be preposed:

(35) b. Alguns convidats   deuran trucar, oi?
          some guests   must-3p call, right
          'Some (of the) guests will probably call, right?'

Unfortunately, there appears to be no interpretational difference here, contrary to the predictions of the theory.

However, there is an independent explanation for this effect. Catalan actually seems to have two subject positions: Spec IP, and an IP adjoined position. Vallduví (1992) has argued that Spec IP in Catalan is reserved for quantificational elements on a weak reading (that is in our terms non-discourse anaphoric). Vallduví argues that referential elements are barred from this position. The IP adjoined position, on the other hand, corresponds to the subject position in Italian and must be interpreted as discourse anaphoric.

6. Conclusion
This paper has argued that subject placement in Italian is not entirely determined by Case, but rather that it is also partly determined by interpretational considerations. The crucial step in the argument is that there are independent well-formedness conditions on discourse structures and that the apparent interpretational effects on preposed subjects of unaccusatives in Italian are actually effects that derive from judgements of felicity in discourse. The apparent optionality of syntactic movement is in fact conditioned by an interface constraint that requires each well-formed DRS to have a set of corresponding terminal syntactic structures. These considerations interact with a notion of global Economy to derive the correlation between subject placement, optionality and interpretation.

This conclusion actually reinforces the autonomy of syntax rather than threatens it. It removes any features from the syntax which have

purely interpretational motivation and leaves a simple theory of argument licensing which is purely structural.

REFERENCES

Adger, D. (1994) *Functional heads and interpretation*, Ph.D., University of Edinburgh.

Adger, D. (1995) Meaning, Movement and Economy. In R. Aranovich, W. Byrne, S, Preuss, and M. Senturia (eds.), *Proceedings of WCCFL 13*. Stanford: CSLI.

Anagnostopoulou, E. (1994) *On the representation of clitic doubling in Modern Greek*, ms., University of Tilburg.

Belletti , A. (1988) The Case of Unaccusatives *LI* 19.1-34.

Burzio, L. (1985) *Italian Syntax*. Dordrecht: Reidel.

Chomsky, N. (1955) *The Logical Structure of Linguistic Theory*. New York: Plenum.

Chomsky, N. (1989) Some notes on economy of derivation and representation *MIT Working Papers in Linguistics* 10.43-74.

Chomsky, N. (1992) A minimalist program for linguistic theory. In *Occasional Papers in Linguistics, 1*. MIT.

Chomsky, N. (1995) Bare Phrase Structure. In G. Webelhuth (ed.) *Government and Binding Theory and the Minimalist Program*. Oxford: Blackwell. 385-439.

Delfitto, D (1994) Beyond specificity: Proposals on cliticization and scrambling. Handout from talk given at the Third Plenary ESF Conference on Language Typology, le Bischenberg.

Diesing, M. (1992) *Indefinites*. Cambridge, Mass: MIT Press.

Heim, I. (1982) *The Semantics of Definite and Indefinite Noun Phrases*, Ph.D., University of Massachusetts, Amherst.

Hoop, H. d. (1992) *Case Configuration and Noun Phrase Interpretation*, Ph.D., University of Groningen.

Kamp, H. (1981) A theory of truth and semantic representation. In J. A. S. Groenendijk, T. M. V. Janssen and M. B. J Stokhof (eds.) *Formal Methods in the Study of Language*. Amsterdam: Mathematical Center Tracts.

Kamp, D. and U. Reyle (1993) *From Discourse to Logic*. Dordrecht: Kluwer.

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Karttunnen, L. (1976) Discourse referents. In J. McCawley (ed.) *Syntax and Semantics 7*. New York: Academic Press. 363-385.

Pinto, M. (1994) *Subjects in Italian: distribution and interpretation*, ms. University of Utrecht.

Perlmutter, D. (1979) Impersonal passives and the unaccusative hypothesis *BLS* IV.157-189, University of California.

Pesetsky, D. (1987) Wh-in-situ: movement and unselective binding. In E. J. Reuland and A. G. B. ter Meulen (eds.) *The Representation of Indefiniteness*. Cambridge, Mass: MIT Press.

Reinhart, T. (1994) *From syntactic encoding to interface strategies*, ms, OTS, Utrecht.

Rizzi, L. (1990) *Relativized Minimality*. Cambridge, Mass: MIT Press.

Vallduví, E (1992) A preverbal landing site for quantificational operators. In *Catalan Working papers in Linguistics*, Barcelona.

Vallduví, E. (1993) *The informational component*, Ph.D., University of Pennsylvania.

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