Unaccusatives -- An Overview

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UNACCUSATIVES -- AN OVERVIEW[1]

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The goal of this paper is to review some of the basic research concerning unaccusative verbs, and to provide a perspective on current work in this and related areas. The fundamental insight (due to work by David Perlmutter) is that superficially intransitive verbs divide into two classes, one usually called the "unergatives" and the other the "ergatives" or "unaccusatives". The "unergatives" are generally agreed to include agentive verbs like talk, shout, and hide while the "unaccusatives" include verbs like arrive, and remain. Unaccusatives behave in some ways transitively rather than intransitively, closely resembling passive verbs, which are often analyzed as involving movement of an underlying direct object NP into surface subject position. This resemblance is attributed to the underlying representation of unaccusatives, in which they are assigned an underlying object, but no subject. To put it differently (and perhaps not equivalently) they have only internal arguments, in the sense of Williams (1981). This hypothesis -- and variants of it -- has become known as the "Unaccusative Hypothesis". The basic idea is found in Perlmutter (1978) and has been developed in Government-Binding theory primarily in Burzio's work, especially Burzio (1986).

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1.   Ramifications of Unaccusativity

Impersonal Passivization
Perlmutter pointed out that impersonal passivization in
Dutch does not occur with unaccusatives. gedanst is the
impersonal passive of an unergative, gebleven of an
unaccusative.

(1)   a.   Er wordt hier door de jonge lui veel gedanst.
            'It is danced here a lot by the young people'
      b.   De kinderen zijn in Amsterdam gebleven.
            'The children remained in Amsterdam.'
      c.   *Er werd door de kinderen in Amsterdam
            gebleven.
            'It was by the children remained in
            Amsterdam.'

                                        (Perlmutter 1978)

Auxiliary Selection
In Italian the difference between unergatives and
unaccusatives is reflected in the auxiliary verbs they
select (see Burzio (1986), Centineo (1986), and Van
Valin (1987) on Italian; Hoekstra (1984) and Zaenen
(1987) for Dutch). The unaccusative arrivare selects
essere 'be', while the unergative telefonare selects
avere 'have'.

(2)   a.   Giovanni arriva / è arrivato.
            'G. arrives / has arrived'
      b.   Giovanni telefona / ha telefonato.
            'G. telephones / has telephoned'
                                        (Burzio 1986)

Ne Cliticization
Cliticization of ne in Italian also shows the effect of
the unaccusative/unergative distinction. ne corresponds
to a subpart of NP, and can be cliticized from the
(surface) subject of an unaccusative, but not from the
subject of an unergative. (See Belletti and Rizzi 1981,
Burzio (1986), and also Hoekstra (1984) on a related
phenomenon in Dutch.)

(3)   a.   Ne arrivano molti.
            'Of them arrive many'
      b.   *Ne telefonano molti.
            'Of them telephone many'
                                        (Burzio 1986)

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Participle Adjective Conversion

Certain intransitive verbs can convert to an adjectival form in English. This is sometimes treated as a case of adjectival passivization -- see for example, the discussion in Levin and Rappaport (1986, 653-4). Following an earlier observation in Bresnan (1982), Levin and Rappaport argue that only unaccusative verbs are eligible to undergo the process:

(4) a.   wilted lettuce, a fallen leaf
    b.   *run man, *coughed patient, *swum contestant

Agreement

Some languages are cooperative enough to reflect the distinction morphologically, in case-marking or agreement. Williamson (1979) reports on the morphology of Lakhota, where the direct object of a transitive verb like <u>hit</u> invokes the same morphological marking on the verb as the subject of an (unaccusative) intransive verb like <u>be tall</u>. The subject of a transitive invokes the same morphology as the subject of an (unergative) intransitive like <u>cry</u>.

(5) a.   a + ma + ya+phe
           loc+1PAT+2AG+hit
           'You hit me'

    b.   ma +haşke   ni +haşke
           1PAT+tall   2PAT+tall
           'I am tall   'You are tall'

    c.   wa +čheye   ya +čheye
           1AG+cry   2AG+cry
           'I cry'   'You cry'

The subject of 'hit' and 'cry' trigger <u>ya</u> in the second person, <u>wa</u> in the first person, and the object of 'hit' and (surface) subject of 'tall' trigger <u>ma</u> in the first person, and <u>ni</u> in the second person.

More recent research has uncovered a large number of other distinguishing characteristics. Null subjects with plural agreement can have an arbitrary plural reading in Spanish and Italian. However, this reading for null subjects is impossible for unaccusatives (also passives and middles) in both languages, (Jaeggli (1986, 50-51), Belletti and Rizzi (1986, 12-14)). The subject must have a definite interpretation, as in (6a), rather than the arbitrary interpretation of (6b).

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(6) a.   <u>pro</u> llegan cansados despué́s de un viaje tan largo.
          pro   arrive tired   after of a   trip so long
          'They arrive tired after such a long trip'

     b.   Aquí́ <u>pro</u> durmieron hace dos dí́as.
          Here arb slept   ago two days
          'Here arb slept two days ago'

                                        (Jaeggli 1986)

Gibson and Raposo (1986, 310) discuss a French dialect in which the subject of an intransitive verb with a complement is realized as a dative clitic in French causatives, instead of the standard accusative clitic. This possibility is available only with unergative verbs like <u>parler</u> 'speak', and not with unaccusatives like <u>parvenir</u> 'reach'.

(7) a.   On le/lui   laissera parler à son avocat.
          We him-acc/-dat will let speak to his lawyer
          'We will let him speak to his lawyer'

     b.   On le/*lui   fera parvenir   à Jean.
          We it-acc/*-dat will make arrive to Jean
          'We will make it reach Jean'
                            (Gibson and Raposo 1986)

In the French <u>faire-par</u> construction, the single argument of an unergative can be suppressed entirely, but that of an unaccusative cannot be, (Zubizarreta 1985, 264). (8b) is ungrammatical because the subject of <u>arriver</u> is unexpressed.

(8) a.   Il faut   laisser parler.
          It is necessary to let   speak

     b.   *Ça fait arriver en retard.
          That makes arrive late
                            (Zubizarreta 1985)

Clearly, the unaccusative/unergative distinction is deeply implicated in grammatical systems. Its reflexes are visible in a wide variety of linguistic constructions. Deriving all these properties from the unaccusative hypothesis would be impressive testimony to the success of lexico-syntactic theory.

2 Predicting Unaccusativity

Setting aside for the moment the issue of how unaccusativity should be represented, we can investigate the important question of what verbs are unaccusative. Is it possible to predict on some semantic basis whether a verb is unaccusative or not?

Noting that verbs of motion may be ambiguous, Perlmutter (1978, 162) suggests the classification of intransitive verbs in (9):

(9) unergative: predicates describing willed or volitional acts; manner-of-speaking verbs; sounds made by animals, certain involuntary bodily processes.

unaccusative: predicates expressed by adjectives in English; predicates whose "nuclear term" is a patient; predicates of existing and happening; non-voluntary emission of stimuli that impinge on the senses; aspectual predicates; duratives.

This view has not gone unchallenged: there is some question as to whether all languages count the same items as unaccusative, and whether the distinction is fully predictable even within individual languages. A well-known discussion of this question is found in Rosen (1984). She argues that the diagnostic of Italian auxiliary selection, illustrated in (2) above, calls into question the predictability of the unaccusative /unergative distinction. russare 'snore' selects avere, while arrossire 'blush' selects essere. sanguinare 'bleed' selects avere while zampillare 'well up' and svenire 'faint' take essere. Williamson (1979) notes that one set of Lakhota verbs takes the agent agreement marker although this is clearly unexpected given the semantic criteria -- the verbs for 'locative be', 'exist', 'dwell', 'live', and 'survive'. Surveying cross-linguistic evidence, Rosen also concludes (1984, 61-62) that different languages can classify verbs with the same meaning differently. The verb meaning 'die' is unaccusative in Italian, but unergative in Choctaw, while the verb meaning 'sweat' is unaccusative in Choctaw, but unergative in Italian.

Rosen even argues that auxiliary selection could not be represented by a diacritic on each individual verb, because of pairs like Mario ha continuato 'Mario continued' with avere and Il dibattito e continuato 'the

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debate continued' with _essere_. The conclusion would appear to be that unaccusativity can be neither predicted nor stipulated, a sorry situation for linguistic theory! However, the force of the _continuare_ examples depends on an implicit assumption: that the two uses of _continuare_ are necessarily listed together in such a way that they must have identical syntactic properties. By positing two sub-cases of _continuare_, (evidently with different selectional restrictions), we can resolve the problem. Note that the two cases of English 'continue' involved in the translation must obviously have distinct lexical information associated with them. The first is basically a two-place predicate, with a complement subject to omission, or "null complement anaphora". The second is a one place predicate of duration (clearly unaccusative by Perlmutter's criteria).

It is of course possible that unaccusativity is completely unpredictable, but the pervasiveness and systematicity of the distinction surely argue against this. If the unaccusative/unergative distinction is an arbitrary division which must be mastered by each learner of each language, how can we explain its cross-linguistic similarities? Why, for example, should agentive predicates never act as unaccusatives? Indeed, why should the distinction exist at all? Even if unaccusativity turns out not to be straightforwardly predictable from meaning alone, it may be predictable in terms of meaning plus some other, perhaps syntactic, criterion. Or the core cases could be predictable, with the outlying classes or individual verbs learned case-by-case using behavior of the core case as evidence.

Given the desirability of finding some principled account of unaccusatives, there are some avenues to be pursued before we surrender to the apparent arbitrariness of the data. The first point (already made by Perlmutter in his original work) is that it is not enough to translate a predicate from one language to another and expect that both predicates will behave the same way. Cross-linguistic apparent synonymity may be misleading: the predicates may very well differ in their properties in crucial ways, having different sub-cases for example, or a different total range of meanings. Some of these properties might interfere with the effects of unaccusativity. What is required is an _analysis_ of the predicates involved, and not just a list of their supposed meanings.

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The second issue concerns the use of "diagnostics". In the face of conflicting evidence it is possible to conclude, as Rosen does, that there is no system to be uncovered. Alternatively, one might explore the idea that some of the criteria simply do not coincide, and that this may be the source of the apparent variation. Consider, for example, the role of Italian auxiliary selection in Rosen's argument. It is quite possible that the class of unaccusative verbs is fully predictable, but auxiliary selection (which is not really ex‐plained by the unaccusative hypothesis anyway -- see below) is an imperfect diagnostic of unaccusativity. To be a perfect diagnostic it would have to correlate exactly with unaccusativity, and therefore provide a necessary and sufficient criterion for inclusion within the unaccusative class. Zaenen (1987) argues that two properties which have been taken to diagnose unaccusativity in Dutch, auxiliary selection and failure of impersonal passivization, in fact characterize different verb classes. (Whether either or both classes should count as "unaccusative" is an open question.) Clearly, the validity of any test used as a diagnostic depends on the directness of the relationship between unaccusativity and the grammatical property itself. It may well be that the system really involves partially overlapping but distinct verb classes, each associated with particular syntactic characteristics, and not just the single binary unaccusative/unergative distinction.

A good deal hinges on the predictability question. If unaccusativity and unergativity are just arbitrary properties of verbs then their analysis is of limited interest. It cannot reveal deep principles of the semantic organization of verbs, nor can it illuminate the issue of how semantics projects onto syntactic representation. Unaccusativity could still be syntactically informative, because of the ramifications of syntactic differences between the two kinds of verb, but such consequences would be nothing like as far reaching.

Even predicting unaccusativity is itself only half the battle: we need to know why a particular set of verbs is unaccusative. A classificatory scheme only allows us to predict the class of unaccusatives in the weakest way. With such a scheme, the unergativity or unaccusativity of a verb can be determined from its meaning, but this does not mean we have a theory of the relationship between meaning and syntax. Nothing

explains _why_ verbs with particular meanings occur in particular syntactic configurations, so the classification itself is totally unexplained.

It seems reasonable to seek a solution in the principles regulating the syntactic realization of arguments, and to develop a theory of semantics/syntax mappings which determines the representation of unaccusatives. Suppose, in accord with most current work, that unaccusatives are underlyingly (or initially) transitive. An explanation for the unaccusativity of certain verb classes could be attained by a "linking" principle which forces the relevant argument of an unaccusative verb to be realized in direct object position, while requiring that the relevant argument of an unergative verb be realized in the subject position.

Candidate linking principles include the _Universal Alignment Hypothesis_ (UAH), proposed by Perlmutter and Postal and discussed in Rosen (1984). According to the UAH, there exists some set of principles which predicts the initial grammatical relation of each nominal from the semantic representation of the clause. So the UAH asserts that there is a deeper (semantic) explanation for unaccusativity, but does not provide one.

According to the _Uniformity of Theta Assignment Hypothesis_ of Baker (1985, 57), identical thematic relationships between items are represented by identical structural relationships between those items at the level of deep structure. Baker states that UTAH entails an unaccusative analysis for examples like _melt_, where there is a corresponding transitive verb, which counts as the same "item" in whatever sense is relevant. But the principle says nothing about verbs like _arrive_, where no transitive counterpart exists. Moreover, UTAH does not explain why unaccusatives are represented as they are, it just says that the argument must be in the same position for all cases of a verb. If all themes were generated in subject position, and all agents in object position, UTAH would not be violated. Or, verbs could be mixed, with some having themes in object position (behaving as unaccusatives) and some having themes in subject position (behaving as unergatives). Provided that each verb is consistent with respect to each theta role, UTAH allows this.

There are two steps, then, involved in resolving these questions. One is discovering which semantic verb classes act as syntactic unaccusatives, and the other is

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discovering the principles which relate the semantics of the verbs to their syntax.

3.   The Representation of Unaccusatives

    How should unaccusatives be represented? How do they differ from unergatives? The standard answer, almost a matter of doctrine now, is that the relevant distinction is between verbs with an underlying or initial object and verbs with just an underlying subject. This is, in essence, the position advocated by Perlmutter (1978) and Burzio (1986).

    There are two primary alternatives. One involves the argument structure and linking properties of unaccusatives (Kiparsky 1987, Grimshaw to appear). Such theories posit a grammatical distinction between the unaccusatives and unergatives, but the distinction does not necessarily have implications for configurational representation, which could be identical for the two verb types.

    The other major line of investigation concerns the idea that semantic properties of unaccusative verbs, rather than derivational or other syntactic properties, directly determine their behaviour. This position has been taken, for example, in Lappin (1986) and Van Valin (1987). The syntactic representation of the verbs plays no role in such accounts. Note that this approach absolutely requires predictability of unaccusativity, since it must be linked to semantic characteristics of the verb and its arguments.

    Theory comparison is not straightforward at this point. Semantic theories by and large have not provided accounts for the syntactic behaviour which motivates the syntactic hypotheses. Syntactic accounts have not addressed the semantic anchoring of unaccusativity. By and large, work exploring the semantics of unaccusatives has focussed on the question of how the class of unaccusatives is _defined_, whereas work exploring the syntax has focussed on how the verbs _behave_. The matter is in part a question of which problems are taken as the central ones: explaining the syntactic effects of unaccusativity or illuminating the semantic basis of the phenomenon. However, there is no reason in principle why the two kinds of investigation should be incompatible. The most likely outcome is surely that the semantics of the verb determines the syntactic

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character of its arguments, and that the syntax of the arguments leads to the syntactic behaviour associated with unaccusativity.

4. Explaining the behaviour of unaccusatives

Assuming that some characterization of the class of unaccusative verbs is available, and assuming some interesting theory of their representation, the final question about the theory of unaccusatives is this-- how deep an explanation do we have for the actual behaviour of unaccusative verbs, and what are the outstanding research questions? I will examine here only the "standard" theory of unaccusatives, in which they have an object but no subject.

The most obvious question is why the object has to move to subject position, instead of just staying where it is. The straightforward answer in GB terms, and the one given in Burzio (1986), depends on case theory. If unaccusatives do not assign case, the post verbal NP will be forced to move to subject position for case-theoretic reasons. (See Belletti (to appear) for an alternative analysis of the case properties of unaccusatives.) But why don't unaccusative verbs assign case? A partial answer has been provided in the form of what is now known as "Burzio's generalization", given in (10).

(10) Burzio's Generalization:
      If a Verb does not assign a theta-role to its subject, it does not assign case to its object.

The principle holds for passives, unaccusatives and subject raising verbs, all of which fail to theta-mark a subject, and all of which are superficially intransitive. It relates case-marking to theta-marking properties, and guarantees that unaccusatives will not assign case to their object. With no source of case, the NP will be forced to move (although in principle it could move to a case-marked but non-theta-marked position other than the subject of the unaccusastive verb).

Nevertheless Burzio's generalization _is_ a stipulation. As far as we know, the principle could just as well say any number of other things about the relationship: verbs which theta-mark subjects are case-assigners, or verbs which don't theta-mark subjects are case-assigners, or verbs which theta-mark subjects are not case-assigners.

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What of other properties of unaccusative verbs, like the ones discussed above in (1) - (8)? Many of them have been at least partly explained in terms of the unaccusative hypothesis. Perlmutter attributed the impersonal passivization effects of (1) to the "1-Advancement Exclusiveness Law" of Relational Grammar, which limits promotion to subject to one per clause. Unaccusative advancement involves promotion of an object to the subject role, and impersonal passivization involves promotion of a dummy element to subject. The two promotions are mutually exclusive, because of the Law, and therefore a clause in which unaccusative advancement has occurred cannot undero impersonal passivization. (Hoekstra (1984) contains further discussion of this solution.)

The behaviour of the clitic _ne_ illustrated in (3) can also be understood as a consequence of the unaccusative hypothesis: see Belletti and Rizzi (1981), Burzio (1986). The fundamental generalization is that _ne_ cliticization is possible from object position but not from subject position, hence it is permitted with unaccusative "subjects" because underlyingly they are inside VP, like any other object.

Zubizarreta (1985) suggests that external arguments can in general be suppressed, while internal arguments must be realized. If unaccusative verbs have only internal arguments, none of their arguments can be suppressed, and this explains the difference between unergatives and unaccusatives in the causative constructions of (8).

As for the arbitrary plural subject data in (6), Jaeggli (1986, 62) concludes that "an arbitrary plural pronominal cannot be in a chain that is case or theta-marked by a verb" and offers an explanation for this restriction in terms of the indexing properties of the pronominal. Similarly, Belletti and Rizzi (1986) suggest that the arbitrary plural pronominal occurs only in theta positions, and is therefore barred from derived subject positions.

Surprisingly, auxiliary selection falls into a category of unexplained phenomena, despite the fact that selection is one of the best known differences between the two verb classes, and indeed has played a major role in motivating the distinction. In this case rather than an explanation, we have a case of what we might call the "single stipulation".

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A version of the Relational Grammar rule of
auxiliary selection (taken from Rosen 1984, 46) is given
in (11):

(11) Select <u>essere</u> 'be' in any clause that contains a 1-
     arc and an object-arc with the same head.
     Otherwise select <u>avere</u>, 'have'.

A simplified version of Burzio's rule, from Burzio
(1986, 55), is given in (12):

(12) The auxiliary will be realized as <u>essere</u> whenever a
     'binding relation' exists between the subject and a
     'nominal contiguous to the verb'.

The general idea behind both of these statements is to
combine the auxiliary selection of unaccusatives with
reflexive verbs and passives, all of which select
<u>essere</u>, and all of which involve some special
relationship between object and subject position.

However, a number of properties of the rule remain
totally unexplained. Why, for example, should this
subject position-object position relationship affect
auxiliary selection, while other relationships between
positions do not? Why should it be <u>essere</u> that occurs
when the relationship is found, and not <u>avere</u>? After
all, <u>essere</u> is generally a predicator, while <u>avere</u> is
not, and it seems reasonable to think that the choice
between the two follows from this difference, and does
not need to be stipulated. With the rule of (10) or
(11) selection could just as well work the other way
round, with unaccusatives selecting 'have' and
unergatives selecting 'be' in some languages. (A
proposal which addresses this problem can be found in
Kiparsky (1987).)

This is not to say, of course, that no progress has
been made. It is certainly an important insight that
passives, reflexives and unaccusatives share the
property that underlies auxiliary selection. Current
work on the problem, such as Centineo (1986), Van Valin
(1987), and Zaenen (1987), promises to develop a richer
understanding about the principles governing auxiliary
selection.

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5.   <u>Conclusion</u>

In sum, there are two problems concerning the representation of unaccusatives: determing what it is, and determining why it is what it is. The goal is to predict the representation of unaccusative and unergative verbs from general principles governing the mapping between semantics and syntax, and then to explain their grammatical behavior as a function of their representation. The theory of unaccusatives will take its place as part of a general theory of the lexical and syntactic representation of predicates.

FOOTNOTES

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