Argument Structure: Passives, Middles, and Unergatives

1 Elements of Argument Structure

So far we have restricted our attention to transitive verbs - two functional heads (T^0, v^0) and two DPs that need case. Now we consider instances where there is only one DP.

We will see that the cut will not be (in)transitivity, but rather whether an external argument is present and what kind of v head we have and whether it licenses case. Moreover it will be important to distinguish a particular kind of syntax from the kinds of roots that can appear in a particular syntactic configuration.

The resulting classification is shown below:

(1) a. when there is an external argument:

      i. Unergative Intransitives: Angela laughed.

      ii. Transitives: Makoto destroyed the submarine.

      iii. Ditransitives: Minjoo gave him a present.

     (the term <u>unergative</u> is sometimes extended to apply to all of the above. But this is rather uncommon.)

  b. when there is no external argument:

      i. Middles: Bureaucrats bribe easily.

      ii. Alternating Unaccusatives: The submarine sank. (also called Ergatives)

      iii. Non-alternating Unaccusatives: The students have arrived.

      iv. Passives: The submarine was sunk by Dave.

     (the term <u>unaccusative</u> is often extended to apply to all of the above.)

2 Basic Intransitives: Middles, Unaccusatives and Unergatives

It is easy to tell passives apart from the basic intransitives. How/why do we distinguish between the other intransitives?

2.1 Middles and Ergatives

2.1.1 The Facts

Middles and Ergatives are easy to spot because corresponding to the intransitive, there exists transitive counterparts. (See Keyser and Roeper (1984) for details).

(2) Middles: most, but not all, English verbs can appear with middle syntax (see Keyser and Roeper (1984):383 for the verbs that do not appear with middle syntax)

a. i. Middle syntax: Bureaucrats bribe easily.

    ii. Transitive syntax: David bribed the bureaucrats.

b. i. Middle syntax: The baggage transfers efficiently.

    ii. Transitive syntax: David transferred the baggage.

Middles require adverbial support. Without the adverbial expression, the middles shown above would be ungrammatical.

(3) Ergatives: a surprisingly large number of English verbs (bounce, break, fracture, open, roll, sink and many many more, see Keyser and Roeper (1984):390 for a long list) can appear with ergative syntax.

a. Ergative syntax: The door opened.

b. Transitive syntax: John opened the door.

But not all verbs can appear with ergative syntax in English e.g. cut, hit etc.

Note also that unlike middles, ergative syntax does not require adverbial support.

2.1.2 Distinguishing Middles and Ergatives

• Requirement for adverbial support - negation and sometimes intonation can also substitute for adverbial support.

• Interpretive Properties:

(4) Compatibility with the progressive:

a. Ergatives are compatible with the progressive:

    i. The boat is sinking.

    ii. The ball is bouncing.

    iii. The door is closing.

b. Middles are incompatible with the progressive:

    i. *Chickens are killing easily.

    ii. *Bureaucrats are bribing easily.

    iii. *The floor is waxing easily.

More generally, middles always have a generic flavor to them - they cannot be used to describe a particular event in time while ergative can.

(5) a. Middle: *The bureaucrat bribed easily at exactly 5pm yesterday.

     b. Ergative: The door of the temple opened at exactly 5pm yesterday.

Keyser and Roeper (1984) argue that middles are always statives, and hence incompatible with point adverbials and the progressive as well as the complements of perception verbs.

(6) a. Middles:

i. *I saw bureaucrats bribe easily.

  ii. *I saw the floor wax easily.

  iii. *I saw chickens kill easily.

b. Ergatives:

  i. I saw the door open.

  ii. I saw the ball bounce.

  iii. I saw the vase break.

It has been argued in Condoravdi (1989) that middles are always generic statements. This fits well with Keyser and Roeper (1984)'s observations.

- A syntactic test: middles do not form prenominal modifiers while ergatives do.

(7) a. Ergatives:

  i. the swiftly rolling ball

  ii. the slowly bouncing ball

b. Middles:

  i. *the easily bribing men

  ii. *the deftly killing chickens

  iii. *the rapidly painting wall

2.1.3 A formal treatment of Ergatives

(8) a. Transitive:
  T^0 $[_{vP}$ DP $[_{v'}$ v_{AG} $[_{VP}$ $\sqrt{}$ DP]]]

b. Ergative:
  T^0 $[_{vP}$ v_{UNACC} $[_{VP}$ $\sqrt{}$ DP]]

- T^0 assigns case to the DP.
- NP moves to [Spec,TP] to satisfy T^0's EPP feature.

Why does v_{UNACC} not block the Agree relationship between T^0 and the DP? Within the system at hand this would have to be because v_{UNACC} does not have the relevant features.

The absence of the v_{AG} receives support from facts concerning semantic interpretation, incompatibility with by-phrases, compatibility with adverbs like all by itself, and syntactic visibility for the purposes of control.

(9) a. *The boat sinks by the navy.

b. The boat sank all by itself.

c. *The building burned [to collect the insurance].
  (vs. The buildins were burned [to collect the insurance].)

2.1.4 A formal treatment of Ergatives

Middles would have substantially the same syntax as Ergatives, but with a different v̲ head, which would be the locus of the distinct semantic properties of Middles.

• An open question: do middles have agentivity as part of their structural representation?

This questions remains open (see Stroik (1992), Zribi-Hertz (1993), Ackema and Schoorlemmer (1995), Rapoport (1999), among others).

Keyser and Roeper (1984) argue for syntactic agentivity in the middle on the basis of the oddness of the following.

(10)   *Bureaucrats bribe easily all by themselves.

But they note that other tests do not go the same way. Like Ergatives, Middles do not permit by̲-phrases or display other signs of a syntactically active implicit agent.

(11)   a.   *Bureaucrats bribe easily by managers.
       b.   *Bureuacrats bribe easily [to keep them happy].

• My conclusion: a distinction is needed between syntactically represented agentivity and encyclopedic/semantic agentivity. Certain roots that appear with middle syntax (e.g. bribe) might have encyclopedic/semantic agentivity, but there is no syntactically represented agentivity.

3   Unergatives and Non-Alternating Unaccusatives

In the case of Middles and Ergatives, the existence of the alternation and the assumption that θ-roles depend upon the point of Merge guided us straightforwardly to the conclusion that the single argument of a Middle/Ergative was merged VP-internally and not in the [Spec,vP].

Now we examine certain intransitive predicates where things are not so clear on the surface.

(12)   a.   Unergative: David laughed.
       b.   Non-alternating Unaccusative: David arrived.

It is not clear in these cases where the subject is merged.

A closer examination reveals certain systematic differences between the two classes indicated in (12) which can be made to follow if we assume the following structures:

(13)   a.   Unergative: T^0 $[_{vP}$ NP $[_{v'}$ v_{AG} $[_{VP}$ $\sqrt{}$ ...]]]
       b.   Unaccusative: T^0 $[_{vP}$ v_{UNACC} $[_{VP}$ $\sqrt{}$ NP]]

The main intuition is that the subject of an unaccusative is at some point in the derivation an object while the subject of an unergative is always a subject - in our terms, this comes down to the idea that the subject of an unaccusative is merged lower (VP-internally) than the subject

of an unergative (as the [Spec,vP]). This is also known as the Unaccusative Hypothesis (due to Perlmutter, also Burzio).

The subject always surfaces in nominative - accusative as a 'dependent' case.

3.1 Tests for Unaccusativity

Tests: different tests for the unaccusative/unergative distinction tend to apply in different languages. There is also a debate about exactly what these tests diagnose - a syntactic difference between the two classes or a semantic difference between two sets of predicates.

• Prenominal Modifier Formation (but see Levin and Rappaport-Hovav (1995) for a cautionary note)

(14)   a. *the recently laughed boy

       b. the recently arrived man

• A semantic distinction:

(15)   Who is Dave acting upon?

       a. Dave made Roumi laugh.

       b. Dave made Roumi arrive on time.

• Cognate Objects: many unergatives allow for a cognate object, while unaccusatives do not.

(16)   a. John laughed (a hearty laugh).

       b. John danced (a thrilling dance).

       c. *John arrived an arrival.

       d. * John fell a fall.

• Auxiliary Selection: in many languages unaccusative predicates and unergative predicates take different auxiliaries in the perfect, unaccusatives combining with <u>be</u> and unergatives combining with <u>have</u>.

(17)   Italian

       a. Unaccusatives, <u>be</u>:

           Molte ragazze sono arrivate
           Many girls   are   arrived.3pl

           'Many girls have arrived.'

       b. Unergatives, <u>have</u>:

           Molte ragazze hanno telefonato
           Many girls   have   phoned.3sg

           'Many girls have phoned.'

• test diagnoses 'deep' unaccusativity

• <u>ne</u>-cliticization in Italian: <u>ne</u>-cliticization is possible out of objects and subjects of unaccusatives but not out of subjects of transitives or unergatives.

(18) <u>ne</u>-cliticization possible from object of transitive:

    a. Gianni trascorrerà   tre   settimane a Milano.
        Gianni spend.Fut.3Pl three weeks   in Milan

        'Gianni will spend three weeks in Milan.'

    b. Gianni ne   trascorrerà   tre   a Milano.
        Gianni of-them spend.Fut.3Pl three in Milan

        'Gianni will spend three of them in Milan.'

(19) <u>ne</u>-cliticization not possible from subject of transitive:

    a. Alcuni persone trascorreranno tre   settimane a Milano.
        some   people spend.Fut.3Pl three weeks   in Milan

        'Some people will spend three weeks in Milan.'

    b. *Alcuni ne   trascorreranno tre   settimane a Milano.
        some   of-them spend.Fut.3Pl three weeks   in Milan

(20) subjects of unergatives can be postverbal, still no <u>ne</u>-cliticization:

    a. Telefoneranno   tre   persone domani
        telephone-Fut.3Pl three people   tomorrow

        'Three people will telephone tomorrow.'

    b. *Ne   telefoneranno   tre   domani
        of-them telephone-Fut.3Pl three tomorrow

(21) a. <u>ne</u>-cliticization possible out of the subject of an unaccusative:

        Ne   arriveranno   molti
        of-them arrive.Fut.3Pl many

        'Many of them will arrive.'

    b. But subject has to be postverbal:

        *Molti ne   arriveranno
        many   of-them arrive.Fut.3Pl

    → test diagnoses 'surface' unaccusativity

• Passivization of intransitives: some languages (e.g. Hindi, possibly German) allow a subset of intransitives to be passivized - the subset that can be passivized is the unergatives, the subset that cannot is the unaccusatives.

• In most languages with incorporation, it is only possible to incorporate out of object position, not out of subjects. Incorporation seems to be possible out of subjects of unaccusatives but not out of subjects of unergatives.

(22) Onondaga (Baker 1988:87, 89)

    a. Unaccusatives:

        i. non-incorporated:

           Ka-hi-hw-i   ne?o-**hsahe?t**-a?
           3N-spill-Caus-Asp the-PRE-bean-SUF

           'The beans spilt.'

        ii. incorporated:

           Ka-**hsahe?t**-ahi-hw-i
           3N-beans-spill-Caus-Asp

           'The beans spilt.'

    b. Unergatives:

        i. Unincorporated:

           H-ate-?se:-?   ne?o-**tsi?kt**-a?
           3MS-Refl-crawl-Asp the-PRE-louse-SUF

           'The louse crawls.'

        ii. Incorporated:

           *H-ate-**tsi?kti**-?se:-?
           3MS-Refl-louse-crawl-Asp

3.2 Variable Unaccusativity

• differences between unaccusative/unergative verbs vs. unaccusatice/unergative syntax.

• An important observation in the study of unaccusatives has been that many verbal roots can appear with both unaccusative and unergative syntax. The syntactic frame involved has an impact on the interpretation.

Possessor datives in Hebrew: this test is similar to ne-cliticization in Italian in that it treats objects of transitive verbs and subjects of unaccusatives in one way and subjects of transitive verbs and subjects of unergatives in another. A possessor dative cannot associate with the latter but can with the former.

(23) Hebrew (from Borer and Grodzinsky (1986))

    a. possessor dative:

        ha-praxim navlu le-rani.
        the-flowers wilted to-Rani

        'Rani's flowers wilted.'

    b. possessor dative cannot be linked to subject of transitive:

        Le-mi   ha-yeladim xatxu 'et   ha-gader
        to-who the-boys   cut   Acc the-fence

        'Whose fence did the boys cut?/*Whose boys cut the fence?'

c. possessor dative cannot be linked to subject of unergative:

   *Le-mi ha-xatulim yilelu
   to-who the-cats   whined

d. possessor dative cannot be linked to subject of unaccusative:

   Le-mi   ha-mitriya   nafla
   to-who the-umbrella fell

   'Whose umbrella fell?'

Using the presence of reflexive datives to diagnose the presence of an external argument (see Borer and Grodzinsky (1986) for details) and the licensing of possessor datives to diagnose unaccusativity, Borer (2005) presents the following minimal pairs:

(24)   (Hebrew, from Borer (2005):32-33)

   a. ha.praxim nablu   le-rani/li.
      the   flowers wilted   to-Rani/to-me

      'Rani's/my flowers wilted.'

   b. ha.praxim$_i$ nablu lahem$_i$.
      the.flowers wilted to.them

      'The flowers were wilting.' (implies self-directed motion)

(25)   (Hebrew, from Borer (2005):33)

   a. ha.qir   hitporer   le-rina/la.
      the.wall crumbled to.Rina/to.her

      'Rina's/her wall crumbled.'

   b. ha.kir$_i$ hitporer   lo$_i$ (le-'ito).
      the.wall crumbled to.it slowly

      'The wall was crumbling slowly.'

• The following correlation has been found to exist between the unaccusative/unergative distinction and interpretation.

(26)   Syntactic unaccusative diagnostics are associated with telic and non-agentive characteristics. Syntactic unergative diagnostics, on the other hand, are typically associated with atelicity and with agentive interpretation. (from Borer (2005):34, who cite Perlmutter (1978) and specially Van Valin (1991))

(27)   (from Borer (2005):34)

    a. unaccusative syntax, telicity:

        ??ha.praxim na<u>blu</u> le-rani me-axat   'ad šaloš ve-'az   yarad gešem ve-hem
        the.flowers wilted to.Rani from-1pm to 3pm and-then fell   rain   and-they
        hit'ošešu
        recovered

        'The flowers wilted from 1pm to 3pm but then it rained and they recovered.

    b. unergative syntax, atelicity:

        ha.praxim$_i$ na<u>blu</u> lahem$_i$ me-axat   'ad šaloš ve-'az   yarad gešem ve-hem
        the.flowers wilted to.them from-1pm to 3pm and-then fell   rain   and-they
        hit'ošešu
        recovered

        'The flowers wilted from 1pm to 3pm but then it rained and they recovered.

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