Deponency in the Mirror: A Unified Approach to Deponents and Unaccusatives

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0. Claim

Deponency and unaccusativity exhibit a mirrored behaviour in all modules of the grammar and are thus to be analysed as two instances of the same phenomenon. This analysis captures this mirror image elegantly by invoking two principles: Identity Avoidance & Lexical Override

1. Introduction

(1)   Deponency is **a mismatch between form and function**. Given that there is **a formal morphological opposition** between **active and passive** that is the **normal realisation** of the corresponding functional opposition, deponents are **a lexically specified set** of verbs whose passive forms function as actives. **The normal function is no longer available** (Baerman 2007).

(1) captures cases of canonical deponency like the mismatch in Latin verb inflection. Other cases of deponency may differ in all of the mentioned properties but the first one ('mismatch between form and function'). The present talk will deal with the case of canonical deponency in Latin.

(2)   Nempe   patr-em   sequ-untur   liber-i.
       Of.course father-ACC.SG follow-3PL-PRES.PASS child-NOM.SG
       'Of course, the children follow the father.' (Bermudez-Otero (2007:231))

2. The data - Properties of deponent verbs

Morphology: passive

The morphology of deponent verbs is always identical with to the morphology of regular verbs in passive voice. This identity extends to all possible combinations of ϕ-, tense-, aspect-, and mood-features.

(3)

	amare - 'love' (regular)	auxiliari - 'help' (deponent)
	Passive	Active
1.SG.PRES.IND	am-or	auxili-or
2.SG.PRES.IND	am-āris	auxili-āris
3.SG.PRES.IND	am-ātur	auxili-ātur
1.SG.PERF.IND	am-ātus sum	auxili-ātus sum
2.SG.PERF.IND	am-ātus es	auxili-ātus es
3.SG.PERF.IND	am-ātus est	auxili-ātus est
3.SG.FUT.IND	ama-bi-tur	auxilia-bi-tur
3.SG.PRES.SUBJ	am-e-tur	auxilietur

Semantics: active

The semantics of deponent verbs is exactly the same as with 'normal' transitive verbs in active voice. Many deponent verbs have subjects and objects (and hence cannot be underlyingly passivized). Deponent verbs furthermore do not constitute a special semantic class of verbs (and hence cannot be some kind of underlying psych-verbs)(c.f. Xu et al. 2007)

(4) Cethegus Ciceronis   ianuam   obsideret   eum=que   vi
     Cethegus Cicero-GEN door-ACC beset-IMPERF-SUBJ-3SG him-ACC=and violently
     aggrederetur
     attack-IMPERF-SUBJ-3SG
     'Cethegus was to beset Cicero's door and assault him' (Embick 2000)

Syntax: active with regard to: Case, Agreement, etc. -
       passive with respect to: Periphrasis

The syntax of deponent verbs does not behave consistently. With regard to case assignment, agreement, number of possible arguments, etc., it behaves like an active transitive verb.

(5) Puer   militem   sequi-tur
     boy-NOM soldier-ACC follow-PASS.3.SG
     'The boy is following the soldier' (Embick 2000)

Under the assumption that periphrasis is a syntactic phenomenon (cf. Embick 2000), however, the syntax behaves like it does with a passive transitive verb.

(6) a. Via-m   secutus   sum.
         way-ACC follow.PTCP be.1.SG
         'I followed the way.'
     b. Satis   sum   verberatus.
         enough be.1.SG beat.PTCP
         'I was beaten enough (times)' (Maccius Plautus, 5.1)
     c. Domin-us   verbera-v-it   serv-um.
         Master-NOM beat-PERF-3.SG servant-ACC.
         'The master beat the servant.'

The deponent verb 'sequi-' follow (Example a) chooses analytic verb form in perfective aspect, just like a passivized transitiv verb (Example b). A non-deponent verb however chooses a synthetic form in perfective aspect (Ex. c)

Exceptions:

A handfull of deponent verbs may not only occur in clauses with active syntax/semantics but also in passives. This is a lexical exception restricted to a few deponent verbs.

(7) Ab amicis horta-re-tur
     by friends urge-IMPERF.SUBJ-PASS.3SG
     'He was urged by friends' (subjunctive) (Embick 2000)

There are no morphological exceptions. An active verb form of a deponent verb like 'horto' or 'auxilio' are ungrammatical. Deponent verbs can never be combined with active morphology.

(8)   Properties of deponent verbs:

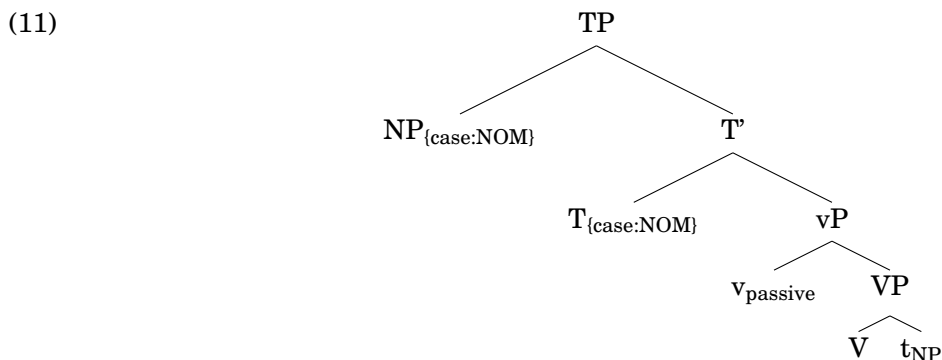|		
Morphology		Passive
Syntax	Periphrasis	Passive
	Case	Active
Semantics		Active
Exceptions	Morphology	None
	Syntax	Some lexical exceptions
	Semantics	Some lexical exceptions

Properties of unaccusative verbs

Morphology: active

The morphology of unaccusative verbs is undeniably active. This applies to German, English as well as Latin in all possible combinations of ϕ-, tense-, aspect-, und mood features.

(9)		amo - 'love' (active)	madesco - 'get wet'
	1.SG.PRES	am-o	madesc-o
	2.SG.PRES	am-ās	madesc-ās
	3.SG.PRES	am-āt	madesc-āt
	1.SG.PERF	am-āvi	madesc-āvi
	2.SG.PERF	am-āvisti	madesc-āvisti
	3.SG.PERF	am-āvit	madesc-āvit
	3.SG.FUT.IND	ama-bi-t	madesca-bi-t
	3.SG.PRES.SUBJ	am-e-t	madesc-e-t

Syntax: passive with respect to: Case, Agreement, etc. -
       active with respect to: Periphrasis

The syntax of unaccusative verbs is inconsistent either. With respect to Case, Agreement, etc. it behaves as if it was passive (the complement of the verb is raised to subject position receiving nominative case and triggering active morphology)(c.f. Perlmutter (1978), Levin & Rappaport-Hovav (1995), Alexiadou et al. (2004)).

(10)   Castor   madesc-āt
        Castor.NOM get.wet-PRES.3.SG
        'Castor is getting wet'

(11)

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                        TP
                       /  \
            NP{case:NOM}    T'
                          /    \
                 T{case:NOM}    vP
                              /   \
                        v_passive  VP
                                  /  \
                                 V   t_NP
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However an unaccusative verb behaves like a transitive active verb when it comes to the question of whether to choose a analytic or synthetic verb form in perfect tense:

(12)   a.   Filius qui in Marathonia pugna cecidit   ...
            son   who in Marathon   battle fall.PERF.3.SG
            'The son who fell in the battle of Marathon...' (Cicero, Letters to Atticus)
       b.   Satis   sum   verberatus.
            enough be.1.SG beat.PTCP
            'I was beaten enough (times)' (Maccius Plautus, 5.1)
       c.   Dominus   verberavit   servum.
            Master.NOM beat.PERF.3.SG servant.ACC.
            'The master beat the servant.'

Semantics: passive(?)

The semantics of unaccusative verbs is a controversial topic. By and large, everyone agrees that a clause with an unaccusative predicate resembles a clause with a passivized transitive verb. It contains the same theta-roles and the same dependencies between its verb and its arguments. Basically for these reasons unaccusative and passivized verbs are subsumed under the label 'non-active voice-head' by Kratzer(1996). This voice-head serves as a default choice when none of the numerous active voice heads can be inserted into the structure.
However, Embick(2000, 2004) argues that there must be some further difference to account for the syntactic differences between both types of predicates.

(13)   a.   The boat sank (*by the captain)
       b.   The boat was sunk (by the captain)

A passivized predicate can license an agent in an adjunct phrase whereas an unaccusative cannot. Furthermore, the implicite agent can license a PRO-argument.

(14)   a.   The boat sank (*PRO to collect the insurance money)
       b.   The boat was sunk (PRO to collect the insurance money)

Exceptions:

There are some exceptions with unaccusative verbs as well. Although there are no morphological exceptions, some unaccusative verbs can undergo causative alternation. In that case, an unaccusative verb behaves like a 'normal' transitive verb. However, this alternation is lexically restricted and is applicable only to a fixed sets of unaccusative verbs (see e.g. Kalluli (2006) on anticausatives).

(15)   *madesc-or (get.wet-PASS.1.SG.PRES)

(16)   a.   The vase broke.
       b.   John broke the vase.

(17)   a.   John fell.
       b.   *John fell the vase.
       c.   *The wind fell John.

(18)   Properties of unaccusative verbs:

Morphology		Active
Syntax	Periphrasis	Active
	Case	Passive
Semantics		Passive(?)
Exceptions	Morphology	None
	Syntax	Some lexical exceptions
	Semantics	Some lexical exceptions

Comparison of the properties of unaccusative and deponent verbs:

A comparison between the properties of these two verb types illustrates the similarities. Whenever one of them behaves like a transitive verb in passive voice, the other behaves like an active verb and vice versa. In syntax, the pattern is inconsistent but also this inconsistence applies to both types of verbs. Even the exceptions seem to pattern alike.

(19)   Comparison

		Deponent Verbs	Unaccusative Verbs
Morphology		Passive	Active
Syntax	Periphrasis	Passive	Active
	Case	Active	Passive
Semantics		Active	Passive(?)
Exceptions	Morphology	None	None
	Syntax	lexical exceptions	lexical exceptions
	Semantics	lexical exceptions	lexical exceptions

3. Hypothesis

(20)   <u>Mirror Image Hypothesis:</u>

Deponency and unaccusativity are both instantiations of the same abstract phenomenon. Thus, a grammatical analysis must treat both types of verbs identically in every respect.

4. Analysis

Assumptions:

1. **Lexical prespecification:** Some verbs may be inherently bear a feature [±active] when coming from the lexicon. Deponent verbs bear [–active], unaccusative verbs bear [+active]. (cf. Embick 2000). 'Normal' transitive verbs remain unspecified.

    (21) V_{unacc}: {V, +active, •NP•, }
             V_{dep}:   {V, –active, •NP•, }
             V_{trans}: {V, •NP•, }

2. **Light verbs:** There is an additional vP-shell above the VP (cf. Kratzer (1994), Chomsky (1995)) which comes in two types: v_{active} and $v_{passive}$. The bear the same features [±active]:

(22) v_{pass}:   {v, −active, •VP•, }
          v_{active}:   {v, +active, •VP•, •NP•, *ϕ*:_, case:acc }

3. **Identity Avoidance:** The only constraint that restricts the combination of v-heads and V-heads is the following:

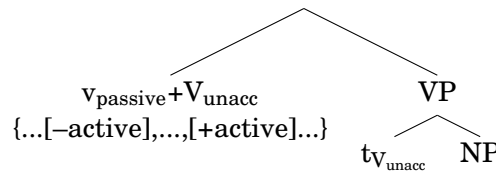(23)   **Identity Avoidance Principle**: *[$_X$ αactive, αactive]

It may apply after head-movement of V to v. If the complex head V-v contains the same feature twice, the derivation will crash. This yields the following results:

(24)   Deponent V{...[−Active]...}   +   Passive v{...[−Active]...}   ⇒ ruled out
       Deponent V{...[−Active]...}   +   Active v{...[+Active]...}   ⇒ ok
       Unaccusative V{...[+Active]...}   +   Passive v{...[−Active]...}   ⇒ ok
       Unaccusative V{...[+Active]...}   +   Active v{...[+Active]...}   ⇒ ruled out
       Regular V{...[ ]...}   +   Passive v{...[−Active]...}   ⇒ ok
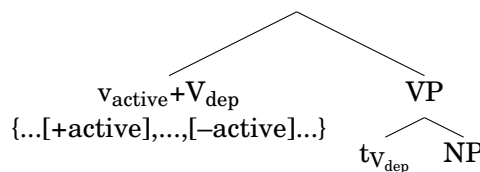   Regular V{...[ ]...}   +   Active v{...[+Active]...}   ⇒ ok

Unaccusative verbs must not occur with an active v-head and deponents must not occur with passive syntax. All other combinations are allowed.

4. **Lexical Override**: The phonological realisation of v takes place on the basis of its feature [±active]. [+active] on v provides active morphology, [−active] provides passive morphology. However, if conflicting features are present on the same head, it is assumed that inherent features (those features that come from the lexical V-head) prevail.

(25)   vP   ⇔ active realisation
                          ╱   ╲
             $v_{passive}$+V_{unacc} VP
             {...[−active],...,[+active]...}   ╱   ╲
                                          $t_{V_{unacc}}$ NP

(26)   v'   ⇔ passive realisation
                          ╱   ╲
             v_{active}+V_{dep} VP
             {...[+active],...,[−active]...}   ╱   ╲
                                          $t_{V_{dep}}$ NP

Sample derivation for deponent verbs
  a) [$_{VP}$ V$_{[−active]}$, NP$_{[case:\_]}$]]   Merge of V & NP
  b) [$_{v'}$ v$_{[+active]}$, [$_{VP}$ V$_{[−−active]}$, NP$_{case:acc}$]]   Merge of v and VP
                                                        ⇒ Checking of ϕ-features and case assignment
  c) [$_{v'}$ v+V$_{[[+active],[−active]]}$, [$_{VP}$ t$_{VP}$, NP$_{case:acc}$]]   Head movement of V to v
  d) [$_{vP}$ [$_{v'}$ NP, v+V$_{[[+active],[−active]]}$, VP]]   Merge of v' and NP

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Sample derivation for unaccusative verbs

a) [$_{VP}$ V$_{[+active]}$, NP$_{[case:\_]}$]]   Merge of V & NP

b) [$_{vP}$ v$_{[-active]}$, [$_{VP}$ V$_{[+active]}$, NP]]   Merge of v and VP

c) [$_{vP}$ v+V$_{[[-active],[+active]]}$, [$_{VP}$ t$_{VP}$, NP]]   Head movement of V to v

How does the system work for languages without deponent verbs?

Languages without deponent but with unaccusative verbs may be derived easily under the assumption that the feature which encodes the alternation between passive and active voice is not a binary feature [±active] but rather a privative feature [active]. All other assumptions can be transferred without further adaptions.

In doing so, verbs cannot be specified as deponent in the lexicon because there is no label available for these cases. Unaccusative verbs can still be labelled [active] and other other verbs remain unspecified:

schlagen [V, •NP•]   transitive

fallen [V, •NP•, active]   unaccusative

The v-heads need to be adjusted accordingly so that the constraint in(23) only excludes the combination of an unaccusative verb with an active v-head.

v$_{passive}$:   {v, •VP• }

v$_{active}$:   {v, active, •VP•, •NP•, *ϕ*:_, case:akk }

5. Empirical predictions and open questions

5.1 Deponency and Unaccusativity should exclude each other

The whole theory is based on the hypothesis in (20). If, however, deponency and unaccusativity are two sides of the same coin, they should exclude each other. A verb could not be unaccusative and deponent at the same time. The theory captures this fact by the assumption that the respective verbs are lexically specified as [–active] or [+active]. And, of course, a verb cannot be specified for both features at the same time. Thus, the following prediction is made:

(27)   Prediction:
       A verb cannot be unaccusative and deponent at the same time.

Under normal circumstances this would be a falsifiable hypothesis. If a deponent verb would pass tests for unaccusativity, this would be a major setback for the theory.
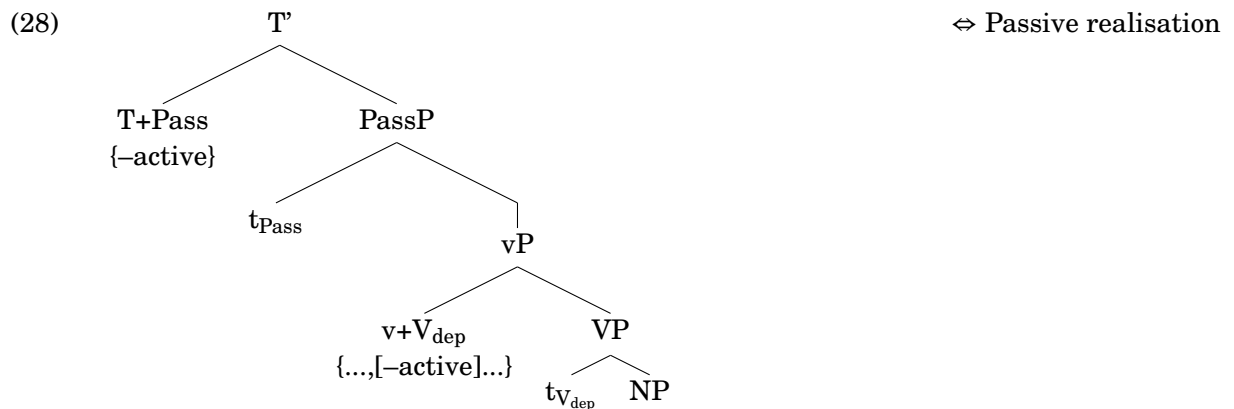
Unfortunately, it appears to be virtually impossible to find such tests for unaccusativity for Latin. Most of the classic tests (auxiliary selection, n-clitisation, impersonal passives) are not applicable in Latin, others (prenominal participles) might be applicable but fail because of the lack of data. Alexiadou & Anagnostopoulou (1999) try to establish new tests for Greek but even these tests cannot be used in Latin, mainly for lack of data.

5.2 Why are there so few languages with deponency?

The answer to that question is strongly related to an independent factor of the syntax of the language, namely the question of whether passive voice is expressed in an analytic or in a synthetic construction. In Latin, a passive verb is (usually) synthetic whereas in all of its derivative languages it is analytic.

I will argue that a passive that is formed analytically throughout the whole language is incompatible with the concept of deponent verbs.

Assumption: Analytic passives are derived by an additional passive phrase (PassP) whereas synthetic passives lack this projection. (cf. Cinque 1999, Adger 2003, Collins 2005)

(28)   ⇔ Passive realisation

$$
\begin{array}{c}
\text{T'} \\
\diagup \quad \diagdown \\
\text{T+Pass} \qquad \text{PassP} \\
\{-\text{active}\} \qquad \diagup \quad \diagdown \\
\quad t_{\text{Pass}} \qquad \text{vP} \\
\qquad \diagup \quad \diagdown \\
\text{v+V}_{\text{dep}} \qquad \text{VP} \\
\{...,[-\text{active}]...\} \quad \diagup \diagdown \\
t_{V_{\text{dep}}} \quad \text{NP}
\end{array}
$$

If the whole realisation of voice-features is a matter of the passive phrase, then the lexical specification of a verb plays no role at all because the features of the verb and those of the passive head are never part of the same feature bundle. Thus, the lexical features can never override the features of the passive head and thus have no syntactic or phonological effect. And features that have no effect on the output are often said to be removed for the sake of lexicon/input optimisation(Prince & Smolensky (1993)). Thus we can state another hypothesis:

(29)   Hypothesis: A language with analytic passive throughout all paradigms cannot maintain a class of deponent verbs. [1].

To test these hypothesis, one may have a look at various languages which seem to have cases of deponency. In the Romance languages, as well as German and English, no cases of canonical deponency are attested. However, we find some European languages which seem the support the hypothesis above:

- Greek (modern as well as classical) (Lavidas & Papangeli (2007))

    (30)   i   egkios   ligureftike   pagoto
            the pregnant.NOM.SG desire.PAST.3SG.MPASS ice-cream.ACC.SG
            'The pregnant woman desired ice cream'

- Swedish (Ritte (2004))

    (31)   Han minna-s   mig   från när vi träffade-s   på Hultsfred
            He   remember-PASS me.AKK from when we meet.PAST-RECIP in H.
            'He remembers me from when we met in Hultsfred.'

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[1]Of course, the term 'deponency' here refers to deponency in the canonical sense(i.e. deponent w.r.t. the distinction between active and passive voice)

- Sanskrit (Stump (2007))

- Finnish (Buchholz (2005))

    (32)   Me   mennään elokuviin.
            1.PL go.PASS   cinema.ILLATIVE
            'We go to the cinema'

6. Conclusion
This talk pursued two interrelated goals:

- To show that the mismatch between morphology and syntax found with deponent verbs is not that exotic and that well-known phenomena like unaccusativity may be analysed as involving a similar mismatch.

- To establish a morphosyntactic analysis for deponent (and unaccusative) verbs
    - that captures the observed mirror image
    - that makes use of as few stipulations as possible
    - that offers explanations about the phenomenon

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