

A mute Voice for the Middle<sup>1</sup>  
(*Sich macht die Stimme bemerkbar*)

Florian Schäfer  
(Guest lecture series: 16.02.2006)

**1. Introduction:**

- The Middle construction and its morphological variation:
  - (1) a. This book reads easily (English)  
b. Dit boek leest makkelijk (Dutch)
  - (2) a. Das Buch liest **sich** leicht (German)  
b. Ce livre **se** lit facilement (French)
  - (3) Afto to vivlio diavazete efkola (Greek)  
this the book read-**NON-ACT**.3sg easily

**1.1 The core characteristics of middles crosslinguistically:**

- The subject of the sentence corresponds to the internal argument (the understood or notional object). (see Ackema & Schoorlemmer 2002)
- The interpretation of the sentence is non-episodic. Middles do not make reference to an actual event having taken place, they rather report a property of the grammatical subject. The otherwise eventive verb becomes a derived stative and, more precisely, receives a generic interpretation.<sup>2</sup> (ebd.)
- The Agent is demoted and receives an arbitrary interpretation. (ebd.)
- I won't discuss: adverbial modification, verbal restrictions, how exactly the generic reading is realised (for a detailed recent discussion see e.g. Lekakou 2005).
- Two theoretical Questions:
  - Q1:** How does the understood or notional object become a subject ?
  - Q2:** What does it mean technically to be demoted (and to receive an arbitrary interpretation) ?

---

<sup>1</sup> I would like to thank Artemis Alexiadou, Jonny Butler, Winnie Lechner and Marika Lekakou for discussing parts of this work with me. All errors are mine.

<sup>2</sup> This claim has been challenged recently by Mills (2005) who argues that English middle sentences can have an episodic reading (see (i)). The same, I think, is the case in German (see (ii)). I will not be concerned with this complication here.

(i) My Ikea bookshelf assembled quickly (a. ...yesterday OR b. ... for years until it broke).

(ii) Das hat sich jetzt in null Komma nix aufgebaut.

*this has Refl. now in zero-point-nothing built-up*

## 1.2 Previous analyses:

### 1.2.1 Syntactic accounts:

**A1:** The theme is A-moved from the object position, as in the passive.

**A2:** The demoted agent is an empty category (pro or PRO) attached to VP.

- (4) a. [IP walls<sub>i</sub> [<sub>I</sub> I [<sub>VP</sub> [<sub>VP</sub> [<sub>V'</sub> paint t<sub>i</sub> easily]] PRO]]] (Stroik 1992)  
b. [IP walls<sub>i</sub> [<sub>I</sub> I [<sub>VP</sub> pro [<sub>V'</sub> paint t<sub>i</sub> easily]]]] (Hoekstra & Roberts 1993)

**Problem 1:** (i) It has been argued that the proposed movement for English middles does not behave like ordinary A-movement in passives. (Ackema & Schoorlemmer 1994).

(ii) It has been argued that Dutch and German middles do not pass the unaccusativity diagnostics. (Ackema & Schoorlemmer 1995, Cabredo Hofherr 2000, Lekakou 2005).

**Problem 2:** (i) *pro* in Germanic Middles would have a rather exceptional character.

(ii) The implicit agent in (Germanic) Middles is not ‘visible’ in the syntax. As Ackema & Schorlemmer (1994:176) put it, the authors “introduce a syntactic element that does not syntactically manifest itself.”<sup>3</sup>

- (5) a. \*Walls paint easily on purpose/carefully (*adverbs*)  
b. \*Walls paint easily by Harry/by anyone (*by phrase*)  
c. \*Walls paint best to protect them against rain (*purpose clause*)

(6) The wall was painted carefully by Harry to protect it against the rain

- (7) a. Das Buch liest sich (\*von den meisten Lesern/irgendwem) leicht  
*the book reads Refl by the most readers/anyone easily*  
b. \*Das Buch liest sich vorsichtig  
*the book reads Refl. carefully*  
c. (??)Das Buch liest sich gut um sich auf die Prüfung vorzubereiten<sup>4</sup>  
*this book reads Refl. well for Refl. On the exam to.prepare*  
d. Die Operation ist notwendig, um weitere Komplikationen zu verhindern  
*the operation is necessary for further complications to avoid*

### 1.2.2 Pre-syntactic/lexical accounts: (Ackema & Schoorlemmer 1994)

- Arguments of a predicate are ordered along a Thematic Hierarchy at **L(exical) C(onceptual) S(tructure)**. This order is projected to syntax.

(8) {Actor-Patient-Agent-Theme-Goal}

<sup>3</sup> Stroik (1992) gives a number of arguments in favour of a syntactically active agent in English middles. See Zribi-Hertz (1993) and Ackema & Schoorlemmer (1995, 2002) for discussion and convincing refutation.

<sup>4</sup> See Cabredo Hofherr (2000) for further discussion why middle agents which seem to license PRO are not an argument in favour of a syntactically represented agent.

**A2:** The external argument is not projected to syntax.

The actor is not projected to syntax but the actor is present at LCS.

Non-projection of an argument is restricted by recoverability; the actor can remain unprojected if it gets an arbitrary interpretation.

(9) Middle formation: Actor = ARB(itrary)

**A1:** The internal argument is projected to the external argument position.

There is no designated external argument.

An LCS as a whole is marked for [+/-ext].

If an LCS is marked [+ext], the highest (remaining) argument in the Thematic Hierarchy is projected to the highest position in the syntax.

(10) The property [+ext] cannot be erased during the derivation

(11) a. read:  $(\theta_{\text{Actor}} (\theta_{\text{Patient}}))^{+\text{ext}}$  -> [John [reads the book]]

|  
Middle formation: Actor = ARB(itrary)

b.  $(\theta_{\text{Patient}})^{+\text{ext}}$  -> [The book [reads]] + easily

**Problem 1:** Theory internal (see Lekakou 2005)

**Problem 2:** conceptual: I am pursuing a grammatical system without structured lexical entries (Marantz 1997)

**Problem 3:** empirical: German middles are unaccusatives (see section 5)

### 1.2.3 A mixed approach:

- It has been claimed that middles differ crosslinguistically in whether
  - (i) they pass the unaccusativity diagnostics or not
  - (ii) they need modification by an adverb or not
  - (iii) they are compatible only with an aspectually restricted class of verbs or not
  - (iv) they allow a by-phrase or not
- One conclusion was that ‘middle’ is not a syntactic category but rather should be treated as a semantic notion (Condoravdi 1989).
- Lekakou (2005):
  - Middle is a particular interpretation that independently existing structures receive;
  - middles in Greek and in French are parasitic on (generic) passives (+i, -ii, -iii, +iv)
  - middles in English Dutch and German are parasitic on unergatives (-i, +ii, +iii, -iv)



- The core structure of alternating verbs:

(14) [Voice [ V<sub>CAUS</sub> [ Root ]]]

(15) active: [Agent [Voice<sub>agent</sub> [ V [ Root ]]]]

passive: [Voice<sub>agent</sub> [ V [ Root ]]]

anticausative: [V [ Root ]]

- Question: Which verbs allow the alternation?
- Roots fall into different classes depending on their *encyclopedic semantics*:

(16) √agentive (murder, assassinate)  
 √externally caused (destroy, kill)  
 √cause unspecified (break, open)  
 √internally caused (blossom, wilt)

- √agentive & √externally caused: these roots have to show up in the context of a thematic Voice-head/external argument. They are always semantically transitive. They don't alternate.

(17) a. John murdered Mary  
 b. Mary was murdered  
 c. \*Mary murdered

(18) a. John destroyed the parcel  
 b. The parcel was destroyed  
 c. \*The parcel destroyed

- √cause unspecified: these roots can show up both with or without a thematic Voice head/external argument. They alternate.

(19) a. John broke the vase  
 b. The vase was broken  
 c. The vase broke

- √internally caused: these roots never combine with a thematic Voice head/external argument. They are always intransitive/unaccusative. They don't alternate.

(20) a. \*John blossomed the flower  
 b. \*The flower was blossomed  
 c. The flower blossomed

- Note: (17c), (18c) and (20a,b) are syntactically well-formed but filtered out at the Conceptual Interface.
- Note: The examples from Levin & Rappaport Hovav (1995) show that the Conceptual Interface does not only look at the root semantics but can evaluate the whole VP.

(21) a. He broke his promise / the contract / the world record  
 b. \*His promise / the contract / the world record broke  
 c. He broke the vase      d. The vase broke

### 3.1. The morphological variation of Anticausatives:

- |      |    |  |    |  |           |
|------|----|--|----|--|-----------|
| (22) | a. | Die Tür öffnet <b>sich</b><br><i>the door opens Refl.</i>        | b. | Die Vase zerbricht<br><i>the vase breaks</i>           | (German)  |
| (23) | a. | La finestra <b>si</b> è chiusa<br><i>the window Refl. closed</i> | b. | I prezzi sono aumentati<br><i>the prices increased</i> | (Italian) |
| (24) | a. | I supa kegete<br><i>the soup-nom burns-Nact</i>                  | b. | I sakula adiase<br><i>the bag-nom emptied-Act</i>      | (Greek)   |

- “Events can be arranged on a scale in the order of decreasing likelihood of spontaneous occurrence (as conceptualized by the speaker)” (Haspelmath 2005:7).

Table 1: <i>all types of roots</i>		
{√agentive	<<	{√externally caused << √cause unspecified << √internally caused}
- spontaneous <<	.....	..... << + spontaneous
..... <- transitive	..... alternate.....	intransitive -> .....

- “A factor favoring the anticausative expression type [i.e. the morphologically marked one as in (22a), (23a) and (24a)] is the probability of an outside force bringing about the event.” (Haspelmath 1993:103).

Table 2: <i>unspecified roots (idealisation)</i>		
{√unsp.(x), √unsp.(x+1), √unsp.(x+2), .....	.....	√unsp.(y-2), √unsp.(y-1), √unsp.(y)}
- spontaneous <<	.....	..... << + spontaneous
German: .....	.....	<- sich   ∅ -> .....
Italian: .....	.....	<- si   ∅ -> .....
Greek: .....	.....	<- passive   ∅ -> .....

- Unspecified/alternating roots can come in two types:  
*√unspecified-marked & √unspecified-unmarked.*
- This partition is semantically motivated but highly idiosyncratic within one language.

### 3.2. The Syntax of marked Anticausatives:

- Claim: extra-morphology is Voice-related
  - German: Anticausatives with reflexive are (although semantically intransitive) syntactically transitive (Fagan 1992, Steinbach 2002, Schäfer 2005)
  - Greek: Passive morphology is associated with Voice (Embick 2004, Alexiadou & Anagnostopoulou 2004)
  - Italian: ‘si’ is the spell out of a Voice head (Folli 2000, McGinnis 1999)

- Roots that form morphologically marked Anticausatives have a formal requirement: they always want to be in the context of Voice (i.e. syntactically transitive).
- But semantically they are intransitive/unaccusative
- → expletive/non-thematic Voice
- expletive Voice can come with or without a Spec (+/- D-feature).

(25) Interpretation:	Syntax:	Spell-out:
active:	[Agent [Voice <sub>{D, agent}</sub> [ V [ Root ]]]]	( <i>active</i> )
passive:	[Voice <sub>{agent}</sub> [ V [ Root ]]]	( <i>passive</i> )
anticausative-I:	[V [ Root ]]	( <i>unmarked</i> ) <sup>8</sup>
anticausative-II:	[Voice <sub>{∅}</sub> [ V [ Root ]]]	( <i>passive, clitic-si</i> )
anticausative-III:	[Expl. [Voice <sub>{D, ∅}</sub> [ V [ Root ]]]]	( <i>sich</i> )

#### 4. Middles:

- Proto-typical middle sentences like “*This book reads easily*” are formed with agentive roots which do not form Anticausatives.
- Question: Why don't they form Anticausatives ?
  - The encyclopaedic meaning associated with these roots implies a driving force/a second entity behind the activity (agent).
  - This element is not realized syntactically in Anticausatives
  - Consequence: The anticausative sentence “*The book reads*” is filtered out at the CI-Interface
- Imagine: Consider Table 1 and 2. If German ‘*lesen*’ (read) could form an anticausative, which morphological form would we expect ?
  - Answer: ‘*sich*’ (‘*si*’ in Italian, ‘passive’ in Greek, ....)

#### 4.1. The CI-Interface, Root meaning and V+Theme meaning:

- Recall that at the CI-Interface eventive anticausatives are filtered out if (i) the root is agentive or (ii) the V+Object combination implies agentivity.

(26) \*The book read (*agentive root*)

(27) a. He broke his promise / the contract / the world record  
 b. \*His promise / the contract / the world record broke (*agentive V+Theme*)

- Exactly as agentive roots, V+Object combinations that don't allow eventive Anticausatives, do allow non-eventive/generic middles.

---

<sup>8</sup> There is the question why morphologically unmarked Anticausatives cannot also come in the marked form. I assume that an economy condition gives us this: ‘Use the minimally possible structure required for a given interpretation.’ Marked anticausatives are forced to add ‘*sich*’/expletive Voice by a(n) (idiosyncratic) requirement which is connected to the +/-spontaneous hierarchy (cf. section 3.1).

- (28) a. \*Der Weltrekord brach am 2.10. 2005 (antic.)  
*the world-record broke at-the 2.10.2005*  
 b. Der Weltrekord bricht sich nicht so leicht (middle)  
*the world-record breaks Refl. not so easily*
- (29) a. \*Der Rotweinfleck entfernt sich (antic.)  
*the red-wine-spot removes Refl.*  
 b. Mit diesem Mittel entfernen sich Rotweinflecken ganz leicht (middle)  
*with this detergent removes Refl. red-wine-spots very easily*

#### 4.1.1 unmarked alternating verbs:

- (30) a. Hans schmilzt das Eis (causative)  
*Hans melts the ice*  
 b. Das Eis schmilzt (\*sich) (unmarked anticausative)  
*the ice melts (Refl.)*

- Generics:

- the unmarked version never implies an implicit agent
- the marked version always implies an implicit agent

- (31) a. Zinn schmilzt leicht (no agent involved)  
*solder melts easily*  
 b. Zinn schmilzt sich leicht (agent involved)  
 c. Zinn schmilzt es sich leicht
- (32) a. Schalplatten zerkratzen leicht  
*records scratch easily*  
 b. Der Bösewicht: Schalplatten zerkratzen sich leichter als CDs  
*the bad-guy: records scratch Refl. more-easily than CDs*
- (33) a. Dünnes Papier zerreit leicht  
*thin paper tears easily*  
 b. Briefe Verfloßener zerreien sich leicht  
*letters of-ex-lovers tear Refl. easily*
- (34) a. Holzhtten brennen leicht nieder  
 b. Holzhtten brennen sich leicht nieder, aber Palste ...!
- (35) a. Schrfwunden heilen leicht/schnell  
 b. Lappalien heilen sich leicht, Herr Kollege, aber ...

- Sometimes an implicit agent is conceptually hard to get

- (36) a. Erdgas verbrennt relativ sauber  
*gas burns relatively cleanly*  
 b. #Erdgas verbrennt sich relativ sauber (internally caused V+Theme)  
 c. #Hans verbrennt das Erdgas sauber
- (37) a. Blumen vertrocknen leicht (internally caused)  
*flowers wither easily*  
 b. \*Blumen vertrocknen sich leicht  
 c. \*Hans vertrocknet die Blumen

#### 4.1.2 marked alternating verbs:

- (38) a. Die Menschheit verändert das Klima (causative)  
*the human kind changes the climate*  
b. Das Klima verändert \*(sich) (marked anticausative)  
*the climate changes Refl.*
- Generics:
    - The structures are ambiguous.<sup>9</sup> The existence of the implicit agent is highly dependent on context and the specific Verb+Theme combination
    - Judgements are tendencies which can be challenged in a specific context
- (39) a. Billige Schuhsohlen lösen sich leicht ab (no agent involved) -> danger  
*cheap soles detach Refl easily prt.*  
b. Diese Aufkleber lösen sich leicht ab (agent involved) -> help  
*these stickers detach Refl easily prt.*
- (40) a. Manche Schadstoffe bauen sich leicht/rasch ab (no agent involved)  
*some toxic-matters decompose Refl. easily/fast prt.*  
b. Deutsche Steinkohle baut sich leicht ab (agent involved)  
*German coal produces Refl. easily prt.*
- (41) a. Uran spaltet sich leicht  
*uranium decomposes Refl. easily*  
b. Die Opposition spaltet sich leicht  
*the opposition splits easily*
- (42) a. Weiße Oberflächen färben sich leicht  
b. Blonde Haare färben sich leicht
- (43) a. Das Material entzündet sich leicht  
b. Der Bösewicht: Ein Flächenbrand entzündet sich leicht
- Synonymous roots
- (44) a. Junge Herzen entflammen leicht (no agent)  
*young hearts inflame easily*  
b. Junge Herzen entflammen sich leicht (agent)
- (45) a. Junge Herzen entzünden sich leicht (ambiguous)  
*young hearts ignite easily*  
c. Junge Herzen entzündet es sich leicht
- Conclusion: The question whether an agent is involved in Middles or not is highly dependant on the root semantics or the V+Theme semantics.

<sup>9</sup> There is a way to formally disambiguate this structures; (i) necessarily involves an implicit agent.

(i) Billige Schuhsohlen löst es sich leicht ab  
*cheap soles-acc detaches it Refl easily prt.*

I tentatively assume, following Abraham (1987) that in these structures the theme has to be analyzed as a part of the verb (i.e. is incorporated at LF). The structure is then necessarily interpreted as externally caused/agentive because there are no verbal constructions without any argument. I do not think that the 'es' has argumental status but it is purely functional. The generic operator needs a nominative element to act on (see Lekakou 2005). This point needs further formal evaluation.

- This information is computed at the CI-Interface.  
→ agent implicature is established at the CI-Interface
- The implication of an agent is formally dependent on the presence of ‘*sich*’/Voice-expl.

(46) Syntax:	agent implication at CI possible?	encyclopaedia satisfied?
[V ...]	-> no	/ <- √agentive
Gen [V ...]	-> no	/ <- √agentive
[Voice-expl. [V ...]]	-> no	/ <- √agentive
Gen [Voice-expl. [V ...]]	-> yes	<- √agentive
[Voice-agent [V ...]]	-> yes	<- √agentive

- But couldn't it be that (45a) is structurally ambiguous; if an agent is implied, a covert middle agent is merged, if not, it is not merged?
  - That's where we started: we have no syntactic reflex of this implicit agent. The next section will show that the two readings behave syntactically alike.
- But isn't it the case that (47a/b) are formed with the same root and have the same theme? Why can only the second structure imply an agent, if root semantics are the point?

(47) a.	Zinn schmilzt leicht <i>solder melts easily</i>	(no agent involved)
b.	Zinn schmilzt sich leicht	(agent involved)

- Right; we must assume that the CI-Interface can give the agent implicature only if ‘*sich*’/Voice is present. If a structure does not even have an expletive Voice, the interface cannot implicate it.<sup>10</sup>

**A (+event):** → The CI interface cannot imply information that is normally encoded in a syntactic projections, i.e. Voice. (Inclusiveness)

- Even the presence of Voice-expl. is not enough (“Die Tür öffnet sich”).

**B (+event):** → The CI interface cannot imply information that is normally encoded with a feature on a syntactic projection, i.e. [+agent] on Voice.

- **In the context of Genericity:**

**A (+Gen):** → The CI interface cannot imply information that is normally encoded in a syntactic projections, i.e. Voice.

(48) a.	Junge Herzen entflammen leicht <i>young hearts inflame easily</i>	(no agent)
---------	--	------------

<sup>10</sup> Why must (47b) imply an agent? This is the result of the economy condition on empty Voice, see fn. 7. Note that the semantic representation necessary for the computation of the reference set therefore must contain the implied agent although it is missing at LF.

**B (+gen):** → **BUT:** The CI interface can add information that is encoded with a feature on a syntactic projection, i.e. +agent on Voice.  
(agent implicature in the context of an expletive Voice)

- Question: Why/how can Genericity have this effect ?
- Answer: Should follow from the semantics (Modal theory of Genericity)
  - Modal relation: ~ necessity
  - Modal base: Theme property (Lekakou 2005)
  - Ordering source: It rates worlds in terms of similarity to the normal course of events and specifies the minimal degree of 'distance' from normalcy a world should satisfy. The closer a world is to normal conditions (usually, what holds in the actual world), the more probable it is that a modal relation will hold in that world.

- (49) a. Hunde haben vier Beine (*Dogs have four legs*)  
b. GEN (x is a dog; x has four legs)

- Everything which is a dog in the worlds of the modal base is such that, in every world which is closest to normal according to the ordering source, it will have four legs. On its preferred reading, (49) requires a realistic modal base, that is, it is interpreted according to the set of facts assumed to hold in the actual world.

- (50) a. Das Buch liest sich leicht (*This book reads easily*)  
b. GEN (e: book(y), read(e), Theme (e,y))(easy(e))

- Everything in the worlds of the modal base which is a reading event of which this book is the theme is such that in every world which is closest to normal according to the ordering source the reading will be easy.
- But since in the normal, actual world reading events necessarily involve a human person (agent) we are free to conclude that this is involved in the statement (50a) too. But the syntax has to be compatible with this; the syntax is compatible if it has a thematic slot for the implied thing (expletive Voice) (→ syntactic theta theory).

b'. GEN (e, X: book(y), read(e), Theme (e,y), *AGENT (E,X)*)(easy(e))

- The interpretation of the implicit argument: Generic indefinite ONE (see Lekakou 2005)

- Question: Is there a suggestive difference between Middles and generic unaccusatives ?
- Answer: Middles are those Generic Unaccusatives that have an expletive Voice which (in the context of agentive encyclopaedic semantics) allows the implicature of an Agent. Generic unaccusatives without an expletive Voice can never imply an implicit agent and therefore cannot be Middles in the strict sense.<sup>11</sup>

---

<sup>11</sup> Saying this I depart from what I said in the abstract for this talk.

## 5. Middles and Reflexive Anticausatives meet the Unaccusativity Diagnostics:

(*Unakkusativitätsdiagnostika, Middles und Anticausative treffen sich*)

- In the recent literature some authors (Cabredo Hofherr 2000, Lekakou 2005, Zwart 2005) concluded from a number of tests, that German Middles (and reflexive Anticausatives) are not unaccusative but unergative.
- I will argue that this conclusion is wrong by:
  - showing that a number of their tests give the “unergative” result for theoretically understandable reasons which are not connected to the merging position of the theme but either to properties of Voice or to the genericity of middles (A, B, C).
  - citing literature that has shown that some tests cannot differentiate between objects and subjects; I will further show that contrary to what the authors claim these tests do not generally yield bad results (C, D, E).
  - giving a number of tests that argue for the syntactic object status of the theme in German middles and reflexive unaccusatives (G, H, I).

### A. AUXILIARY SELECTION:

The test:

- |      |    |   |                         |
|------|----|---|-------------------------|
| (51) | a. | Hans <b>hat</b> die Tür geöffnet<br><i>Hans has the door opened</i> | ( <i>transitive</i> )   |
|      | b. | Hans <b>hat</b> geschlafen<br><i>Hans has slept</i>                 | ( <i>unergative</i> )   |
|      | c. | Die Vase <b>ist</b> umgefallen<br><i>The vase is toppled-down</i>   | ( <i>unaccusative</i> ) |

Middles:

- |      |    |  |
|------|----|--|
| (52) | a. | Der Wagen <b>hat</b> sich schon immer gut gefahren<br><i>The car has Refl already ever good driven</i> |
|      | b. | Hier <b>hat</b> es sich schon immer gut getanzt<br><i>Here has it already ever well danced</i>         |

Anticausatives:

- |      |    |  |
|------|----|--|
| (53) | a. | Die Tür <b>hat</b> sich geöffnet<br><i>The door has Refl opened</i>        |
|      | b. | Das Klima <b>hat</b> sich verändert<br><i>The climate has Refl changed</i> |

Discussion:

- Verbs that assign accusative select as a rule “have” in German.  
(Exception: German: ‘gehen’, Dutch: ‘vergeffen’)

- (54) Er **ist** einen schweren Weg gegangen  
*He is a heavy way went*

- German anticausatives with ‘sich’ are semantically intransitive but syntactically transitive  
The theme is marked nominative and the Reflexive is marked accusative (e.g., Steinbach



Anticausatives:

- (60) a. \*die sich geöffnete Tür  
*the Refl opened door*  
b. \*das sich veränderte Klima  
*the Refl changed climate*

Discussion:

- Cabredo Hofherr (2000) considers this test as not decisive as passive structures which pass all other unaccusativity tests don't pass this test.

- (61) a. Der Junge wurde gesehen  
*the boy became seen*  
b. \*der gesehen wordene Junge  
*the seen become boy*

- strong correlation between 'sein' selection and grammaticality of the attributive perfect participle (Eisenberg 1989)

- Assumption:

The prenominal perfect participle is an unaccusative structure in the sense of (55a,b).  
(It does not project a specifier nor does it license accusative.)

- (62) a. der angekommene Mann (unaccusative, 55a)  
*the arrived man*  
b. der (von dem Jungen) gegessene Kuchen (passive, 55b)  
*the by the boy eaten cake*  
c. die (von Peter) geöffnete Tür (passive, 55b)  
*the by Peter opened door*

- (63) a. \*der geschlafene Junge (unergative, 56b)  
*the slept boy*  
b. \*der (den Kuchen) gegessene Junge (transitive, 56c)  
*the the cake eaten boy*  
c. \*die sich geöffnete Tür (ref. anticausative, 56a)  
*the Refl opened door*

- The addition of 'habend' (having) licenses in addition SpecVoice;
- the bigger structure can license accusative.

- (64) a. der geschlafen **habende** Junge (unergative)  
*the slept having boy*  
b. das gesungen **habende** Kind  
*the sung having child*

- (65) a. die sich öffnet **habende** Tür (refl. unaccusative)  
*the Refl. opened having door*  
b. das sich verändert **habende** Klima  
*the Refl. changed having climate*  
c. das sich gut verkauft **habende** Buch (reflexive middle)  
*the Refl. good sold having book*

- What remains to be explained is why the accusative always remains in the participle and the nominative always becomes the modified noun

- (66) a. \*die der Peter geöffnet habende Tür  
*the the Peter-nom opened having door*  
 b. der die Tür geöffnet habende Peter  
*the the door opened having Peter*

- ✓ Conclusion: The test result is not decisive about the merging position of the theme in middles and reflexive anticausatives. The test is about properties of Voice and Case licensing in different participles.

### C. WAS-FÜR SPLIT:

#### The test:

- *Cabredo-Hofherr* argues: the ‘was für’-split distinguishes transitive verbs from intransitive verbs. The latter’s subjects allow it, the former’s don’t. Middle subjects behave like transitive subjects in not allowing the split.
- *What she shows*: ‘was für’-splits are o.k. with the subjects of unaccusatives and with the subjects of unergatives. She also gives an example with a reflexive verb.

- (67) a. Was für Leute sind gestern gekommen? (unaccusative)  
*What für people are yesterday come*  
 b. Was sind gestern für Leute gekommen?  
*What are yesterday für people come*

- (68) a. ?Was sind für Sachen passiert? (unaccusative)  
*what are für things happened*  
 b. Was sind da für Sachen passiert?  
*What are prt. für things happened*  
 c. Was sind denn da gestern für Sachen passiert?  
*what are prt. prt. yesterday für things happened*

- (69) a. ??Was haben für Leute gearbeitet? (unergative)  
*What have für people worked*  
 b. Was haben hier früher für Leute gearbeitet?  
*what have here in-the-past für people worked*

- (70) a. ?Was haben sich für Leute gemeldet? (reflexive)  
*What have themselves für people registered*  
 b. Was haben sich damals für Leute gemeldet?  
*What have themselves at-that-time für people registered*

- Citing *Vikner* (1995), she claims that only subjects of transitive verbs are bad in the *was-für* split construction. She does not give an example for this claim.
- Next, she says that the nominative NP of middles cannot be split;<sup>13</sup> she concludes that they therefore must be the external argument of a transitive construction.

<sup>13</sup> *Cardinaletti* (1998) claims that middles allow the *was-für* split (cf. (i)). For me the sentence is marked.

(71) \*Was haben sich für Wagen gut gefahren (middle)  
*what have Refl. für cars good driven*

The “history” of the split:

- den Besten (1985), Müller (1993): The split is restricted to direct objects of transitives and subjects of unaccusatives.

(72) a. Was hast du für einen Jungen gesehen? (object)  
*what have you für a boy seen*  
 b. Was sind denn da heute für Gäste gekommen? (unaccusative)  
*what are prt today für guests come/arrived*  
 c. \*Was haben für Leute dem Fritz Briefe geschickt (unergative)  
*what have für Leute the Fritz letters sent*  
 d. \*Was hat der Fritz für Leuten Briefe geschickt (dativ)  
*what has the Fritz für people letters sent*

- Meinunger (1995): extraction is possible from base positions. Scrambling (topic movement) blocks extraction.
  - Subjects of transitives allow the split (as already observed by Diesing (1992), Kratzer (1995)) if they are not topic moved/scrambled.

(73) a. Was haben dieses Buch denn für Leute gelesen (subject in  
*what have this book prt. Für people read base position)*  
 b. Was haben dem Fritz für Leute Briefe geschrieben  
*what have the Fritz für people letters sent*

(74) a. Was hat sie’s denn für Leuten empfohlen (dative in base position)  
*what has she+it ptc für people recommended*  
 b. \*Was haben für Leuten gestern Verlagsangestellte Bücher geschickt? (Topic  
*what have für people yesterday edition employees books sent dative)*

(75) a. Was hast du damals für Bücher gelesen? (object in base position)  
*what have you that-time für books read*  
 b. ??Was hast du für Bücher damals gelesen (moved object)  
*what have you für books that-time read*

- Haider & Rosengren (1998:33f): extraction is possible from subjects. Scrambling does not block extraction. The second part of the split constituent should not be the first constituent after C<sup>0</sup>.

(76) a. Was hat denn jeder von euch [e für Witze] erzählt?  
 b. \*Was hat [e für Witze] denn jeder von euch erzählt?  
 c. Was hat denn damals [e für Witze] jeder von euch e erzählt?

(77) a. \*Wem hat [was für Witze] denn damals jeder von euch e erzählt?  
 b. Wem hat denn damals [was für Witze] jeder von euch e erzählt?

(i) Was lesen sich denn für Bücher einfach  
*what read Refl. prt. für books easily*

- |      |    |   |
|------|----|---|
| (78) | a. | Was hat damals [e für Ergebnisse] (denn) jeder von Euch erzielt |
|      | b. | *Was ist [e für ein Flugzeug] (denn) abgestürzt?                |

✓ Conclusion: The test result is not decisive about the merging position of the theme in middles. The test does not distinguish between subjects of transitives and subjects of intransitives and objects. The test is either about scrambling/weak islands or about a well formedness condition of the German Mittelfeld.

- A further problem with the was-für split:

The claim that middles and reflexive anticausatives have the same syntax is challenged by the following contrast.

- |      |    |  |                       |
|------|----|--|-----------------------|
| (79) | a. | *Was haben sich für Wagen gut gefahren<br><i>what have Refl. für cars good driven</i>        | (middle)              |
|      | b. | Was haben sich für Termine verschoben<br><i>what have Refl. für appointments rescheduled</i> | (refl. anticausative) |

- A first observation:

- the was-für split is possible with stage level predicates but not with individual level predicates (Diesing 1992, Kratzer 1995).
- Individual level predicates have been argued to be inherently generic (Chierchia 1995). I will not discuss this claim.

- |      |    |   |
|------|----|---|
| (80) | a. | Was für Feuerwehrmänner sind verfügbar<br><i>what für firemen are available</i>     |
|      | b. | Was für Feuerwehrmänner sind intelligent<br><i>what für firemen are intelligent</i> |

- |      |    |   |
|------|----|---|
| (81) | a. | Was sind für Feuerwehrmänner verfügbar<br><i>what are für firemen available</i>     |
|      | b. | *Was sind für Feuerwehrmänner intelligent<br><i>what are für firemen intelligen</i> |

- The semantics of middles: Middles are generic sentences involving a generic operator (at sentence or at vP level (see Lekakou (2005) for the latter claim).

- The semantics of the was-für split (Meinunger 1995, Vikner 1995):

- Unsplitted was-für phrase questions allow two readings:
  - (i) a specific, discourse linked individual reading (asking for a listed answer)  
“Which books have you read ?” – “This, this and that one”
  - (ii) a property reading (asking for a kind answer)  
“What kind of book have you read?” – “Linguistic books”
- In the split construction the individual reading disappears.

- |      |    |   |                |
|------|----|---|----------------|
| (82) | a. | Was für Bücher hast du gelesen<br><i>what für books have you read</i> | [(i) and (ii)] |
|      | b. | Was hast du für Bücher gelesen<br><i>what have you für books read</i> | [only (ii)]    |

- In a weak island weak NPs are blocked  
-> the property reading is blocked and no other reading is available.  
-> ungrammaticality.

- (83) a. Was für Bücher hast du nicht gelesen  
*what für books have not you read*  
b. \*Was hast du nicht für Bücher gelesen  
*what have you not für books read*

✓ Conclusion: We expect the Generic operator in middles to show the same effects that other operators show. Operators are weak islands (Rizzi (1990), Cinque (1990)). They block weak NP readings. The difference between middles and reflexive anticausatives is not a difference of argument structure but one of semantics.

- Prediction: The *was-für* split should be blocked in other generic contexts that have no 'sich'. Generic unaccusatives show exactly the same effect.

- Questionnaire study:

(84)a.	Was für Wagen haben sich gut gefahren?	1	1	1	1	1	1	2	2	<b>1.3</b>
b.	Was für Aufsätze lesen sich angenehm?	1	1	4	1	1	1	2	2	<b>1.6</b>
(85)a.	Was lesen sich für Aufsätze angenehm?	3	4	5	5	5	4	4	5	<b>4.3</b>
b.	Was fahren sich für Wagen angenehm?	4	2.5	5	5	5	4	5	5	<b>4.4</b>
(86)a.	Was für Vasen zerbrechen leicht?	1	1	1	1	1	1	2	2	<b>1.25</b>
b.	Was zerbrechen für Vasen leicht?	5	5	5	5	5	5	5	5	<b>5</b>
(87)a.	Was für Vasen sind leicht zerbrochen?	1	1	1	2	1	1	2	2	<b>1.4</b>
b.	Was sind für Vasen leicht zerbrochen?	5	5	5	5	5	5	5	5	<b>5</b>
(88)a.	Was für eine Vase ist zerbrochen?	1	1	1	1	1	3	1	2	<b>1.4</b>
b.	Was ist für eine Vase zerbrochen?	3	5	1	5	1	5	3	5	<b>3.5</b>
(89)a.	Was für Werte haben sich verändert?	1	1	1	1	1	3	1	2	<b>1.4</b>
b.	Was haben sich für Werte verändert?	3	1.5	4	5	3.5	4	2.5	3	<b>3.3</b>

✓ Conclusion: The results of this test do not force us to assume a different argument structures for middles and reflexive Anticausatives. The two constructions differ in their semantics. Split constructions are marked, anyway.

#### D. SPLIT NP:

The test:

- (90) a. Kleider hat er immer so komische an (object)  
*clothes has he always so strange on*  
b. Bücher liest er am liebsten französische  
*books reads he at best french*

(91)	a.	Fehler sind dem Hans vermeidbare unterlaufen <i>mistakes are the Hans avoidable occurred</i>	( <i>unaccusative</i> )
	b.	Widersprüche sind dem Richter mehrere aufgefallen <i>contradictions ate the judge many stroked</i>	
	c.	Gewinner wurden nur weibliche mit einer Urkunde geehrt <i>winners were only female with a certificate honoured</i>	( <i>passive</i> )
(92)	a.	*Studenten haben fleißige das Seminar besucht <i>students have hard-working the seminar visited</i>	( <i>subject</i> )

Middles: (Cabredo Hofherr (2000))

- (93) a. \*Autos fahren sich am besten neue  
*cars drive Refl. at best new*
- b. \*Autos haben sich schon immer am besten neue gefahren  
*cars have Refl. already ever at best new driven*

Anticausatives:

- (94) a. Nägel haben sich heute schon viele verbogen  
*nails have Refl. today already many twisted*
- b. Türen haben sich mir leider nur blaue geöffnet  
*doors have Refl. me unfortunately only blue opened*

- Do we have to conclude from (93) that the themes in middles are external arguments?
- Do we have to conclude that middles and reflexive anticausatives have a different syntax?

Ad test:

- Discontinuous subject NPs are possible (Fanselow 1988, 1993, Fanselow & Cavar 2002)

- (95) a. Briefe an Maria haben mich keine erschreckt  
*letters to Mary have me none frightened*  
As for letters to Mary, they have not frightened me.
- b. (?)Friseurinnen arbeiten nur blonde in dem Salon  
*coiffeurs work only blond in the saloon*
- c. Stahlarbeiter haben nur entlassene demonstriert  
*steel workers have only released demonstrated*
- d. Arbeiter haben viele die SPD gewählt  
*workers have many the SPD voted*
- e. Politiker glaube ich haben keine zum Wohl der Welt beigetragen  
*politicians think I have none to-the welfare of-the world contributed*

- Again, the split phrase cannot show up directly after  $C^0$ , as the following examples from Meinunger (1995) show.

- (96) a. Frauen haben da immer nur wenige gearbeitet  
*women have there always only few worked*
- a'. \*Frauen haben wenige immer gearbeitet

b.	Frauen hat er schon vielen das Gesicht geliftet <i>women has he already many the face lifted</i>	(object)
b'.	*Frauen hat er vielen schon oft das Gesicht geliftet	

✓ Conclusion: The test result does not force us to assume that the theme of middles is an external argument.

• Question: what about the difference between middles and reflexive anticausatives?

- (97) a. \*Autos fahren sich am besten neue  
*cars drive Refl. at best new*  
c. \*Autos haben sich schon immer am besten neue gefahren  
*cars have Refl. already ever at best new driven*

- (98) a. Nägel haben sich heute schon viele verbogen  
*nails have Refl. today already many twisted*  
c. Türen haben sich mir leider nur blaue geöffnet  
*doors have Refl. me unfortunately only blue opened*

• It has been claimed that individual-level predicates do not allow the fronting of the head noun of a subject NP (Diesing 1992:40f):

- (99) a. \*Wildschweine sind viele intelligent  
*wild boars are many intelligent*  
'As for wild boars, many are intelligent'  
b. Wildschweine sind viele verfügbar  
*wild boars are many available*  
'As for wild boars, many are available'

- (100) a. \*Linguisten wissen das viele  
*linguists know this many*  
'As for linguists, many know this'  
b. Mücken haben ihn viele gebissen  
*mosquitos have him many bitten*  
'As for mosquitos, many have bitten him.'

• It has been shown that this general claim is wrong (Fanselow & Cavar 2002:6f)

- (101) a. Ärzte dürften schon ein paar altruistisch sein  
*doctors may really a few altruistic be*  
'As for doctors, a few will be altruistic'  
b. Skorpione sind ziemlich viele giftig  
*scorpions are rather many poisonous*  
'As for scorpions, rather many of them are poisonous'

• Is the difference between middles and reflexive Anticausatives robust? No.

- (102) a. ?Bücher verkaufen sich am besten kleine/rote/kurze.  
*books sell Refl. at best small/red/short*  
b. Bücher haben sich viele verkauft, aber ...  
*books have Refl. many sold, but ...*

- |    |   |
|----|---|
| c. | Autos verkaufen sich am besten grüne<br><i>cars sell Refl. at best green</i>        |
| d. | Autos verkaufen sich <b>grüne</b> am besten<br><i>cars sell Refl. green at best</i> |

✓ Conclusion: The test cannot decide between subjects and objects. Further, it does not give robust differences between middles and reflexive anticausatives.

### E. TOPICALISATION OF SUBJECT + PARTICIPLE II

#### The test:

- |          |  |                          |
|----------|--|--------------------------|
| (103) a. | [Ein Fehler unterlaufen] ist ihm noch nie<br><i>a mistake occurred has him yet never</i>                 | ( <i>unaccusative</i> )  |
| b.       | [Einen Fehler gemacht] hat er noch nie<br><i>a mistake made has he yet never</i>                         | ( <i>trans. object</i> ) |
| c.       | ?[Eine Rezension geschrieben] wurde darüber noch nie<br><i>a review written was about-this yet never</i> | ( <i>passive</i> )       |
| c.       | *[Ein Mann gemacht] hat diesen Fehler noch nie<br><i>a man made has this mistake yet never</i>           | ( <i>subject</i> )       |

#### Middles: (Cabredo Hofherr 2000)

- |          |   |
|----------|---|
| (104) a. | ??Sich schnell gelesen hat eine Kurzgeschichte schon immer<br><i>Refl. fast read has a short-story already ever</i> |
| b.       | ??Eine Kurzgeschichte gelesen hat sich schon immer schnell<br><i>a short-story read has Refl. already ever</i>      |

- inherent reflexives show that the Reflexive can be topicalized with the finite verb:

- |          |  |
|----------|--|
| (105) a. | Sich geschämt hat Hans schon immer leicht<br><i>Refl. shamed has Hans already ever easily</i>          |
| b.       | Sich gewaschen hat Hans schon immer ungerne<br><i>Refl. washed has Hans already always reluctantly</i> |

- Comment: By the logic of the test, one of the middle sentences above should be good; actually Cabredo Hofherr predicts the a-sentence to be good.

#### Anticausatives:

- |          |  |
|----------|--|
| (106) a. | Eine Vase zerbrochen ist mir auch schon öfters<br><i>a vase broken is me-dat already once in the kitchen</i> |
| b.       | *Ein Stock gebogen hat sich während des Sturms<br><i>a stick bent has Refl during the-gen-storm</i>          |
| (107) a. | *Eine Vase zerbrochen ist während der Mittagspause<br><i>a vase broken is during the lunch-break</i>         |
| b.       | *Ein Stuhl umgekippt ist mir gestern<br><i>a chair overbalanced is me yesterday</i>                          |
| c.       | Platten zer/verkratzt sind mir schon öfter<br><i>records scratched are me already often</i>                  |

- Haider (1985) observes that the topicalisation of the VP becomes marginal if the Mittelfeld does not contain a further argument.

- (108) a. Türen geöffnet haben sich mir noch nie  
*doors opened have Refl. me yet never*
- b. Wäsche verfärbt hat sich mir noch nie  
*clothes discoloured has Refl. me yet never*
- d. Eine Abfahrt verzögert hat sich bei mir noch nie  
*a departure delayed has Refl. at him yet never*
- e. So peinliche Fehler wiederholt haben sich selten  
*such embarrassing mistakes reiterated have Refl. seldom*
- f. Probleme zugespitzt haben sich durch ihn schon öfters  
*problems acuminated have Refl. through him already often*
- e. Widerstand formiert hat sich erst Jahre später  
*resistance formed-up has Refl only years later*

- VP-Topicalisation + NP split gives the best results:

- (109) a. Türen geöffnet haben sich mir noch keine  
*doors opened have Refl. me yet never*
- b. Wildvögel infiziert haben sich mit dem Virus schon viele  
*wild-birds infected have Refl. with the virus already many*
- c. Probleme aufgelöst hatten sich bis dahin nur zwei  
*problems solved had Refl. till then just two*
- d. Patienten angesteckt hatten sich 10.  
*patients inflected had Refl. 10*
- e. Fässer geöffnet haben sich keine aber Dosen schon  
*barrels opened have Refl. none but cans did*

- Question: Is the difference between middles and anticausatives robust? No.

- (110) a. Bücher verkauft haben sich hier schon immer gut  
*books sold have Refl. here already ever good*
- b. Politiker bestochen haben sich in der Provinz schon immer leicht  
*politicians bribed have Refl. in the province already ever easy*
- c. Villen verkauft haben sich schon immer gut in Grünwald  
*villas sold have Refl. already ever good in Grünwald*
- c. Beweise gefunden haben sich noch keine mit links  
*proofs found have Refl. yet none with left*

- ✓ Conclusion: The test does not show that the themes in middles are external arguments but in contrary, they behave as objects do.

#### F. PASSIVE:

The test:

- (111) a. \*Es wird pünktlich angekommen (unaccusative)  
*it becomes on-time arrived*
- b. \*Es wird ihm aufgefallen  
*it becomes him struck*

Middles:

- (112) a. \*Hier wird es sich leicht bestochen  
*here becomes it Refl. easily bribed*  
b. \*Das Buch wurde sich leicht verkauft  
*the book becomes Refl. easily sold*  
c. Es wurde sich geschämt/gefürchtet  
*it became Refl. ashamed/feared* (inherent reflexive)

Discussion:

- 'sich' is connected to one Voice head
- the passive is connected to another Voice head
- \*[Voice[Voice]]

✓ Conclusion: The result of the test, which under the traditional view (Grewendorf (1989)) argues for an unaccusativity analysis of middles, can be derived in the system proposed here.

**G. DATIVES:**

The test:

- *Affectedness Datives* are possible with objects of transitives and the subjects of unaccusatives but not with the subjects of transitives or subjects of unergatives (see among many, Schäfer 2005, Cuervo 2005).

- (113) a. Hans hat der Maria die Tür geöffnet (transitive)  
*Hans has the-dat. Maria the door opened*  
b. Der Maria ist eine Vase zerbrochen  
*the-dat. is a vase broken*  
c. Der Menschheit hat sich das Klima verändert (refl. anticausative)  
*the human kind has the climate changed*  
d. Der Mutter starb das Kind (pure unaccusative)  
*the-dat. Mother died the child*
- (114) a. \*Das Kind hat der Mutter geträumt (unergative)  
*the child has the-dat.mother dreamt*  
b. \*Der Mutter tanzt das Kind  
*the-dat. Mother dances the child*

Middles:

- (115) a. Dir haben sich schon immer leicht die Leviten gelesen  
*you-dat. have Refl. yet already the levites read*  
b. Blinden reinigt es sich die Wohnung am leichtesten  
*Blinds cleans it Refl. the flat at easiest*  
c. Wehrlosen schneiden sich die Ohren leicht ab  
*defenceless-ones-dat cut Refl. the ears easily off*  
d. Ganz kleinen Kindern lesen sich Märchen noch leicht /am besten vor  
*very young-childs-dat. read Refl. fairy-tales yet easily/the best for*

- e. So einem Publikum spielt sich ein Bach nicht so leicht vor (Schachtl 1991)  
*such an audience plays Refl. a Bach not so easily for*

✓ The test shows that the Theme in middles behaves like an ordinary object.

Nom.-dat. order (Schachtl 1991):

(116) transitive:

- Q: Wem vertraut heutzutage schon noch der erfahrene Kunde?  
 a. Heutzutage vertraut der erfahrene Kunde nur noch dem Fachhändler  
 b. \*Heutzutage vertraut nur noch dem Fachhändler der erfahrene Kunde

(117) passive:

- Q: Wem können heutzutage schon noch die schwarzen Scheiben verkauft werden  
 a. Heutzutage können die schwarzen Scheiben nur noch dem ewig gestrigen verkauft werden  
 b. Heutzutage können nur noch dem ewig gestrigen die schwarzen Scheiben verkauft werden

(118) unaccusative:

- Q: Wem gefällt heutzutage schon noch der Klang der schwarzen Scheibe  
 a. Heutzutage gefällt der Klang der schwarzen Scheibe nur noch dem ewig gestrigen  
 b. Heutzutage gefällt nur noch dem ewig gestrigen der Klang der schwarzen Scheibe

(119) middle:

- Q: Wem verkauft sich heutzutage schon noch die schwarze Scheibe?  
 a. Heutzutage verkauft sich die schwarze Scheibe nur noch dem ewig gestrigen  
 b. Heutzutage verkauft sich nur noch dem ewig gestrigen die schwarze Scheibe

✓ Conclusion: The test shows that the nominative in middles behaves like the nominative in passives and unaccusatives but not like the nominative in transitives.

## **H. RESULTATIVES:**

The test:

- (120) a. \*Das Defizit hat zu einer Belastung zugenommen (*unergative*)  
*the deficiency has to a burden ratchet up*  
 b. Das Defizit ist zu einer Belastung angewachsen (*unaccusative*)  
*the deficiency has to a burden grown*

Middles:

- (121) a. Der Zauberlehrling: Eine Schildkröte verwandelt sich leicht in einen Stein  
*sorcerer's apprentice: a turtle transmutes easily into a stone*  
 b. Der Tisch schiebt sich ganz leicht in die Ecke  
*the table pushes easily into the corner*

Dutch:

- Zwart (2005) argues that resultatives are bad with Dutch middles

- (17) a. \* Deze borden zetten lekker op tafel  
these plates place good on table  
b. \* Bureacraten kopen gemakkelijk om  
bureacrats buy easy off  
'Bureacrats bribe easily.'  
c. Deze schoenen lopen lekker (\*scheef)  
these shoes walk good oblique

**I. THE WEAK/STRONG READINGS OF INDEFINITES AND BARE PLURALS:**

The test:

- The first vP-border is the domain of existential closure (among many, Diesing 1992, deHoop 1992, Haider & Rosengren 1998).

- The unaccusativity hypothesis: prediction:  
[<sub>VP</sub> sich [<sub>VP</sub> a door open] (weak reading)  
[<sub>XP</sub> a door<sub>i</sub> [<sub>VP</sub> sich [<sub>VP</sub> t<sub>i</sub> open] **(no weak reading)**
- The unergativity hypothesis:  
[<sub>VP</sub> a door [<sub>VP</sub> sich open] **(weak reading)**  
[<sub>XP</sub> sich<sub>i</sub> [<sub>VP</sub> a door [<sub>VP</sub> t<sub>i</sub> open] (weak reading)  
[<sub>XP</sub> a door<sub>k</sub> [<sub>XP</sub> sich<sub>i</sub> [<sub>VP</sub> t<sub>k</sub> [<sub>VP</sub> t<sub>i</sub> open] (no weak reading)

- Indefinite pronouns don't scramble:

- (122) a. weil der Hans was gesehen hat  
*because the Hans what seen has*  
b. \*weil was der Hans gesehen hat
- (123) a. weil sich was öffnete  
*because Refl. what opens*  
c. \*weil was sich öffnete
- (124) a. falls [??wer] sich [wer] meldet  
*because someone Refl. someone signals*  
b. weil Hans [??wem] sich [wem] gezeigt hat  
*because Hans someone himself introduced*

! Conclusion: not decisive.

- scrambled indefinites lose their indefinite and unspecific reading (examples from Haider&Rosengren 1998):

- (125) a. dass Hans einen Fisch bestellte (*specific, existential*)  
*that Hans a fish ordered*  
 a. dass einen Fisch Hans bestellte (*specific*)  
*that a fish Hans ordered*
- o with anticausatives:
- (126) a. weil sich eine Tür öffnete (*specific, existential*)  
*because Refl. a door opened*  
 b. weil eine Tür sich öffnete (*specific*)
- (127) a. weil sich eine Tür öffnen sollte (*generic, specific, existential*)  
*because Refl. a door open should*  
 b. weil eine Tür sich öffnete sollte (*generic, specific*)

- bare plurals:

- (128) a. dass ja Max Primaballerinas bewundert (*generic, existential*)  
*that prt. Max prima ballerinas admires*  
 b. dass ja Primaballerinas Max bewundert (*generic*)
- (129) a. weil ja niemand Fledermausgeräusche hören kann (*generic, existential*)  
*because prt. No one bat-noises hear can*  
 b. weil ja Fledermausgeräusche niemand e hören kann (*generic*)
- o with anticausatives:
- (130) a. weil Türen sich öffneten (*generic*)  
*because doors Refl. opened*  
 b. weil sich Türen öffneten (*generic, existential*)
- (131) a. weil Türen sich öffnen (*generic*)  
*because doors Refl. open*  
 b. weil sich Türen öffnen (*generic, existential*)
- (132) a. weil sich Türen öffnen und schließen sollten (*generic, existential*)  
*because Refl. doors open and close should*  
 b. weil Türen sich öffnen und schließen sollten (*generic*)
- o with middles:
- (133) a. weil sich hier Bücher gut verkaufen (*generic, existential*)  
*because Refl. here books good sell*  
 b. weil Bücher sich hier gut verkaufen (*generic*)
- (134) a. weil sich hier Politiker leicht bestechen (*generic, existential*)  
*because Refl. here politicians easily bribe*  
 b. weil Politiker sich hier leicht bestechen (*generic*)

- negative indefinite is scrambled out of the domain of existential closure. It cannot get a specific interpretation because that's incompatible with its lexical meaning

(135) dass ja nichts \*(von dem) jemand/Hans hören kann (Haider & Rosengren 1998)  
*that prt. nothing (of this) anyone/Hans hear can*

- (136) a. weil ihm nichts gelingen wird  
*because him nothing succeed will*  
 b. weil nichts \*(von dem) ihm gelingen wird  
 o with anticausatives:

- (137) a. \*weil nichts (von dem) sich verändern wird  
*because nothing (of this) Refl. change will*  
 b. weil sich nichts verändern wird

- ✓ Conclusion: The test suggests that the Theme in middles and Anticausatives is base-generated below the Reflexive. Scrambling of the Thema to the front moves it out of the domain of existential closure.

## 6. Some speculations about English and Dutch:

- Both languages show Voice symptoms:

- (138) a. John raises his kids very strictly (Lekakou 2005)  
 b. The sun rises from the East  
 c. Obedient daughters **raise** more easily than disobedient sons

(139) This vinyl floor **lays**/\*lies in a few hours (Fellbaum 1986)

- (140) a. Dit soort boeken heeft/\*is altijd goed verkocht (Lekakou 2005)  
*this sort books has/is always well sold*  
 b. het makkelijk snijdende/\*gesneden vlees  
*the easily cutting cut meat*

- An empty SpecVoice:<sup>14</sup> D-feature drives object movement in the absence of an expletive

(141) Language:	Middle Syntax:	Spell-out:
Greek:	[ <sub>VP</sub> [ <sub>v'</sub> Voice <sub>{∅}</sub> [ V Theme ]]]	-> ( <i>passive</i> )
Italian:	[ <sub>VP</sub> [ <sub>v'</sub> Voice <sub>{∅}</sub> [ V Theme ]]]	-> ( <i>clitic-si</i> )
German:	[ <sub>VP</sub> Expl. [ <sub>v'</sub> Voice <sub>{D, ∅}</sub> [ V Theme ]]]	-> ( <i>sich</i> )
Dutch, English:	[ <sub>VP</sub> Theme <sub>i</sub> [ <sub>v'</sub> Voice <sub>{D, ∅}</sub> [ V t <sub>i</sub> ]]]	-> ( <i>active</i> )

<sup>14</sup> If Greek and French middles really allow *by-phrases* (Lekakou 2005), then these structures probably involve Voice with an agent feature, i.e. they are real (generic) passives. The question that remains then is why for example the German passive cannot have the Generic reading known from Middles. The contrast analytic vs. periphrastic passive might be relevant.

- Adverb position (Fellbaum 1986)

- (142) a. Delicate plants [easily] die [easily] when left alone  
 b. Silk dresses [\*easily] wash [easily]

- V to v movement obligatory. But no further.
- ‘easily’ is a VP/vP adverb or a complement.
- Adjunction to a semantically empty vP is not possible.

### 7. A German puzzle:

- (143) aufwecken (tr.) - aufwachen (intr.) (wake (s.o.) up)  
 a. Der Hans weckt sich angenehm auf  
 b. \*Der Hans wacht sich angenehm auf  
 c. Hier weckt es sich den Hans angenehm auf  
 c. \*Hier wacht es sich den Hans angenehm auf  
 d. Hier wacht es sich angenehm auf

- (144) versenken (tr.) - versinken (intr.) (sink (s.th.))  
 a. Steine versenken sich leicht  
 b. \*Steine versinken sich leicht  
 c. Steine versenkt es sich leicht  
 d. \*Steine versinkt es sich leicht  
 e. Im Moor versinkt es sich leicht

- (145) ertränken (tr.) - ertrinken (intr.) (drown (s.o.))  
 a. Kleine Katzen ertränken sich leicht  
 b. \*Kleine Katzen ertrinken sich leicht  
 c. Hier ertränkt es sich Katzen leicht  
 d. \*Hier ertrinkt es sich Katzen leicht  
 d. Im Meer ertrinkt es sich leicht

- Hypothesis: Reanalysis as unergative in the context of humans (potential controllers).
- But why does the morphology remain unaccusative?  
 -> it remains intransitive (late insertion).  
 -> This tells us that ‘es’ cannot be an argument (subject, object); it is a functional element.

- (146) a. Gewachsen wird nachts (Spiegel online: 6.3.05)  
*grown is at-night*  
 b. Bei Ruhe wächst es sich tatsächlich am besten  
*at repose grows it Refl. indeed at gest*

- (147) a. In welchem Bezirk stirbt es sich am frühesten (Steinbach 2002)  
*in which area dies it Refl. at earliest*  
 b. So steht’s sich wie ein Ritter, so fällt sich’s wie ein Held

- A final puzzle: Idiom?

- (148) Die reden sich leicht  
*these(people) talk Refl. Easily*

## Literature:

- Abraham, W. (1987) Was hat sich in „Damit hat sich's“? *Das Passiv im Deutschen: Akten des Kolloquiums über das Passiv im Deutschen, Nizza 1986*, ed. Centre de Recherche en Linguistique Germanique Nice, 51-71. Tübingen: Niemeyer.
- Ackema, P. & M. Schoorlemmer (1994) The middle construction and the syntax-semantics interface. *Lingua* 93:59–90.
- Ackema, P. & M. Schoorlemmer (1995) Middles and nonmovement. *Linguistic Inquiry* 26:173–197.
- Ackema, P. & M. Schoorlemmer (2002) Middles. Ms. University of Nijmegen and University of Utrecht. To appear in the SynCom Project.
- Alexiadou, A. & E. Anagnostopoulou (2004) Voice morphology in the Causative-Inchoative Alternation: Evidence for a Non-Unified Structural Analysis of Unaccusatives. In: *The Unaccusativity Puzzle: explorations of the syntax-lexicon interface*, eds. A. Alexiadou, E. Anagnostopoulou & M. Everaert, 114–136. Oxford: Oxford University Press.
- Alexiadou, A., Anagnostopoulou, E. & F. Schäfer (2006) *The properties of anticausatives crosslinguistically*, In: *Phases of Interpretation*, ed. M. Frascarelli. Berlin: Mouton.
- den Besten, H. (1985). The Ergative Hypothesis and Free Word Order in Dutch and German. In: *Studies in German Grammar*, ed. J. Toman, 23-64. Dordrecht: Foris.
- Cabredo Hofherr, P. (2000) La passivation des intransitifs en allemand et le statut des explétifs. Ph.D. University Paris VII.
- Cardinaletti, A. (1998) *Case Checking in German Impersonal Middles and Passives*. <http://mitpress.mit.edu.celebration> (Chomsky Celebration), The MIT Press, Cambridge, Mass.
- Chierchia, G. (1995) Individual level predicates as Inherent Generics. In: *The Generic Book*, eds. G. Carlson & F. J. Pelletier. Chicago: Chicago University Press.
- Cinque, G. 1990. *Types of A' dependencies*. Cambridge, Mass., The MIT Press.
- Condoravdi, C. (1989) The middle: where semantics and morphology meet. *MIT Working Papers in Linguistics* 11:18–30.
- Cuervo, M. C. (2003). *Datives at Large*. Ph.D. thesis, MIT.
- deHoop, H. (1992) *Case Configuration and Noun Phrase Interpretation*. Ph.D. University of Groningen.
- Diesing, M. (1992) *Indefinites*. Cambridge, Massachusetts: MIT Press.
- Eisenberg, P. (1989) Perfektbildung und Ergativparameter im Deutschen. In: *Linguistische und didaktische Grammatik - Beiträge zu Deutsch als Fremdsprache*, eds. J. Buscha & J. Schröder, 112-128. Leipzig.
- Embick, David. 2004. Unaccusative Syntax and Verbal Alternations. In *The unaccusativity puzzle: explorations of the syntax-lexicon interface*, eds. A. Alexiadou, E. Anagnostopoulou & M. Everaert, 137-158, Oxford: Oxford University Press.
- Fagan, S. (1992) *The syntax and semantics of middle constructions*. Cambridge: University Press.
- Fanselow, G. (1988) Aufspaltung von NP und das Problem der 'freien' Wortstellung. *Linguistische Berichte* 114: 91-113
- Fanselow, G. (1993) Die Rückkehr der Basisgenerierer. *Groninger Arbeiten zur Germanistischen Linguistik* 36: 1-74.
- Fanselow, G. & D. Cavar (2002) Distributed Deletion. In: *Theoretical Approaches to Universals*, ed. Artemis Alexiadou, 65- 107, Amsterdam: Benjamins.
- Fellbaum, C. (1986) *On the middle construction in English*. Bloomington, Indiana: Indiana University Linguistics Club.
- Folli, R. (2002). *Constructing Telicity in English and Italian*. PhD dissertation, University of Oxford.
- Grewendorf, G. (1989) *Ergativity in German*. Dordrecht: Foris.
- Haider, H. (1985). Von sein oder nicht sein: Zur Grammatik des Pronomens „sich“. In: *Erklärende Syntax des Deutschen*, ed. W. Abraham, Tübingen: Narr.
- Haider, H. & I. Rosengren. 1998. Scrambling. *Sprache und Pragmatik* 49. Lund: Germanistisches Institut.
- Haspelmath, M. (1993). More on the typology of inchoative/causative verb alternations. In: *Causatives and Transitivity*, eds. B. Comrie & M. Polinsky, Amsterdam: John Benjamins.
- Haspelmath, H. (2005) *Universals of causative verb formation* (handout), <http://email.eva.mpg.de/~haspelmt/5.CausativeVerbs.pdf>

- Hoekstra, T. & I. Roberts (1993) Middle constructions in Dutch and English. In: *Knowledge and Language II. Lexical and Conceptual Structure*, eds. Eric Reuland & Werner Abraham, 183–220, Dordrecht: Kluwer.
- Kratzer, A. (1995) Stage-Level and Individual-Level Predicates. In: *The Generic Book*, eds. G. Carlson & F. J. Pelletier, 125–175, Chicago: Chicago University Press.
- Lekakou, M. (2005) *In the Middle, Somewhat Elevated. The semantics of middles and its crosslinguistic realization*. Ph.D. University of London. Available at LINGBUZZ.
- Levin, B. & M. Rappaport Hovav (1995) *Unaccusativity*. Cambridge, Massachusetts: MIT Press.
- McGinnis, M. (1999) Reflexive clitics and the specifiers of vP. *MIT Working Papers in Linguistics* 35:137–160.
- Marantz, A. (1997) No escape from syntax: Don't try morphological analysis in the privacy of your own Lexicon. In: Proceedings of the 21st Annual Penn Linguistics Colloquium, ed. Alexis Dimitriadis et.al., 201-225, Penn Working Papers in Linguistics 4: 2.
- Meinunger, A. (1995) *Discourse dependent DP (de-)placement*. Dissertation, University of Potsdam.
- Mills, J. (2005) *Solving Middle Syntax with Tagalog Morphology* (abstract for PLC 30), <http://www.ling.upenn.edu/Events/PLC/plc30/abstracts/91.pdf>
- Müller, G. (1993) *On deriving movement type Asymmetries*. Doctoral Dissertation. SfS-Report-05-93. Tübingen
- Rizzi, L. (1990) *Relativized minimality*. MIT Press, Cambridge, MA.
- Schachtl, S. (1991) Der Akkusativ in der Medialkonstruktion des Deutschen. In: *Strukturen und Merkmale Syntaktischer Kategorien*, eds. G. Fanselow & S. W. Felix, 104-120 Tübingen: Niemeyer.
- Schäfer, F. (2005) *The syntax of the unintentional causer construction*, talk at the guest lecture series of the graduate school 'Linguistic representations and their interpretation', University of Stuttgart.
- Steinbach, M. (2002) *Middle Voice*. Amsterdam: John Benjamins.
- Stroik, T. (1992) Middles and Movement. *Linguistic Inquiry* 23:127–137.
- Vikner, S. (1995) *Verb Movement and Expletive Subjects in the Germanic Languages*. Oxford: Oxford University Press.
- Zribi-Hertz, A. (1993) On Stroik's analysis of English middle constructions. *Linguistic Inquiry* 24:583–589.
- Zwart, J.-W. (2005) *Reflexivity and middle constructions in Dutch and English* (handout), <http://www.let.rug.nl/~zwart/>