Middles as Voiced Anticausatives*

Florian Schäfer

University of Stuttgart

1. Introduction

(1)-(3) give a crosslinguistic sample of the so called generic middle construction.

(1) a. Dit boek leest makelijk (*Dutch*)
b. This book reads easily (*English*)

(2) a. Das Buch liest **sich** leicht (*German*)
b. Ce livre **se** lit facilement (*French*)
this book (Refl) reads (Refl) easily

(3) Afto to vivlio diavaz**ete** efkola (*Greek*)
this the book read**-**Non-Act.3sg easily

The examples in this sample differ morphologically; some languages form unmarked middles, others mark their middles with reflexive or non-active morphology. Despite this variation, all middles show the following core properties (from Ackema & Schoorlemmer 2005): (i) The subject of the sentence corresponds to the internal argument. (ii) The Agent is demoted and receives an arbitrary interpretation. (iii) The interpretation of the sentence is non-episodic. Middles do not make reference to an actual event having taken place but rather report a property of the grammatical subject. The otherwise eventive verb becomes a derived stative and, more precisely, receives a generic modal interpretation.

This survey poses at least the following questions: How does the understood or notional object become the subject of the sentence? What is the function of the special morphology that we find in middles of some languages? What is the right linguistic representation of the agent; what does it mean technically to be demoted?

I will try to answer these questions assuming a *theory of configurational theta role assignment*. This predefines already the answer to the first question; the theme

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must be base generated in object position. Nominative/agreement is either checked in situ or the theme A-moves to a structural subject position. The answer to the second question will be guided by the following observation: languages that mark their middles use the same morphology to mark a subclass of their anticausative verbs. The answer to the third question must account for the fact that the implicit agent in middles clearly differs from the implicit agent in passives; only the latter is syntactically active. The standard tests *licensing of agentive adverbs*, *control into purpose clauses* and *licensing of by-phrases* should suffice here to show this difference between passives (4) and middles (5).[1] However, an agent does not seem to be totally missing in middles as a comparison with eventive unaccusatives in (6) and (7) shows. The two differ with respect to the licensing of '*by itself*' (Keyser & Roeper 1984) and instrumental phrases (Hale & Keyser 1987).

(4) a. The boat was sunk on purpose.
b. The boat was sunk [PRO to collect the insurance].
c. The boat was sunk by the enemy.

(5) a. *Such texts translate (easily) deliberately/passionately.
b. *Such texts translate easily [PRO to win the Translator's Prize].
c. *Such texts translate easily by an experienced translator.

(6) a. This cup breaks easily (*all by itself)
b. This cup broke suddenly all by itself

(7) a. This glass breaks easily with a hammer
b. The window broke suddenly (*with a hammer)

Such contrasts can be explained within lexicalist frameworks by the assumption that all theta roles are represented in the lexical entry of a predicate but in middles the agent is not projected from the lexicon to the syntax (e.g. Ackema & Schoorlemmer 1994). Then the agent is semantically present but not syntactically active.

Here I am pursuing a grammatical system without structured lexical entries (Marantz 1997, Borer 2005, among others). The main question to be answered then is the following: If there is no syntactically active agent in middles, and if there are no structured lexical entries, where does the intuition concerning agency come from? Here I will develop and defend the following claims:[2]

i) Middles are *generic unaccusatives*. The theme is merged as an object as in transitive structures. There is no syntactically represented implicit agent.[3]
ii) Middles involve an implicit agent if the *encyclopaedic knowledge* about the verbal root or the verb+Theme combination in the construction implies this.[4]

[1] As has often been noticed the first two tests are not without problems as they might built on intentionality and eventivity. However, taken all indications together the claim seems to be justified.

[2] Some of these claims can already be found in Hale & Keyser (1987), Condoravdi (1989) and Rapoport (1999). See also Marantz (1997) for the role of root semantics.

[3] Syntactic theories of middles which propose that the agent is *pro/PRO* have the problem that the implicit agent in Middles differs from other well known instances of *pro/PRO* as well as from the implicit agent in Passives.

[4] This is the translation of the view in Condoravdi (1989:19), that "the implicit agent can be had as an entailment of the lexical meaning of the verb". It follows from i) + ii) that: "…the relation of

iii) Only *generic unaccusatives* allow the implication of an agent but not *eventive unaccusatives*. This means: *Genericity* helps us to interpret structures at the CI-Interface that are otherwise uninterpretable.

iv) Middles with an implicit agent necessarily have a semantically empty Voice component; this component makes them often look morphologically like the most marked anticausative in a language (German – *sich*; Greek – *non-active*; Romance – *si/se*). It makes the construction formally transitive or passive. Transitive constructions do not pass (all) the unaccusativity diagnostics.[5]

Since verbs undergoing the causative alternation have been identified to form the core of the verbs forming middles (Hale & Keyser 1987), and since middles often show the same morphological marking as anticausatives, verbs undergoing the causative alternation seem to be a good starting point to investigate middles. In section 2 I will therefore present a theory of the causative alternation and anticausative morphology. Section 3 explores the circumstances under which verbs undergoing the causative alternation can have a middle reading. Section 4 discusses English and Dutch middles.

2. The causative alternation

This section introduces the most central assumptions about the causative alternation as developed in Alexiadou et al. (2006). Verbs undergoing the alternation can appear in transitive, passive and anticausative constructions as illustrated for English in (8).

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

Alexiadou et al. assign the structures in (9) to the constructions in (8). All three constructions are built up by a root+theme complex expressing a resultant state and an eventive head V_{CAUS} on top of it. V_{CAUS} introduces *a causal relation* between a causing event (the implicit argument of V_{CAUS}) and the resultant state denoted by the verbal root + theme. Importantly, causatives and anticausatives do not differ in their event decomposition but only in the presence vs. absence of Voice. Voice does not introduce an event but just relates the external argument to the verbal event as proposed by Kratzer (1996). In transitives the external argument is in SpecVoice, in passives it is implicit in the Voice head, in anticausatives Voice is missing.

(9) active: [Agent [$Voice_{agent}$ [V_{CAUS} [Root + Theme]]]]
passive: [$Voice_{agent}$ [V_{CAUS} [Root + Theme]]]
anticausative: [V_{CAUS} [Root + Theme]]

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a verb in the middle to an unaccusative verb is in its *form* and argument structure, not in its *lexical meaning* as well …" Condoravdi (1989:27). It further follows that: "The question one must address is this: which verbs, and under what conditions, allow their intransitive form to express a meaning which includes an agent? That is, transitivity alternations are not simply coextensive with ergativity alternations." Condoravdi (ibid.).

[5] A discussion of the behaviour of middles with respect to unaccusativity diagnostics is beyond the scope of this paper. See Schäfer (in prep.) for such a discussion where it is argued that e.g. in German the relevant tests suggest that middles are unaccusative and that some of the tests that seem to argue against the unaccusativity of English middles are not significant.

The question which verbs allow the causative alternation depends on the *encyclopaedic semantics* of the root involved (cf. also Marantz 1997, Harley & Noyer 2000). Following the terminology in Levin & Rappaport Hovav (1995), four semantic root classes are distinguished: √agentive (e.g. *murder*, *assassinate*), √externally caused (e.g. *destroy*, *kill*), √cause-unspecified (e.g. *break*, *open*) and √internally caused (e.g. *blossom*, *wilt*). The idea is that every root which forms a change of state verb can show up in both a causative as well as in an anticausative frame from a syntactic point of view. But the syntactic frame must be compatible with the root semantics. If a root refers to an event that is conceptualized as necessarily 'agentive' or 'externally caused', then it has to show up in the context of a thematic Voice-head/external argument. Such a root is always semantically transitive and does not form anticausatives (cf. (10) and (11)).

(10) a. John murdered Mary
b. Mary was murdered
c. *Mary murdered

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

Roots that refer to an event that is necessarily conceptualized as 'internally caused' never combine with a thematic Voice head/external argument. They are always intransitive/unaccusative (cf. (12)).

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

If a root expresses an event that can be conceptualized as either 'externally caused' or 'internally caused' (√cause-unspecified) then the root can show up both with or without a thematic Voice head/external argument, i.e. it undergoes the causative alternation (cf. (13)).

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

This means that (10c), (11c) and (12a, b) are syntactically well-formed but filtered out as uninterpretable at the *Conceptual Interface*. As discussed in Alexiadou et al. (2006) the *Conceptual Interface* does not only look at the root but can evaluate the whole VP. The examples below (from Levin & Rappaport Hovav 1995) illustrate this. Although the verb '*break*' can in principle undergo the causative alternation, (14c) is not grammatical. The reason is that our world knowledge tells us that events of breaking a promise or world record necessarily involve an agent.[6] Such examples show that the relevant information cannot be encoded in a lexical entry and is not strictly linguistic.

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

[6] Encyclopaedic knowledge about a root is therefore nothing else than world knowledge associated with a root.

2.1 Morphological variation in anticausative formation

Many languages have morphologically marked and unmarked anticausatives. These two classes are exemplified below for German, Italian and Greek.

(15) a. Die Tür öffnet **sich**
the door opens Refl.

b. Die Vase zerbricht (*German*)
the vase breaks

(16) a. La finestra **si** è chiusa
the window Refl. are closed

b. I prezzi sono aumentati (*Italian*)
the prices are increased

(17) a. I supa keg**ete**
the soup-nom burns-**Nact**

b. I sakula adias**e** (*Greek*)
the bag-nom emptied-**Act**

Haspelmath (1995, 2005) argues that this partition reflects the conceptualization of change of state events. He proposes that "events can be arranged on a scale in the order of decreasing likelihood of spontaneous occurrence (as conceptualized by the speaker)" (Haspelmath 2005:7). This is illustrated in Table 1 using the typology of roots introduced above. The likelihood of spontaneous occurrence of an event described by a root is directly reflected by the syntactic frame a root can enter. √externally caused are of low spontaneity and need a transitive syntax. √internally caused are of high spontaneity and need an intransitive syntax. √cause unspecified are in between and allow both syntactic frames.

Table 1: spontaneity scale: *all types of roots*

{√agentive < √externally caused <	√cause unspecified	< √internally caused}
- spontaneous < … … … … … …	… … … … …	… … < + spontaneous
.. .. … … … … … ... <- transitive |	… … alternate … …	| intransitive -> … … ..

Turning to the two morphological classes of anticausatives, Haspelmath (1993:103) argues that "a factor favoring the anticausative expression type [i.e. the morphologically marked one as in (15a), (16a) and (17a)] is the probability of an outside force bringing about the event." This idea is illustrated in table 2 which zooms into the dotted area of table 1. In Table 2 we see the different √cause-unspecified as they are ordered on the spontaneity scale. The idea is that each language cuts the class of √cause-unspecified in two halfs. Those on the right side of the cut are spontaneous enough to behave morphologically as √internally caused. Those on the left side of the cut are less spontaneous and need an extra mark if they form anticausatives.

Table 2: spontaneity scale: √*cause-unspecified* (idealisation)

{√unsp.(x), √unsp.(x+1), √unsp.(x+2), … … … √unsp.(y-2), √unsp.(y-1), √unsp.(y)}
- spontaneous < … … … … … … ... … … … … … … < + spontaneous
German: … … … … … … … … … … … … … <- sich | ∅ -> … … … … … … … …
Italian: … … ... … … … … <- si | ∅ -> … … … … … … … … … … … … … ..
Greek: … … … … … … … … … … <- non-active | ∅ -> … … … … … … … … ...

To conclude, languages can have two classes of √cause-unspecified (i.e. roots undergoing the causative alternation), √unspecified-marked and √unspecified-unmarked. This partition is semantically motivated but the cut-off point is highly idiosyncratic within one language.

2.2 The syntax of marked anticausatives

We have to account for the syntactic position of the morphology found with marked anticausatives. My general claim is that it is Voice-related. For Greek this obviously makes sense as the same morphology is used to mark eventive passives which arguable involve a Voice projection. In fact it has been argued e.g. by Embick (2004) or Alexiadou & Anagnostopoulou (2004) that the morphology in Greek anticausatives is located in or associated with Voice/little v. German marked anticausatives have been argued to be syntactically transitive although they are semantically unaccusative (c.f. Fagan 1992, Steinbach 2002) and transitivity is typically dealt with in Voice; I therefore assume that in German anticausatives 'sich', a full reflexive pronoun, is located in the SpecVoice. Finally for Italian anticausatives, Folli (2000) argues that 'si', a reflexive clitic, is located in the highest verbal head of the construction; this should be Voice under my view. Combining these phrase-structural assumptions with the results of the last section we arrive at the following conclusion: Roots that form marked anticausatives have a formal requirement: they always want to be in the context of Voice (i.e. be syntactically transitive or passive).[7]

But semantically anticausatives are unaccusative. The only way out of this contradiction is to assume that Voice can be **expletive** or **non-thematic.** This option is even predicted if we assume that the behaviour of Voice is determined by a (sub-)set of features (cf. 18). Thematic Voice carries a feature (e.g. agent) determining the thematic role of the external argument. If Voice carries in addition a categorical D feature the external argument is projected in the SpecVoice (*active*). In the absence of the categorical D feature we derive a *passive* with an implicit argument. A further option is a Voice head with a categorical feature but no thematic feature; this Voice head projects an explitive '*sich*' without a theta role in its specifer. If Voice is without any feature, no specifer is projected and no implicit argument is realized; the head might be spelled out as non-active or as a reflexive clitic. These different options are depicted below.

(18)

Interpretation:	Syntax:	Spell-out:
active:	[Agent [Voice$_{\{D,\ agent\}}$ [V [Root]]]]	(*active*)
passive:	[Voice$_{\{agent\}}$ [V [Root]]]	(*non-active*)
anticausative-I:	[Expl. [Voice$_{\{D,\ \varnothing\}}$ [V [Root]]]]	(*sich*)
anticausative-II:	[Voice$_{\{\varnothing\}}$ [V [Root]]]	(*non-active, clitic-si*)
anticausative-III:	[V [Root]]	(*unmarked*)[8]

[7] This could in principal be implemented with a c-selectional feature on these roots, similar to the use of such features in Ramchand (2006).

[8] There is the question why morphologically unmarked anticausatives cannot optionally 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

An expletive Voice projection therefore allows roots which are relatively low on the spontaneity scale to be at least syntactically transitive (or passive) although they do not have a thematic external argument. Of course we would like to explain why the expletive in SpecVoice is realized as a reflexive pronoun '*sich*' and how the theme can get nominative in such a structure. A proposal which builds on the fact that reflexives are void of φ-features is developed in Schäfer (in prep.).

3. Generic middles

Prototypical middle sentences like "*This book reads easily*" are formed with agentive roots which do not form anticausatives. Above, we explained this by building on the encyclopaedic meaning associated with such roots. The event associated with the root √READ is of very low spontaneity; it implies a driving force/a second entity behind the activity (agent). Since such an entity is not realized syntactically in anticausatives the anticausative sentence "*The book reads*" is filtered out at the CI-Interface.

Imagine that even roots like √READ could form anticausatives, either because there is no semantic restriction on anticausative formation or because it could be circumvented. Which morphology would we expect to show up? The answer (building on table 2) would be that such a root should form marked anticausative with '*sich*' in German, '*si*' in Italian, and non-active morphology in Greek.

3.1 At the CI-Interface: agentive Roots and V+Theme combinations

Recall that at the CI-Interface eventive anticausatives are filtered out if the verbal root is agentive as in (19) or if the V+Object combination implies agentivity (20b).

(19) *The book read (*agentive root*)

(20) a. He broke his promise / the contract / the world record
b. *His promise / the contract / the world record broke (*agentive V+Object*)

However, both agentive roots and agentive V+Object combinations do allow non-eventive/generic middles. (21) is an English middle with an agentive root. (22) and (23) are German examples of agentive V+Object combinations that do not form anticausatives but middles. The middle is always marked with extra morphology.

(21) This book reads easily

(22) a. *Der Weltrekord brach am 2.10.2005 (*anticausative*)
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

(23) a. *Der Rotweinfleck entfernt sich (*anticausative*)
the red-wine-spot removes Refl.
b. Mit diesem Mittel entfernen sich Flecken ganz leicht (*middle*)
with this detergent remove Refl. spots very easily

Voice by a(n) (idiosyncratic) requirement associated with the root which is connected to the +/- spontaneous hierarchy (cf. section 2.1).

3.1.1 Verbs forming unmarked anticausatives

In this section we look at the behavior of roots that form unmarked anticausatives such as '*schmelzen*' (melt) below.

(24) a. Hans schmilzt das Eis
Hans melts the ice
b. Das Eis schmilzt (*sich)
the ice melts (Refl.)

If we put such anticausatives into the context of a generic sentence operator (GEN) we can make two observations: First, both the unmarked but also the marked version is grammatical. Second, the unmarked version never implies an implicit agent but the marked version necessarily implies an implicit agent.

(25) a. Zinn schmilzt leicht (*no agent involved*)
b. Zinn schmilzt sich leicht (*agent involved*)
solder melts (Refl) easily

(26) a. Schalplatten zerkratzen leicht (*no agent involved*)
records scratch easily
b. Schalplatten zerkratzen sich leichter als CDs (*agent involved*)
records scratch Refl more-easily than CDs

Sometimes an implicit agent is conceptually hard to get. In (27) the V+theme complex is internally caused as can be seen from the ungrammaticality of (28); it is an inherent property of gas that it burns relatively cleanly (in contrast to for example coal). In (29) the root '*vertrocknen*' (wither) is internally caused (see (30)). Under such circumstances the addition of the reflexive pronoun to the generic sentences in (27a) and (29a) leads to unacceptability (cf. (27b) and (29b)); only the unmarked sentences which do not imply an agent are well-formed.

(27) a. Erdgas verbrennt relativ sauber (*internally caused V+Theme*)
b. #Erdgas verbrennt sich relativ sauber
gas burns (Refl) relatively cleanly

(28) #Hans verbrennt das Erdgas sauber
John burns the gas cleanly

(29) a. Blumen vertrocknen leicht (√*internally caused*)
b. #Blumen vertrocknen sich leicht
flowers wither (Refl) easily

(30) #Hans vertrocknet die Blumen
John withers the flowers

3.1.2 Verbs forming marked anticausatives

Next we look at the behaviour of verbs that form marked anticausatives as for example the verb '*verändern*' (change) below.

(31) a. Die Menschheit verändert das Klima
the human kind changes the climate
b. Das Klima verändert *(sich)
the climate changes Refl.

If we put verbs forming marked anticausatives into the context of a generic sentence operator GEN the structures are in principle ambiguous. They optionally imply the presence of an implicit agent. However, the existence of the implicit agent is highly dependent on the context and the specific Verb+Theme combination. This is shown by the examples below. (32a) and (33a) ascribe properties to their themes which are typically conceived as purely internal to the themes and which are hard to influence from outside. Therefore these examples do not lead to the implication of an agent. (A transitive version of (32a) would need a very special context, a transitive version of (33a) is impossible). The b-examples on the other hand ascribe properties to their themes which typically depend on the interaction with a human agent. Therefore these examples lead to the implication of an agent. (The judgments are tendencies (~) which can be challenged in a specific context.)

(32) a. Billige Sohlen lösen sich leicht ab (~ *no agent involved*)
cheap soles detach Refl easily prt.
b. Diese Aufkleber lösen sich leicht ab (~ *agent involved*)
these stickers detach Refl easily prt.

(33) 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.

As a summary of this and the previous section, we can examine two nearly synonymous roots, '*entflammen*' and '*entzünden*' (roughly: inflame/ignite) which form unmarked and marked anticausatives respectively.

(34) a. Das Papier entflammt b. Das Papier entzündet sich
the paper inflames the paper ignites Refl

If we put these anticausatives into the context of a generic sentence operator GEN we see the following result. The root which forms unmarked anticausatives can now appear with or without the reflexive pronoun whereby the unmarked version never implies an implicit agent and the marked version necessarily implies one (cf. (35)). The root forming marked anticausatives needs to combine with the reflexive and is ambiguous.

(35) a. Trockenes Holz entflammt leicht (*no agent involved*)
b. Trockenes Holz entflammt sich leicht (*agent involved*)
Dry wood inflames (Refl) easily
(36) Trockenes Holz entzündet sich leicht (*ambiguous*)
Dry wood ignites Refl easily

3.2 The source of the agent implicature

The previous two sections lead to the following conclusions:

i) If we put an anticausative in the context of a generic sentence operator then the question whether an agent is involved or not is highly dependant on the root semantics or the V+Theme semantics. This information is computed at the CI-Interface. I conclude that the agent implicature is *established* at the CI-Interface.
ii) The implication of an agent is formally dependent on the presence of '*sich*'/Voice-expl.
iii) Accepting the assumption developed above that marked anticausatives and middles are syntactically identical, the implication of an agent is further dependent on the specific middle/generic semantics.

These findings are resumed in (37); on the left side you see the different syntactic frames (presence and type of Voice, presence of the generic operator), in the middle you see whether the frame allows an agent implication, on the right side you see whether an agentive root can "survive" in this syntactic frame.

(37)

Syntax:		agent implicature at CI possible?		encyclopaedia satisfied?
A)	[V …]	->	no	* <- √agentive
A')	GEN + [V …]	->	no	* <- √agentive
B)	[Voice-expl. [V …]]	->	no	* <- √agentive
B')	GEN + [Voice-expl. [V …]]	->	yes	✓ <- √agentive
C)	[Voice-agent [V …]]	->	n.a.[9]	✓ <- √agentive

Under this view the two readings of (36) are not the result of a structural ambiguity (in the sense that if an agent is implied, a covert agent is merged) but the result of the fact that the encyclopaedic knowledge about the verbal root as well as the verb+theme combination are compatible with both scenarios, that the event evolves spontaneously or under the input of an agent. This view is supported by the observation that we cannot find any syntactic reflex of such an implicit agent (cf. e.g. section 1); the two readings behave syntactically alike. On the other hand the syntax seems indeed to be highly relevant for the implication of an agent. Encyclopaedic agentivity is never enough to implicate a middle agent as the examples in (35) show. We have to conclude that the CI-Interface can give the agent implicature only if '*sich*'/Voice-expletive is present. If a structure does not even have an expletive Voice, the interface cannot implicate an agent.[10] Finally the generic semantics must be involved in order to make an agent implicature possible. Below we consider the syntactic structures in (37 A, A', B, B') in detail from the perspective of the CI-interface:

Structure A is the syntax of an unmarked anticausative in an eventive construal. In this case the CI-Interface cannot imply an agent, i.e. information that is

[9] Agent implication at the CI is not necessary as the agent is already introduced in the syntax.

[10] Why must (35b) imply an agent? This is the result of the economy condition on empty Voice, see fn. 8. 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 and does not come earlier than at the CI-Interface.

normally encoded in a syntactic projection, i.e. Voice. This follows simply from the principle of Inclusiveness; you normally cannot insert information that wasn't there on earlier steps in the derivation. If Voice is not part of the syntactic structure you cannot add semantic information normally encoded on Voice.

Structure B is the syntax of a marked anticausative in an eventive construal. Once again the CI-Interface cannot imply an agent. The presence of Voice-expl does not help. Once again this follows from Inclusiveness. The CI-Interface cannot imply information that is normally encoded with a feature on a syntactic projection, i.e. [+agent] on Voice.

Structure A' is the syntax of an unmarked anticausative in the context of a generic sentence operator. Once again, the CI-Interface cannot imply information that is normally encoded in a syntactic projection, i.e. Voice (Inclusiveness).

Structure B' however leads to a different result. This structure is the syntax of a marked anticausative in the context of a generic sentence operator. In this case the CI interface can add information that is normally encoded with a feature on a syntactic projection, i.e. [+agent] on Voice. An agent implicature becomes possible in the context of both Genericity and an expletive Voice. Somehow this structure circumvents a violation of Inclusiveness.

Why/how can Genericity have this effect? The answer to this question should follow from the generic semantics. Specifically, I assume that it can be derived within a modal theory of Genericity (e.g. Krifka et al. 1995 and references there). Such a theory has three ingredients, a *modal relation* which in the case of middles is something close to 'necessity', a *modal base* (or conversational background) which in the case of middles is a property of the theme (cf. Lekakou 2005)[11], and finally an *ordering source* (a stereotypical conversational background). This *ordering source* 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 our actual world), the more probable it is that a modal relation will hold in that world. To see what this means look at the following sentence (38a) with its LF in (38b)

(38) a. Hunde haben vier Beine (*Dogs have four legs*)
b. GEN [x is a dog] [x has four legs]

Under the modal theory of genericity (38b) means that 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, (38b) requires a realistic modal base and is interpreted according to the set of facts which hold in our actual world.

Turning to generic middles, the sentence (39a) has the LF in (39b).

(39) a. Das Buch liest sich leicht (*This book reads easily*)
b. GEN [e: book(y), read(e), Theme (e,y)] [easy(e)] (cf. Condoravdi 1989)

[11] Lekakou (2005) argues that middles are generics ascribing a dispositional property to the understood object. They are subject-oriented, 'in virtue of' generalizations employing a VP-level generic operator comparable to dispositional *will*. As far as I can see my analysis does not crucially hinge on this assumption. However, her take nicely explains why we have to get rid of the external argument in order to form a middle. The agent is syntactically suppressed for minimiality reasons, in order to allow the dispositional property to be predicated of the understood object.

Applying the modal theory of genericity to this LF leads to the following interpretation: Everything in the worlds of the modal base which is a reading event of which this book (with all the properties it has in the actual world) 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 (39a) too.[12] But this is only the semantic part of the story: We saw before that the syntax has to be compatible with this; the syntax is compatible if it has an expletive Voice, i.e. a syntactic slot where the implicated information can be anchored into the linguistic structure. That is, only the combination of Genericity and an expletive Voice projection allows the CI-Interface to switch from (39b) to (40b') which has an agent variable. Following Lekakou (2005) I assume that this variable is interpreted as Generic indefinite ONE.

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

This theory allows us now to answer a question that has been around in the literature for some time (cf. e.g. Lekakou 2005, Rapoport 1999). Is there a suggestive difference between generic middles and generic unaccusatives? The answer proposed here is that 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 they are no middles in this strict sense.[13]

4. "Unmarked" middles in English and Dutch

Both, English and Dutch form unmarked middles. Obviously, the theory about the implicit agent in middles developed above can only be on the right rack if it holds crosslinguistically. This last section argues that we can find symptoms of an expletive Voice in English and Dutch middles, too.
Dutch middles select exactly as German middles the auxiliary 'have'.

(40) a. Dit soort boeken heeft/*is altijd goed verkocht
this sort books has/ is always well sold

In German we expect exactly this auxiliary if the reflexive pronoun 'sich' was merged in the SpecVoice. Can we motivate something similar for Dutch, too?
English has a few verbs that show some morphological reflex when they undergo the causative alternation. Crucially, middles of these verbs come with the transitive morphology (Fellbaum (1986), the example is from Lekakou (2005)).

(41) a. John **raises** his kids very strictly b. The sun **rises** from the East
c. Obedient daughters **raise** more easily then disobedient sons

[12] More formally, we are required to restrict the evaluation of the modal to stereotypical worlds where reading events have agents in accordance with our encyclopaedic knowledge about √READ. See Papafragou (1996) for another example where encyclopaedic knowledge can restrict the relevant worlds selected by the ordering source.
[13] This fits with the observation that simple generic unaccusatives license 'by itself' and generic middles with an agent implication do not (cf. the data in Rapoport (1999)).

These examples again suggest that SpecVoice is occupied in middles. I propose therefore that English and Dutch are quite close to German in projecting a SpecVoice in middles but differ in that they do not have an expletive that could be merged in SpecVoice.[14] In the absence of an expletive the categorical D-feature on the expletive Voice head has to be checked by movement of the theme.

(42) German: $[_{vP}$ Expl. $[_{v'}$ Voice$_{\{D, \varnothing\}}$ [V Theme]]]
Dutch, English: $[_{vP}$ Theme$_i$ $[_{v'}$ Voice$_{\{D, \varnothing\}}$ [V t_i]]]

Further motivation for this view comes from a difference in possible adverb positions in English anticausatives and middles discussed in Fellbaum (1986). She observes that generic unaccusatives can have the adverb in front or after the verb while in generic middles the adverb necessarily appears after the verb (cf. (43a, b)). The same effect is found with verbs undergoing the causative alternation such as '*break*' in (44). If the adverb follows the verb the sentence is ambiguous if it precedes the verb only the generic anticausative reading without agent implicature is possible (p.c. Beth Levin).

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

(44) a. This kind of vases easily breaks (anticausative reading/*middle reading)
b. This kind of vases breaks easily (anticausative reading/middle reading)

We can explain these data if V to Voice movement is obligatory in English and if adverbs can only attach to verbal projections with semantic content. That is, adverbs like '*easily*' or '*slowly*' can attach to VP or to a thematic VoiceP (cf. (45b)) but not to a semantically empty/expletive VoiceP (cf. (45a)).

(45) a. This book [*slowly] reads [slowly] b. John [slowly] read the book [slowly]

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[14] English does not have a light reflexive pronoun of the type of German '*sich*' but Dutch has. However, there are arguments that German '*sich*' and Dutch '*zich*' differ in productivity. First, while in German most anticausatives are marked with '*sich*' in Dutch only a small number of anticausatives is marked. Second, newly coined anticausatives in Dutch never appear with the reflexive pronoun but in German they always do (cf. Lekakou 2005). This perfectly fits with my view developed above that middles are anticausatives of verbs that normally do not form anticausatives, i.e. that they are in some sense newly coined anticausatives.

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Institute of Linguistics/Anglistics
University of Stuttgart
70174 Stuttgart, Germany

florian@ifla.uni-stuttgart.de