

# MIDDLES AS DISPOSITION ASCRIPTIONS

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## Abstract

Any analysis of middles has to account for the fact that across languages there is variation in their syntax. English and Dutch employ an unergative verb, whereas in French and Greek it is passives that can encode the middle interpretation. I propose to treat ‘middle’ as the targeted interpretation, which different languages express in different ways, depending on the means available to them with respect to encoding genericity. I qualify middles as disposition ascriptions to the internal argument, and argue that their core properties follow from this characterization.

## 1 Introduction

The syntactic properties of the so-called ‘(personal) middle construction’ in (1) and its equivalent in other languages have received a fair amount of attention in the literature (Roberts 1987, Tsimplici 1989, Fagan 1992, Stroik 1992, Hoekstra and Roberts 1993, Ackema and Schoorlemmer 1994, 1995, 2002, Steinbach 2002). Its semantic properties have been explored significantly less.

- (1) This book reads easily.

The need to examine the semantics of middles becomes even more pressing, once we acknowledge the cross-linguistic variation in the realization of the latter. In this paper, I attempt a novel semantic characterization of the middle and propose to derive the cross-linguistic variation in its realization from the different ways in which languages encode genericity in the verbal morphology. Section 2 contains some of the facts pertaining to the cross-linguistic variation as well as the core properties that middles share across languages. In section 3 I briefly present my proposal of how to derive middles across the two types of languages identified: English/Dutch and Greek/French. Section 4 is devoted to a discussion of genericity, with the aim of ultimately bringing to the fore a characteristic of middles from which their core semantic properties fall out, to wit dispositionality. Section 5 concludes.

## 2 The non-existence of the middle construction

(2) contains examples of middles in English, Dutch, Greek and French:

- (2) a. This book reads easily.  
b. Dit boek leest gemakkelijk.  
this book read-3SG easily  
‘This book reads easily.’

- c. Afto to vivlio δjavazete efkola.  
 this the-NOM book read-NONACT.IMPERF.3SG easily
- d. Ce livre se lit facilement.  
 this book REFL read-3SG easily  
 ‘This book can be read easily.’

English and Dutch middles employ an intransitive verb, whereas Greek and French employ a (reflexive) passive. Even in the absence of passive morphology, there are certain similarities that such sentences share with passives: the external argument, which would normally occupy the subject position, is suppressed, and it is the internal argument which is the subject of the sentence. These similarities have led authors such as Hoekstra and Roberts (1993), Roberts (1987), Stroik (1992) to argue that middles in English and Dutch involve syntactic A-movement of the object to subject position, and the assignment of the agent argument to a phonologically null syntactic element (either a *pro* within the VP, as in Hoekstra and Roberts (1993), or a PRO adjoined to VP, as in Stroik (1992)). Such analyses, which assimilate middle to passive formation even in languages such as English and Dutch, rest on the assumption that there is a middle construction definable in syntactic terms across languages. More crucially for the syntax-lexical semantics interface, such analyses are imposed by adherence to Baker’s Uniformity of Theta-role Assignment Hypothesis (UTAH). The UTAH dictates that internal arguments are always base-generated in a unique syntactic position (sister of V); therefore, since the syntactic subject of the middle corresponds to the internal argument, it can only appear in its surface position via syntactic movement from its underlying position.

However, the empirical data speak against such a neat picture. The full array of arguments concerning the cross-linguistic variation in the syntax of middles cannot be provided here, but see Ackema and Schoorlemmer (1994, 1995) for an extensive discussion of the English and Dutch case, and Lekakou (2002, 2003, forthcoming), Ackema and Schoorlemmer (2002) for the two types of middle more generally. Ackema and Schoorlemmer (1994, 1995) in particular have provided compelling evidence to the effect that the subject of the middle in English and Dutch is base-generated in its surface position, and not moved there: contrary to the predictions of movement analyses, Dutch and English middles fail the unaccusativity diagnostics, thus qualifying as unergative, and not unaccusative verbs. Moreover, the implicit argument of middles does not show any signs of syntactic activity: it cannot license agent-oriented adverbs, purpose clauses, or *by*-phrases (cf. (3) below). The suppressed argument of passives, by contrast, is syntactically active (cf. (4)):

- (3) This book reads easily \*by anyone/\*in order to impress the teacher/\*carefully.
- (4) The bank was robbed by unidentified criminals/ in order to save the poor/carefully.

Such considerations cast doubt on the validity of a movement analysis for English and Dutch middles. On the other hand, there are good reasons to assume such a movement analysis for French and Greek, where middles are syntactically indistinguishable from (reflexive) passives and thus behave as unaccusatives (cf. among others Wehrli (1986), Zribi-Hertz (2003), Tsimpli (1989), Lekakou (2003)). In these languages, the agent is syntactically active, to the effect that it can take the guise of a *by*-phrase:

- (5) Afto to vivlio δjavazete efkola akomi ki apo pedja.  
 this the book-NOM read-NONACT.IMPERF.3SG easily even and by children

‘This book can be read easily even by children.’<sup>1</sup>

- (6) Ce livre se lit facilement par tout le monde.  
 this book REFL read-3SG easily by all the world  
 ‘This book can be read easily by anyone/everyone.’

Given this state of affairs, any attempt to define syntactically ‘the middle construction’ in a cross-linguistically coherent way is doomed to fail; the ‘middle construction’ as a syntactic animal does not exist.

A different approach, within which the cross-linguistic variation can be accounted for, is to treat the middle as a semantic notion. This was first pursued by Condoravdi (1989), who emphasized that there is no such thing as ‘middle verbs’ or a ‘middle forming operation’. Especially since ‘middles’ are parasitic on independently existing structures—unergatives, passives—, it makes more sense to think of the former as a particular interpretation that the latter may receive. The real question then becomes, which factor determines the choice of structure to be employed in a given language? This is the ultimate question that I wish to answer, and I will provide my contribution in the following subsection.<sup>2</sup>

Our aim is then two-fold. We want to account for the cross-linguistic variation, and in order to do that we need an explicit characterization of the middle interpretation (henceforth MI). Condoravdi (1989) argues that middles are generic sentences. (7a) thus receives the representation in (7b) (from Condoravdi (1989):

- (7) a. This book reads easily.  
 b. Gen [e: book(x), read(e), Patient (e,x)] [easy(e)]

More in particular, it seems that there are three basic ingredients common to middles across languages. (8) contains the essential properties of what I consider the core of the middle semantics:<sup>3</sup>

- (8) The core components of the middle interpretation:
- a. The internal argument (the understood or notional object) is the subject of the sentence.
  - b. The reading is non-eventive; 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.
  - c. The agent is syntactically suppressed and receives an arbitrary interpretation.

In the following section, I will briefly present my analysis of middles across languages, which capitalizes on the (un)availability of imperfective aspect to encode genericity. In

<sup>1</sup>The *by*-phrase is accompanied by *akomi ke*, ‘even’, but not necessarily. I will return to this in the following subsection.

<sup>2</sup>The reader is thus advised to interpret ‘middle’ as ‘the structure that conveys the middle interpretation’. I will be using such abbreviations throughout for ease of exposition.

<sup>3</sup>There are obviously more issues that I do not address here, such as the role of the adverb and the restrictions on the aspectual classes of verbs eligible for middle formation. I have nothing to say at this stage on the second issue. As for the first one, one would be inclined to agree with Condoravdi (1989) and McConnell-Ginet (1994) who argue that the adverb is required in order to provide the scope for the generic operator. An indication that this cannot be the whole story is given at the end of the paper.

the second part of this paper, I will argue that we can compress (8) into a single statement from which the properties listed in (8) all follow:

- (9) (MI) = the ascription of a dispositional property to the understood object.

### 3 The realization of the middle semantics across languages

#### 3.1 Licensing the arbitrary agent

The understood agent, even in languages like English and Dutch where it doesn't show any syntactic activity, is nonetheless semantically present, and receives an arbitrary interpretation. Several authors have tried to link this fact to the genericity that middles exhibit (cf. Lyons (1995)). For instance, Ackema and Schoorlemmer (1994) propose the following:

- (10) A verb has an event role iff it has a fully specified action tier.

Ackema and Schoorlemmer (1994) assume a Jackendoffian level of presyntactic representation, which comprises two tiers, the action tier and the thematic tier. For them, the essence of middle formation is the assignment of an arbitrary interpretation to the agent, which does not project in the syntax. This results in a not fully specified Action tier, which in turn according to (10) has the effect of the otherwise eventive verb 'becoming' a stative one, and more precisely an individual level (i-level) predicate, in Kratzer (1995)'s sense.

The Kratzerian analysis of i-level predicates has not remained unchallenged (cf. Chierchia (1995), Jäger (2001) among others) (nor has Ackema and Schoorlemmer's claim that middles are i-level predicates (Steinbach 2002)). Besides, one would like to know why anything like (10) should hold. I propose to take the arbitrary interpretation of the agent quite literally:

- (11) The agent in middles is a covert free-choice *any(one)*—ANY\*.<sup>4</sup>

Like its overt counterpart, ANY\* needs to be licensed. In the case of middles it is licensed by genericity—the generic operator **Gen**. The crosslinguistic variation concerning the realization of middles is related to the form **Gen** takes in the languages in question. I propose the following:

- (12) Syntactically active ANY\* needs to be licensed in the syntax.

ANY\* can only be syntactic, i.e. projected in the syntax, if its licenser is present in the syntax. This is what happens when the aspectual system of a given language realizes the opposition generic-nongeneric in the morphosyntax. As I will illustrate below,

<sup>4</sup>In this respect, my proposal is different from Condoravdi (1989)'s, who argues that the Agent is absent from all levels of representation, not just the syntactic, or the semantic (cf. 7b), but also from the level of argument structure. Condoravdi's claim is that the agent can be had as an entailment of the lexical meaning of the verb, whenever the latter includes one. According to her, this move is required in any event for the case of English. It also, however, makes it impossible to distinguish between middles and generic unaccusatives. It is, for example, unclear on what grounds Condoravdi would be able to deny generic unaccusatives like *The sun rises from the East* the status of a middle.

Greek and French pattern together with respect to an important aspect of their aspectual system: their imperfective verbal forms encode **Gen**. English and Dutch belong to a class of languages in which **Gen** is morphosyntactically absent, that is, it is only present semantically.

On the basis of this line of reasoning, I make the following typological prediction:

- (13) A language will employ a passive structure to convey the middle interpretation iff **Gen** is encoded in imperfective morphology.

### 3.2 The nature of **Gen** qua imperfective aspect

What does it mean precisely for **Gen** to be morphologically encoded? I propose to understand this in the following way:

- (14) A language encodes **Gen** in imperfective morphology iff in at least one tense it has two distinct verb forms for generic and nongeneric uses, i.e. iff genericity  $\implies$  imperfectivity.<sup>5</sup>

Let's see how the languages in question fare with respect to 14. In Greek, all verbs are obligatorily inflected for aspect. Episodic sentences contain perfectly marked verbs. Generic/habitual sentences require imperfective aspect:

- (15) a. O             $\gamma$ ianis e $\gamma$ rafe                            ena  $\gamma$ rama kathe mera.  
the-NOM John write-PAST.IMPERF.3SG one letter every day  
'John used to write a letter every day.'
- b. \*O             $\gamma$ ianis e $\gamma$ rapse                            ena  $\gamma$ rama kathe mera.  
the-NOM John write-PAST.PERF.3SG one letter every day  
'John wrote a letter every day.'

The same situation obtains in French, where distinct verb forms are used for episodic and generic/habitual sentences:

- (16) a. Jean écrivit                            une lettre hier/            \*chaque jour.  
Jean write-PAST.PERF.3SG one letter yesterday/ every day  
'Jean wrote a letter yesterday/everyday.'
- b. Jean écrivait                            une lettre chaque jour.  
Jean write-PAST.IMPERF.3SG one letter every day  
'John used to write one letter every day.'
- c. Jean a écrit    une lettre hier/            \*chaque jour.  
John has written one letter yesterday/ every day  
'John has written a letter.'

<sup>5</sup>(14) requires a certain level of abstraction in the following sense. There is probably no tense/aspect that is entirely incompatible with (at least) habituality. For instance, *Linguistics students are working harder and harder these days* or *John has always left for work at 8 am* are perfectly ok, even though they employ the Progressive and the Present Perfect respectively, and not, say, the Present or Simple Past. This possibility, obviously related to the presence of Q-adverbs or temporal frame adverbials, does not render either the progressive or the present perfect 'generic tenses'. Thanks to Gerhard Schaden and Jenny Doetjes for discussion.

Greek and French encode **Gen** in imperfective morphology, in the sense of (14). By (12), Greek/French imperfective aspect licenses a syntactically active ANY\*. Greek/French type middles will employ a passive structure to convey the middle interpretation.

English does not distinguish morphologically between perfective and imperfective. Giorgi and Pianesi (1997) have claimed that, in the absence of any inflectional morphology, the English verbal forms area associated with the feature [+perfective]. The feature [-perfective] is never instantiated in English, since there is no corresponding morpheme (cf. also Comrie (1976), according to whom English realizes the distinctions progressive-nonprogressive and perfect-nonperfect, but crucially not generic-nongeneric).

That English does not have **Gen** in the sense of (14) is illustrated below:

- (17) a. John drove to school (yesterday).  
 b. John drove to school (as a teenager).

The same can be claimed for Dutch, on the basis of similar data:

- (18) a. Jan fietste gisteren naar school.  
 Jan cycled yesterday to school  
 ‘Yesterday, John cycled to school.’  
 b. Als tiener fietste Jan naar school.  
 as teenager cycled Jan to school  
 ‘As a teenager, John cycled to school.’

By (12), English and Dutch middles cannot have a syntactically active ANY\*, since its licensor is morphologically covert **Gen**.

For reasons of space, I will not go into the derivations for the two types of middle. I refer the interested reader to Lekakou (2003, forthcoming).

The semantics of **Gen** will be discussed in the following section. As for ANY\*, it is tempting to assume Kadmon and Landman (1993)’s analysis of *any*, whereby the latter is an indefinite which comes with two additional semantic/pragmatic characteristics, namely widening and strengthening. The widening effected by *any* (and by ANY\*) is implicated in the Greek example (5), which features an (optional *even*) *by*-phrase. The Greek ‘even’, *akomi ke*, effects additional widening of the interpretation of the implicit agent.<sup>6</sup>

### 3.3 Interim Summary

So far, I have assumed a list of three core properties, (8), as an informal characterization of the MI, and have proposed a way to link property (c) with property (b). In the rest of the paper, I will motivate property (a), which is more of a syntactic, rather than semantic description. I will argue that all three properties follow from the statement in (9). This will become possible by granting middles the status of a particular type of generic sentence, namely a disposition ascription.

<sup>6</sup>Thanks to Cleo Condoravdi for discussion on this point.

## 4 ‘In virtue of’ generalizations

### 4.1 NP genericity

Although the genericity of middles is of the sentence type, and not the NP type (in the sense of Krifka et al. (1995)), I will start by discussing the latter case, with the aim of highlighting the import that ‘in virtue of’ generalizations have on genericity in general, and of pointing to a feature of such generalizations that is of interest in connection to middles: the fact that their conversational background incorporates properties of the subject.

It is a well-established fact that sentences containing singular indefinite (SI) and bare plural (BP) generic NPs are very similar but at the same time different. SIs differ from BPs in (at least) their felicity conditions and in expressing a somewhat stronger non-accidental generalization (Cohen 2001, Greenberg to appear).

Greenberg (to appear) argues that there are two types of nonaccidental generalizations: descriptive, and ‘in virtue of’ generalizations. SIs always denote the latter, i.e. they assert that the generalization is non-accidentally true in virtue of some property that the subject referent is taken (by the speaker) to have (and that the hearer has to accommodate). On the other hand, descriptive generalizations merely assert the existence of a pattern. BPs can denote both types of non-accidental generalization. The following is her illustration of the different readings.

- (19) a. A boy doesn’t cry.  
 b. The generalization ‘Every boy doesn’t cry (in any relevant situation)’ is nonaccidentally true in virtue of some property, associated with the property of being a boy (e.g. the property of being tough).
- (20) a. Boys don’t cry.  
 b. The generalization ‘every boy doesn’t cry (in all relevant, e.g. tear inducing situations)’ is not accidental: not limited to actual boys in actual (relevant) situations, but is expected to hold for other, nonactual boys in other, nonactual(relevant) situations, as well.  
 c. The generalization ‘Every boy doesn’t cry (in any relevant situation)’ is nonaccidentally true in virtue of some property, associated with the property of being a boy (e.g. the property of being tough).

On the ‘in virtue of’ generalization, the accessibility relation restricting the generic quantifier involves a property that the speaker has in mind, in virtue of which the generalization reported is true. For example, if the property in(19a) is  $\hat{\text{be tough}}$ , then we only consider worlds where boys are tough in order to evaluate the sentence.

How do we choose the ‘in virtue of’ property? And how do we avoid all SI sentences coming out as true? Greenberg assumes that we only choose a property associated with the subject referent and claims that this association relation is determined by our stereotypes, norms, beliefs etc. about the actual world. In effect, besides the accessibility relation which tells us to look at worlds where the subject referent has the ‘in virtue of’ property, there is another Kratzerian accessibility relation, which effects the association between the subject-referent property and the ‘in virtue of’ property. To be concrete, consider (19a) and let the property  $\hat{\text{boy}}$  be represented as  $\hat{\text{P}}$ , the property  $\hat{\text{be tough}}$  as  $\hat{\text{S}}$ , and the property  $\hat{\text{do not cry}}$  as  $\hat{\text{Q}}$ .

Greenberg’s formal definition of ‘associated properties’ follows:

- (21)  $\hat{S}$  is associated with  $\hat{P}$  in  $w$  iff there is a Kratzerian accessibility function  $f$  from worlds to sets of propositions (e.g. epistemic, deontic, stereotypical, legal, etc.)  
 s.t.  $\forall w'' [w'' R_f w] \rightarrow [\forall x [P(x, w'')] \rightarrow [S(x, w'')]]$

The truth conditions of SI sentences will then look like this:

- (22) A SI sentence is true in  $w$  iff:  
 $\exists \hat{S} \forall w' [\forall x [P(x, w')] \rightarrow [S(x, w')] \ \& \ \hat{S} \text{ is associated in } w \text{ with } \hat{P}] \rightarrow$   
 $[\forall x, s [P(x, w') \ \& \ C(s, x, w')] \rightarrow [Q(s, x, w')]]$

There is thus a double modality in SI sentences (and the ‘in virtue of’ readings more generally) which is responsible for the more law-like flavour that SIs have.

## 4.2 Sentence-level genericity: dispositionals

So far, the distinction between ‘in virtue of’ and descriptive generalizations has been applied to NP genericity. The discussion in Greenberg (to appear) was inspired by the analysis offered by Brennan (1993) for modal auxiliaries. Brennan (1993) analyses certain modals, in particular dynamic modals (i.e. ability *can* and dispositional *will*), not as S(entence)-operators, but as VP-operators. On this view, a dynamic modal combines with a VP, resulting in a modal property denoted of the subject; “VP-operator modals relate properties and individuals” (Brennan 1993, 43). The intuition behind this idea is that, “in uttering a root modal sentence, the speaker typically relies on information about the syntactic subject” (Brennan 1993, 66).

Brennan’s innovation is the introduction of a different accessibility relation that restricts dynamic modals, which differs from the one restricting epistemic modals (which are still S-operators) on two counts: first, although the latter consists of propositions (those that in Kratzer (1991) are introduced by *in view of*), the former consists of properties (introduced by *in virtue of*). Second, and most crucially, the accessibility relation of dynamic modals consists of properties of the subject, and in that sense, it is keyed to the syntactic subject. Dynamic (readings of) modals are thus subject oriented (cf. Barbiers (1995)). This is supported by Brennan’s observation that overt *in virtue of* adverbials are obligatorily subject-controlled only when combined with dynamic modals (Brennan 1993, 48-52):

- (23) Joan can sing arias in virtue of her natural ability.  
 (24) In virtue of her patience, Joan will listen to anything.  
 (25) \* In virtue of being a graduate student, Joan may be intelligent.  
 (26) \* In virtue of winning a Guggenheim, Joan must be intelligent.  
 (27) ?? In virtue of the rock being lightweight, Mary can lift it.  
 (28) ?? Mary will agree to anything in virtue of the loose atmosphere in the office.  
 (29) They did not award him the prize in virtue of his reputation.

When combined with dynamic modals, *in virtue of* adverbials are property-denoting expressions that fix the set of accessible worlds, and thus restrict the accessibility relation.

A model for the semantics of such expressions is given in (30) (Brennan 1993, 65). Accessibility keyed to an individual (the subject) is defined in (31) (Brennan 1993, 64). The semantics of root *must* and dynamic *will* is given in (32) (Brennan 1993, 67):

- (30) The meaning of (*in virtue of*) *her physical properties* will be that function  $f$  from  $W \times D$  into the power set of the power set of  $W \times D$ , which assigns to any world-individual pair,  $\langle w, d \rangle$ , in  $W \times D$ , the set of all those (relevant) physical properties that  $d$  has in  $w$ .
- (31) *Accessible for d*: a world  $w'$  is accessible from a world  $w$  for an individual  $d$ ,  $\langle w, d \rangle R w'$ , iff  $\langle w', d \rangle \in \mathcal{P}$   
(where  $\mathcal{P}$  is an arbitrary property-denoting expression restricting the modal)
- (32) Property-level *must* and *will* ( $must_2$  and  $will_2$ ):  
 $Must_2$  and  $will_2$  denote that function  $v$  of type schema  $\langle \text{IV}, \text{IV} \rangle$  such that for any index  $w$ , any assignment  $g$ , any conversational backgrounds  $h_x, j$ , and any expression  $P$  of type  $\langle s, \langle e, t \rangle \rangle$ ,  
 $\llbracket v(\wedge P) \rrbracket^{w, g, h_x, j} : D \Rightarrow 2$ .  
For any  $d \in D$   $\llbracket v(\wedge P) \rrbracket^{w, g, h_x, j} = 1$  iff  
 $\forall w' \in W$  if  
(i)  $w'$  is accessible from  $w$  for  $d$  given  $h_x$ ,  
(ii)  $w'$  is maximally close to the ideal established by  $j(w)$ , then  
(iii)  $\langle w', d \rangle \in \llbracket P \rrbracket^g$

The conversational background  $h_x$  corresponds to the accessibility relation as defined in (31).  $j$  is the Kratzerian ordering source, which Brennan assumes is determined by a stereotypical conversational background.

I propose to extend Brennan's analysis of dispositional *will* to dispositional generics. For canonical disposition ascriptions of the type illustrated in (33), Fara (2001) seems to share Brennan (1993)'s intuition. His truth conditions for (33) are given in (34):

- (33) Sugar is disposed to dissolve when put in water.  
(34) ' $N$  is disposed to  $M$  when  $C$  is true iff  $N$  has an intrinsic property in virtue of which it  $M$ s when  $C$ .

Fara argues that 'to attribute to an object a disposition to do so-and-so is to say not just that it does so-and-so, but that it has some intrinsic property in virtue of which it does so-and-so' (Fara 2001, 35-36). He too makes the assumption that disposition ascriptions need not take the guise of sentences like (33). The classical examples of dispositional predicates are adjectives like *fragile* and *soluble*, and *-able* adjectives more generally (cf. Chierchia & McConnell-Ginet 1990). At least some generic sentences, as we have already seen above, are dispositional (cf. also sentences like *This car goes 250 km/h* which have both a dispositional and a habitual reading). In fact, I am assuming that disposition ascriptions, whichever form they take, are generic statements (cf. Dahl (1975), Krifka et al. (1995)). As I will argue in the following subsection, the class of dispositional generics also includes middles.

The essence of disposition ascriptions is that they express 'in virtue of' generalizations. Following Brennan (1993), I suggest that the implementation of this is that the accessibility relation restricting such generalizations is keyed to the subject, and that therefore all disposition ascriptions are subject-oriented:

- (35) Dispositional (readings of) generic sentences are subject-oriented.

That this is true of canonical disposition ascriptions is evident from the following example:

- (36) ?? Bread is disposed to turn into gold when touched by Midas.

The myth has it that Midas had a special property, in virtue of which he could turn anything into gold, merely by touching it. The problem with (36) is that it is dispositional on its subject, whereas the relevant property resides with the referent of a non-subject NP, namely Midas. Bread has no inherent property in virtue of which it turns into gold when Midas touches it; it is Midas whose properties are responsible for the phenomenon.

I thus assume that Brennan's accessibility relation restricts the modal operator in disposition ascriptions. When the operator is **Gen**, the latter is a VP-operator of the dynamic *will* type, whose semantics was given in (32). Although a modal semantics of **Gen**, and indeed one that assimilates the latter to a necessity (universal) operator, is more or less standard, the view that we might need more than one variety of **Gen** is not. The claim is supported by the diversity of the phenomena subsumed under the label 'genericity', and in particular the differences between habituals and other generics. See Laca (1990), Scheiner (2003), Van Geenhoven (2003) among others.

The proposal I am making generates the following prediction: according to (35), cases (a) and (b) below can only express descriptive, and not 'in virtue of', generalizations: (a) sentences with generic bare plurals in non-subject position (such as the cases of generic objects that Laca (1990) discusses) and (b) generic sentences which attribute a property to non-subject arguments (such as the well-known ambiguous examples that Krifka et al. (1995) cite (p.24)).<sup>7</sup>

In the final section, I will present a piece of evidence in favour of the existence of more than one null generic operators.

### 4.3 Middles as dispositionals

Let us now return to middles. A first indication that middles are dispositional predicates<sup>8</sup> is the fact that the paraphrase that they most frequently receive is the *-able* adjective, which, as mentioned already, is the dispositional predicate *par excellence*. If middles are indeed dispositionals, and if (35) is correct, we have an explanation for why the understood object surfaces in subject position in middles.

I start with some data. By treating middles on a par with dispositional modals, we predict that in this case too, *in virtue of* adverbials can only be subject-controlled. This prediction is borne out. The sentences below do not feature an *in virtue of* adverbial, but a *because* clause, a fact which, I take it, strengthens the argument. Van Oosten (1977) first noted the contrast between (37) and (38), and Dowty (2000) offers (39):

- (37) The clothes wash with no trouble because...  
 a. ... they're machine-washable.

<sup>7</sup>A fact worth noting in connection to this is that singular indefinites, which only express 'in virtue of' generalizations, can only have a generic interpretation in subject position. See Cohen (2001) for discussion, and for a proposal of a mixed approach to genericity.

<sup>8</sup>This claim was made by Sally McConnell-Ginet in a handout of class lectures.

- b. \* ... I have lots of time.
- (38) It's no trouble to wash the clothes because...
- a. ... they're machine-washable.
- b. ... I have lots of time.
- (39) This car drives well...
- a. ... because the suspension is engineered well.
- b. ?? ... because we're driving on smooth pavement.

Van Oosten argues that the contrast is explained by (40):

- (40) Responsibility condition  
The subject of a middle (the logical object) must have properties such that it can be understood to be responsible for the action expressed by the predicate.

According to her, (40) holds of all (nonstative) subjects, because responsibility is a general trait of (agentive) subjects, which is why middles, but not sentences like (38), are subject to this constraint.<sup>9</sup>

Something similar to (40) is discussed in McConnell-Ginet (1994), from where the following examples originate:

- (41) ? Cars park easily.
- (42) Small cars park easily.

Sentence (42) is a definite improvement over (41). What is communicated is that small cars, in virtue precisely of being small, are easy to park. McConnell-Ginet (1994) admits this feature of the middle in the semantic representation, by designating the syntactic subject as the causer. According to her, the middle in (42) means something like: 'some property of small cars is such that (the STATE of) their having that property is what CAUSES parking them to be generally easy' (McConnell-Ginet 1994:241). She provides the following formulation of the property predicated of small cars in (42) ( $y_i^*$  stands for a null reflexive that she assumes exists in English middles):

- (43)  $\lambda x \lambda e. [\text{easy}(\text{parking}(y_i^*))(\text{e}) \ \& \ x = \text{Causer}(\text{e}) \ \& \ x = y_i^*]$

There is no need to stipulate conditions like (40); nor to formally represent this feature of the meaning of middles in the way it is done in (43). (In some systems, for instance in Reinhart (2003), it would in fact be impossible to do so.) If middles are dispositionals, then (40) is associated with the latter more generally. Treating middles as dispositionals entails precisely that there is some property inherent to the subject which enables or facilitates the action denoted by the verb. Unless we were to somehow generalize (43) to all dispositionals, it seems to me that characterizing middles as disposition ascriptions is to be preferred.

Building on what we've said so far, the property predicated of the syntactic subject in (42) will look like this:

<sup>9</sup>By 'subject', van Oosten means 'underived subject', as she shows that subjects of passives are not interpreted as responsible. That this cannot be entirely true is enforced by considering languages like Greek, where middles are parasitic on passives.

- (44)  $\llbracket \text{Gen}(\wedge \text{VP})(d) \rrbracket^{w,g,h_x,j} = 1$  iff  
 $\forall w' \in W$  if  
 (i)  $w'$  is accessible from  $w$  for  $d$  given  $h_x$ ,  
 (ii)  $w'$  is maximally close to the ideal established by  $j(w)$ , then  
 (iii)  $\langle w', d \rangle \in \llbracket \text{VP} \rrbracket^g$

In the beginning of this subsection, I presented empirical evidence that middles are subject-oriented, much in the way that dynamic readings of modals are (cf. (23)–(29)). If that is correct, then we have evidence for (35). From this it follows that we have discovered what constitutes a semantic reason for why the object occupies the subject position in middles across languages: if it is to be ascribed a dispositional property, it needs to appear in subject position. Moreover, (35) is to also be held responsible for the demotion of the agent. The latter would normally be the most eligible candidate for the subject position. Now that the semantics requires the understood object to appear in that position, the agent has to be suppressed in one way or the other.

I speculate that the interpretation that the implicit agent receives is also related to the dispositional semantics of middles. Note the oddity of (45):

- (45) ?? Sugar is disposed to dissolve when put into water by John.

It makes little sense to ascribe a disposition to an entity that only manifests itself when a specific agent is involved. Dispositions, I presume, hold across agents (whenever they are involved). This is the desired result, but obviously more research is needed in order to determine whether we do not really need to stipulate the precise interpretation of the agent in middles, i.e. its free-choice reading.

I repeat below what we started with, namely the three core properties of the (MI), having now restated property (i) so that it makes reference to the dispositional element:

- (46) The core components of the (MI):
- a. The internal argument is ascribed a dispositional property.
  - b. An otherwise eventive verb becomes a derived stative and, more precisely, receives a generic interpretation.
  - c. The agent receives an arbitrary, free choice interpretation.

Property (a), in conjunction with the subject-orientedness of disposition ascriptions argued for above, is responsible for the promotion of the understood object to subject position (which takes place at a pre-syntactic level for English and Dutch, and in the syntax for Greek and French). Property (b) follows from (a): a disposition ascription is a generic statement. Property (c) also follows, in the sense of the syntactic suppression. As far as the interpretation is concerned, this could also be said to follow, given the incompatibility of disposition ascriptions and specific agents.

Now the core of the middle semantics can be reduced to the statement in (9), repeated below as (47):

- (47) The middle ascribes a disposition to the internal argument.

## 5 Concluding remarks

In this paper I have argued for an approach that treats the ‘middle construction’ as a particular interpretation that independently available structures receive. The locus of the cross-linguistic variation was taken to be the morphological means available to languages with respect to encoding genericity. I proposed a treatment of the **Gen** employed in dispositionals, of which middles were argued to be an instance, along the lines of Brennan (1993)’s analysis of dynamic modals.

My focus has been the case of so-called personal middles, derived from transitive verbs, whose subject corresponds to the understood object. Verbs lacking an internal argument can in some languages (Dutch, German) give us impersonal middles, whose syntactic and semantic properties remain an issue open for further research.

Another issue awaiting further investigation is the nature of disposition ascriptions. I have argued that in the case of dispositional generics, **Gen** is a VP-operator. This potentially leads to a proliferation of silent generic operators, which might be viewed as an unwelcome consequence. In support of the view defended here, I would like to point to a thus far unnoticed contrast between middles and generic passives. There are two contexts that reveal the non-identity of their interpretation. In the absence of an adverbial, the passive is habitual, but the middle is not. And conjoining the two does not result in contradiction:

- (48) a. Linguistics articles just don’t read!  
       b. Linguistics articles just aren’t read!
- (49) This book reads easily, but it isn’t easily read.

One explanation for the data above is that generic passives and middles employ different generic operators. In the spirit of the cross-linguistic account of middles defended here, this would be related to the morphology of the periphrasis employed in English for (generic) passives (recall that Greek passives/middles are synthetic). In addition to bringing out the aspectual difference between generic passives and middles, the data above also suggest that the role of *easily* has not been investigated thoroughly.

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