# Middle semantics and its realization in English and Greek[*]

MARIA LEKAKOU

## Abstract

In this paper I examine the realization of the notional category 'middle' in two types of languages, exemplified by English vs. Greek. The data indicate that middles are parasitic on independently available structures: unergatives in the former, passives in the latter. I propose that the cross-linguistically distinct behaviour of middles is ultimately related to the different morphological means available to the languages in question, and more specifically, to the (un)availability of imperfective aspect in the verbal morphology. The approach advocated here implies that there can be no syntactic notion of the 'middle construction' and suggests a view of the syntax-lexical semantics interface contrary to the standard 'one-to-one' correspondence.

## 1 Introduction

The so-called 'middle construction'[1] is interesting in that it displays properties of both the active and the passive voice: its subject corresponds to the understood object, yet, at least in languages like English and Dutch, it bears active morphology. The by now standard example is given in (1); (2) is its Dutch equivalent:

(1)    This book reads easily
(2)    Dit   boek leest        gemakkelijk
        this  book read-3SG   easily

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[1] I will continue to use the terms 'middle construction' and 'middle verb' (both usually abbreviated as 'middle'), as well as 'middle formation'. However, it will become obvious, I hope, by the end that this is in fact wrong practice, adopted only for the sake of convenience in this paper.

On the other hand, in Greek, middles appear with passive morphology (Tsimpli (1989), Sioupi (1998, 1999):

(3)     Afto to   vivlio diavazete         efxarista
        this  the book   read-PASS-3SG with pleasure
        'This book reads with pleasure' [lit.]

Middles across languages do not behave syntactically in a uniform way. In English and Dutch, as Ackema & Schoorlemmer—henceforth A&S—(1994, 1995, 2002) have shown, they exhibit properties of unergatives. On the other hand, Greek middles are formally identical to passives. It is the aim of this paper to account for this divergence[2].

  It should be noted that this divergence has implications for our view of the syntax-lexical semantics interface, and in particular poses a challenge on a view of the latter, according to which there is a one-to-one relation between structure and meaning. (I will return to this point in the end.) However, under the approach I will be pursuing, the cross-linguistic variation is precisely what would be expected. As has been argued by Condoravdi (1989), the middle is best characterized as a semantic category. Its realization across languages is achieved by different means, and is contingent upon other morphosyntactic properties of the languages in question. In this paper, I propose that the property relevant for middle formation is the (un)availability of imperfective morphological aspect.

  Before addressing this hypothesis, I will attempt to specify the middle interpretation itself. In particular, in the following section I will try to show that it has not been accurately defined, and will propose a slightly different characterization of it than has been argued for so far. In section 3, I will look into the core ingredients of the middle semantics that I propose, and see how each one determines what middles can look like in general. At the end of that section I will specify how the (un)availability of imperfective aspect in the verbal morphology interacts with the targeted semantics. Section 4 is devoted to spelling out the hypothesis, and showing how it derives the difference between English and Greek. In section 5 I address issues arising with this approach, as well as the question of the necessity of adverbial modification in middles. Section 6 summarizes and

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  [2] In this paper I will focus on the case of English in contrast to Greek. Given that, as A & S (1994, 1995, 2002) have shown, Dutch patterns with English with respect to middle formation, in what follows I will be using evidence from Dutch when discussing the English type middle. Insofar as Dutch lacks imperfective aspectual morphology in the same way as English, the analysis should also be applicable to Dutch.

concludes with the implications that such an approach to middles has.

## 2 The middle semantics

Languages may differ as to which structure they employ in order to express the middle interpretation, but what arguably remains constant across languages is the interpretation itself. Let us try to spell out what exactly it is.

  Middles have been almost unanimously considered to be generic statements about the notional object. They ascribe a property to what would normally be realized as the object of the verb[3]. The verb itself, in virtue of its genericity, is a stative derived from an eventive entry. Finally, the understood agent is interpreted as arbitrary. The following list summarizes these essential properties of what I consider the core of the middle semantics:

i.      The argument that would normally be mapped to the object position (henceforth to be referred to as the understood/notional object) is the topic (see section 3.3).
ii.     The agent receives an arbitrary interpretation.
iii.    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.

In fact, as we will see, these properties are intrinsically linked to each other. Before showing that, I wish to add the following amendment to property iii.

  A characteristic of the middle interpretation that is sometimes noted in passing by authors who, nonetheless, consider the latter generic, is the fact that it involves some sort of modality (see for instance Fagan (1992); also A & S (2002), who take the modal character of at least the English/Dutch type middle to be obligatory). *This book reads*

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[3] This in most cases corresponds to the (Affected) Patient, which is why middle formation has been argued to be subject to the Affectedness Constraint. However, the Patient is not always the argument that is promoted to subject position in middles. For discussion of the constraint, and exceptions to it, see A & S (1994). The term notional/understood object is thus meant here to refer to the (lexical conceptual structure) argument—in most, but not all cases, the Patient—which would canonically be mapped to object position in the syntax. The term agent is also not entirely accurate, since in some cases of middles, there is no agent to start with, but I will be using this term as a shorthand for the lexical conceptual structure argument of a verb which would normally occupy the subject position in the syntax of the transitive form.

*easily* is thus interpreted not as 'whenever there is a reading event involving this book, the event proceeds with ease', but as 'this book is such that anyone can read it with ease'. The sentence is not so much a generalization over events, as Condoravdi (1989) argues, as an ascription of a property or quality to the understood object, which enables any arbitrary agent to act on it in the way specified by the meaning of the verb (and the adverb). Let us call this 'the property reading' of middles, intended to refer to the modality of ability that is expressed. I would like to propose that this modality does not arise pragmatically, but is in fact encoded, that is, it is part of the middle semantics.

## 2.1 Adding modality

The evidence I would like to adduce in defense of this claim comes from comparing the middle to a related construction, the passive. Passives in English (and Dutch) are not normally considered to be middles, but if genericity is what the middle verb encodes, then we would expect, as in fact has been claimed by Lyons (1995), that a generic passive with an arbitrary agent is identical in meaning with the corresponding middle. (In fact, the Dutch equivalents of the sentences in (4)-(7) are bad, and only in the presence of the overt modal become acceptable.[4]) Consider the following examples from Lyons (ibid.), and the passive corresponding to (1):

(4)    These glasses are easily cleaned.
(5)    This judge is easily bribed.
(6)    This material is easily washed.
(7)    This book is easily read.

These are claimed to be semantically indistinguishable from the corresponding middles:

(8)    These glasses clean easily.
(9)    This judge bribes easily.
(10)   This material washes easily.
(11)   This book reads easily.

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[4] Despite this difference, I will be assuming throughout that Dutch is similar to English in that the simple present tense of nonstative predicates is interpreted generically/habitually through a conspiracy of factors, as in Giorgi & Pianesi (1997) or Smith (1997), but crucially not because the verb encodes morphologically the distinction perfective/imperfective aspect.

However, there is a difference in the interpretation of the sentences (4)-(7) and (8)-(11) having to do with modality. Generic passives simply generalize over events, and if there is a modal component it is not encoded. It arises pragmatically, on the basis of the validity of the inference that, if something is done, and done habitually, it can be done. In the case of middles, however, the ability reading is encoded, and not inferred. Consider what happens if we add the overt ability modal *can* to the sentences above:

(12)    These glasses can be (easily) cleaned (easily).
(13)    This judge can be (easily) bribed (easily).
(14)    This material can be (quickly) washed (quickly).
(15)    This book can be (easily) read (easily).

(16)    ??These glasses can clean easily.
(17)    ??This judge can bribe easily.
(18)    ??This material can wash easily.
(19)    ??This book can read easily.

The passive sentences are fine, whereas the corresponding middles are awkward. To be more precise, there might be a modal interpretation available for the middles under (16)-(19), but it involves a type of modality distinct from the one involved in the middle semantics, and also in the passives in (12)-(15). Specifically, the sentences in (16)-(19), if good at all, express *epistemic modality*, that is, the *possibility* that the glasses clean easily, the judge bribes easily, the material washes easily and the book reads easily; they do not express *root modality*, i.e. they do not refer to the *ability* of any arbitrary agent to carry out the tasks specified. The fact that the modality in (16)-(19) is epistemic, can be seen by the fact that *can* could be substituted in these cases by *may/might*. The (unmodified) middle verb, however, expresses—and, as I argue, encodes—root modality.

Before concluding this section with the now modified description of the middle semantics, I want to point to an additional difference between generic passives and middles in English having to do with the position of the adverb. A middle is only grammatical with the adverb occupying the final position ((8')-(11') below). The generic passives in (4)-(7), on the other hand, are in fact much better with the adverb sentence-medially. Compare them with the following sentences:

(8')    *These glasses easily clean.
(9')    *This judge easily bribes.

(10')   *This material easily washes.
(11')   *This book easily reads.

It has been argued (by Fellbaum (1986), reported in A & S (2002)) that there is a difference in interpretation depending on the position of the adverb, which correlates with the presence/absence of the agent. I believe the issue is more complicated but for now only mention this as an additional difference between generic passives and middles.

   On the basis of the evidence discussed so far, I conclude that modality is a crucial part of the middle semantics, and one not encoded in a generic passive in English and Dutch. Below is a modified version of the list of the semantic properties of middles given earlier:

(i)     The notional object is the topic.
(ii)    The agent receives an arbitrary interpretation.
(iii)   The otherwise eventive verb receives a modal reading and is a derived stative.

I will now try to show how properties ii and iii can be related to each other.


## 3 What the semantic ingredients amount to
## 3.1 Licensing the arbitrary agent

The arbitrary agent has figured as a central property of the middle semantics in most accounts of middle formation. Moreover, it is a property that several authors have tried to link to the alleged generic interpretation of the predicate. So, for instance, A & S (1994), for whom middle formation amounts to the assignment of an arbitrary interpretation to the agent, propose the following generalization:

(20)    A verb has an e-role iff it has a fully specified Action tier

The arbitrary interpretation of the agent results in an under-specified Action tier, which in turn goes hand in hand with a non-eventive reading of the verb. In sum, then, A & S propose that whenever the agent is construed as arbitrary, the verb no longer denotes an event, but rather receives a generic reading. Lack of an event role is to be construed as lack of an existentially bound event role, which is what the generic flavour is due to, much like what happens with so-called individual-level predicates (in the spirit of Kratzer 1995, Chierchia 1995; but see, among others, Jaeger 2001 for recent objections against such analyses of individual-level predicates). In fact, A & S take middles to be derived

individual-level predicates.

Lyons (1995) makes a similar statement with his 'aspectual constraint'. His observation is that, if any of the arguments of a verb receive an arbitrary interpretation, then the sentence is necessarily generic. I believe that both insights are basically correct, but need to be modified. I will focus on the interpretation of the arbitrary agent and leave the interpretation of, say, arbitrary (and indefinite) patients out of this discussion.

We have already established that the agent in middles is interpreted as arbitrary, that is as 'anyone'. I would like to propose that, in fact, the agent in middles *is* semantically a form of *anyone*—a covert *anyone*. If one looks at the distribution of overt *any(one)*, it becomes immediately obvious that it needs to be licensed by something in the linguistic environment; it is a polarity item in the sense of Giannakidou (2001), on whose discussion of free choice and polarity I am relying. For example, its occurrence is unproblematic in the presence of an intensional operator, such as the generic operator, or a modal, but illicit in the context of an episodic verb. In a similar vein, I claim, the covert *any* (henceforth ANY\*) needs to be licensed. Usually, its licensor is the genericity of the verb; hence the 'aspect constraint' proposed by Lyons. However, in the case of middles, it is a covert ability modal operator —we will use CAN\* for it—that is responsible for licensing it. Starting from the generalization that arbitrary agents need to be licensed, I propose the following as the licensing condition for the arbitrary agent in middles[5]:

(21)    In middles, the licensor of the arbitrary agent (ANY\*) is a modal operator, either overt, CAN, or covert, CAN\*.

Corresponding to its licensor, ANY\* may be syntactically active, or not:

(22)    a.    CAN    → syntactically active ANY\*
        b.    CAN\*  → syntactically inert ANY\*

The semantics of this covert modal operator is in essence the same as that of its overt counterpart. Following Giannakidou (2001), I take ability CAN to be a universal quantifier over possible worlds. The same goes for its covert counterpart, CAN\*. It is this feature of the operator that is responsible for the generic/habitual interpretation of middles.

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[5] I will use italics for overt forms of the modal (*can*) and the free choice item (*any(one)*), and small capitals for the corresponding implicit forms thereof.

Moreover, it is to this modal component that middles owe their stative character. For discussion of the relation between modality and stativity, see A & S (2002).

## 3.2 More on the modal component and some on the workings of imperfective aspect

As we saw above, the English generic passives only express genericity at best, although they may indeed give rise to inferences of modality. And, as was also noted above, Dutch does not have generic passives at all. In the case of Greek, on the other hand, things are different: a passive verb may encode the middle semantics, cf. (3) above. Why is that?

  Unlike English, Greek encodes morphologically the distinction between perfectivity and imperfectivity: all verbs in Greek are obligatorily inflected for aspect. Whenever a verb is marked for imperfective aspect, it is ambiguous between a progressive and a habitual reading. There is, however, another interpretation available. Holton et al. (1997) point out: 'the imperfective can also be used to indicate capability, or more frequently the lack of it, in negative sentences'. They provide the following examples:

(23)  kovi            afto to  psalidi?
      cut-IMPERF-3SG this  the scissors
      'Do these scissors cut [are they sharp]?'
(24)  afto to  molivi  de   grafi
      this the pencil  not write- IMPERF-3SG
      'This pencil does not write [it is not possible to write with it]'

I would like to propose that imperfective aspect in Greek may encode, in addition to habituality and progressivity, modality of ability, as in the examples above. This very claim, i.e. that imperfective aspect on the verb may contribute a modal operator has also been made by Sioupi (1998, 1999) and Papastathi (2001). Therefore, in this type of language, clause A of the disjunctive licensing condition on ANY* is selected and middle ANY* is licensed by the modal operator contributed by imperfective morphology:

(25)       ANY* needs to be licensed.
           In middles, its licensor is either CAN, or CAN*
           Corresponding to its licensor, ANY* may be syntactically active, or not:
      a.   CAN → syntactically active ANY*

On the other hand, in English, which does not encode imperfective aspect, and therefore the modality of ability, in the morphology of the verb, clause B applies:

(26)         ANY* needs to be licensed.
             In middles, its licensor is either CAN, or CAN*
             Corresponding to its licensor, ANY* may be syntactically active, or not:
     b.      CAN* → syntactically inert ANY*

There is one final piece of the puzzle that needs to be added, before we can see what the semantics of middles and the different mechanisms available to languages buy us.

## 3.3 Topichood

In the list of semantic properties of middle constructions given above, I included mention of the topichood of the understood object. What does that mean exactly? The middle is a statement 'about' what would normally appear as the object. The understood object is the topic of the sentence, to which the predicate ascribes a property. This characteristic of the middle semantics has the effect that the notional object appears in a topic position. This might not be easy to see in, for instance English, but is actually detectable in other languages, which have distinct designated positions for topics. Such a language is Greek. Greek enjoys a relatively free word order (but is generally considered to be underlyingly a VSO language). SVO order has been analyzed as involving a topicalized subject (see Alexiadou 1999 for Greek and references therein). Middles in Greek always appear in this order (Sioupi 1998).
  Recall that, due to its modality, the middle verb is a derived stative. The fact that subjects of stative predicates are topics has been argued for independently by Jaeger (2001) on semantic grounds. The same holds true of simple generic sentences, which are also aspectually (derived) statives. Generics involve a generic operator that imposes a partition of the clause into restriction and nuclear scope. The topic of a generic sentence is mapped onto the restriction. As expected, in Greek, subjects of stative predicates—and, by extension, subjects of generic sentences—occupy a topic position (Alexiadou 1999, Sioupi 1998). Thus, the fact that the object surfaces preverbally in middles is a result of the combination of its semantic properties: it is the topic of a derived stative predicate.

## 4 Deriving the difference between English and Greek

Let us recapitulate what constitutes the middle semantics. The middle is a modalized statement about the understood object; it ascribes a property reading (in the sense made explicit above) to the notional object of an otherwise eventive verb, whose agent is assigned an arbitrary interpretation. It should be emphasized that this is a semantic requirement, not a syntactic one. There is nothing in the middle semantics that forces the syntactic inertia of the agent; all that is required is that it be interpreted as arbitrary.

This much in fact, as we would expect, is not subject to variation. In the previous section the topichood of the understood object was related to its position in the sentence: in order for it to be predicated a property reading, it must appear preverbally, as a topic. And in fact, across languages it does. However, in some languages, e.g. Greek, it does so by moving from the canonical object position in the syntax, giving us passive-middles, while in others, as in the case of Dutch and English, it does so by being generated in subject position, thus giving unergative-middles. In other words, Greek employs imperfectively marked passives to express the middle semantics (which explains why in some cases telling middles from passives is not an easy task). On the other hand, English and Dutch do not. Why is that? The answer should by now be fairly obvious: the difference lies in the different aspectual distinctions available for each language.

Recall that Greek may encode morphologically the modality inherent in middles, which in turn may license a syntactically active agent.

(25)        ANY* needs to be licensed.
            In middles, its licensor is either CAN, or CAN*
            Corresponding to its licensor, ANY* may be syntactically active, or not:
    a.      CAN → syntactically active ANY*

We therefore expect that a passive verb with imperfective aspect may express the middle semantics. This is exactly what we get. Moreover, the agent may even be present in the guise of a *by*-phrase, as in the following examples (from Tsimpli 1989):

(27)   afto to   vivlio diavazete            efxarista     (apo opiondipote)
       this  the book  read-PASS-IMPERF-3SG with-pleasure by  anyone
       'This book reads with pleasure by anyone' [lit.]
(28)   ta  galika   mathenonde          efkola (apo opiondipote)
       the french  learn-PASS-IMPERF-3PL easily   by   anyone
       'French acquires easily by anyone' [lit.]

(29) afto to film vlepete                efxarista     (apo opiondipote)
this the film see-PASS-IMPERF-3SG with pleasure by  anyone
'This film watches easily by anyone' [lit.]

   In the case of English, on the other hand, there is no modal operator encoded in the verbal aspect. The arbitrary agent is licensed by an abstract modal, which is not encoded in the verbal morphology. Clause B of (21) applies, and ANY* may not be present in the syntax.

(26)         ANY* needs to be licensed.
             In middles, its licensor is either CAN, or CAN*
             Corresponding to its licensor, ANY* may be syntactically active, or not:
   b.        CAN* → syntactically inert ANY*

The syntactic inertia of the agent in the English middle comes about as a result of it being licensed by a covert modal operator. In essence, this amounts to saying that the agent does not project in the syntax at all. This is quite similar to what A & S have proposed constitutes the operation of middle formation. For lack of space, I will only briefly outline A & S's (1994) analysis of the Dutch and English middle. I refer to their work for a full exposition.
   A & S argue that essentially middle formation is the assignment of an arbitrary interpretation to the agent. This in our system means that the latter (ANY*) needs to be licensed. In the case at hand, it is licensed by CAN*, and is therefore not expressible syntactically. In effect, it is syntactically suppressed, as in A & S. To be more specific, in A & S's system projection of Lexical Conceptual Structure arguments (such as the agent and the patient) to D-structure is in principle not obligatory, but rather regulated by a recoverability condition, which states that a non-projecting semantic argument must either be discourse linked, or assigned an arbitrary interpretation. The agent in middles, having been assigned an arbitrary interpretation, is semantically (at LCS), but not syntactically present (not projecting to D-structure). The same effect, i.e. the non-projection of the agent in middles, is derived in a different way by our (22), which states that arbitrary agents licensed by implicit modals cannot be syntactically active.
   Moreover, in A & S's system, no argument is designated as external; rather, which argument will be realized as external is determined according to a thematic hierarchy. Once the otherwise most eligible candidate for the subject position, i.e. the agent, is suppressed, the argument highest in the hierarchy is usually (but not always, cf. fn. 3) the

Patient, i.e. the notional object. Thus the understood object of a transitive verb ends up being projected onto syntax as the grammatical subject.

The evidence that A & S provide is compelling. I can only briefly mention them here. For one thing, in Dutch (A & S 1994, 1995), middles pattern with unergatives and not unaccusatives with respect to the following unaccusativity diagnostics: they select the auxiliary 'have' and not 'be'; they only allow the present participle prenominally, whereas unaccusatives also allow the past participle; they disallow adjectival passive formation, again unlike unaccusatives but similarly to unergatives.

Moreover, middles in English and Dutch do not exhibit any signs of a syntactically active agent, as in fact the approach proposed above straightforwardly predicts. I refer the reader to the arguments provided by A & S (1995) and Rapoport (1999) concerning the nonagentivity of the English and Dutch middle.

## 5 Remaining questions

In this final section, I tentatively address some of the questions the proposed analysis raises. I also discuss a problem that I have thus far not touched upon at all, namely the apparently obligatory presence of a (manner) adverbial in middles. Here I only wish to see how the approach outlined above could deal with this. It is with this second issue that I begin.

The question of the role of adverbial modification is an intriguing one, which to my knowledge has as yet not received a conclusive answer. The middle verb, especially in English and Dutch, is generally modified by a manner adverb. The question is, is this a grammatical requirement, or merely a pragmatic one? In other words, is it the case that modifier-less middles are uninformative, hence pragmatically odd, or (syntactically/)semantically ill-formed, hence ungrammatical? In the literature both claims have been advanced. Tsimpli (1989: 248) claims that 'imperfective passive affix selects a manner adverbial whose presence then becomes obligatory by some version of the Projection Principle'. At the other extreme, A & S (1994), Kakouriotis (1994) argue that the requirement for an adverb is pragmatic in nature, and highlight the admittedly important role that context plays in the acceptability of middles without it. Yet another view is the one advocated by (Condoravdi 1989), according to whom the adverb is required on semantic grounds: it has the function of providing content for the nuclear scope of the generic operator which in her view is present in middles. Recall that Condoravdi takes middles to be generalizations over events and does not mention modality.

The approach I put forward, however, does include modality and in fact treats it as an integral part of the middle semantics. I have argued above that, a significant ingredient of the middle interpretation is a modal operator, sometimes encoded in imperfective morphology. In the absence of imperfective aspect, the modal reading is related to the presence of an abstract modal, CAN*. Before I return to what the adverb might be doing in middles, let me offer a suggestion on how its presence could be accounted for within the analysis proposed. The (abstract) modal could be related to the adverb occurring in most instances of middle constructions in the following way. It has been independently argued by Williams (1991: 84-86) for the case of overt modals, that they take adjunct clauses as complements. In a similar vein, one could argue that the adverb in middles is selected by the implicit modal (cf. Tsimpli ibid.). In a personal communication, Edwin Williams clarified that this was intended to assimilate modals to other quantifiers, like the generic operator, which induce a partition of the clause into restriction and nuclear scope. The adverb, as argued by Condoravdi, provides the scope of the operator and is in that sense a complement to it.

Assuming all this is indeed on the right track, the presence of the adverb is due to requirements of semantic well-formedness. However, as has been emphasized by those authors who claim that the adverb is there for pragmatic reasons, in the right context middles can occur without modification, as in the following examples from McConnell-Ginet (1994):

(30)   a. This silk washes
        b. This dress buttons
        c. This car handles

What McConnell-Ginet suggests is the following. The adverb in middles does provide the scope for the operator (which she also claims is generic, but in this analysis is modal), and hence is in general necessary, but if something else may contribute the scope, then the need for the adverb becomes superfluous. In (at least) the first two examples above, this is arguably precisely what is going on. 'The point is that the main verb is not needed as the restrictor because context has provided restriction via implicit contrast among different modes of doing something, the main verb then being free to designate one such mode (serving then to give content to the scopal element)' (McConnell-Ginet 1994: 247). For example, in (30a) the context specifies the restriction to be of ways of cleaning silk, and the content of 'wash' provides the scope.

In this way, the need for adverbial modification can be related to both semantic and pragmatic factors. More particularly, the effect contextual considerations have is spelled out, without compromising the validity of the generalization that, in most cases, middles come with a certain adverbial modification.

Moving away from the question of the necessity of the adverb, I now wish to address issues arising with the specific proposal about middle formation I put forward in the previous sections. The analysis advocated above raises (at least) the following questions, which could be stated in terms of blocking. First, why doesn't a generic passive with an overt modal in English block the corresponding middle? A possible answer might run as follows. Once the overt modal is selected in the numeration, it may (but does not have to) combine with a generic passive to give the middle interpretation. Crucially, however, the ability modal cannot be combined with a middle, as we have already seen. So, overt ability *can* blocks middle formation. On the other hand, when no overt modal is selected, in order for the middle interpretation to obtain, middle formation has to take place; a passive won't do.

Interestingly, the same 'non-blocking' effect occurs in Greek as well. Overt ability *can* can combine with a passive, just like in English. Due to the perfective/imperfective aspect distinction present in the verbal system, there are two possibilities equivalent to the English example (15) above.[6] This by the way shows that the English sentence has to be ambiguous. The first reading, corresponding to (31), is one in which there is reference to a single event, hence the incompatibility with a frequency adverb (*kathe mera* 'every day'). The second reading, corresponding to (32), involves a generalization over events, in other words is an instance of a generic passive (I gloss *na*, the subjunctive marker, as subj):

(31)   afta  ta  vivlia  borun    na    diavastun        apopse/*kathe mera
       these the books can-3PL subj read-PASS-PERF-3PL tonight/ every day

(32)   afta  ta  vivlia  borun    na    diavazonde              *apopse/kathe mera
       these the books can-3PL subj read-PASS-IMPERF-3PL  tonight/every day
       'These books can be read tonight/every day'

I believe the sentence in (31) to be the true paraphrase of the middle, and (32) to be an instance of a generic passive.

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[6] The Greek examples have a plural subject, which is chosen deliberately in order to avoid the ambiguity between epistemic and root (ability) *can*. The former takes the form of an impersonal modal inflected for 3. pers. sing. (*bori*), whereas the latter agrees in person and number with its subject.

A second similar question is what prevents the existence of the English type middle in Greek. That would entail that Greek too resorts to an abstract modal, in order for the arbitrary agent to be licensed. But, we saw that in Greek, the latter is licensed by a modal operator contributed by imperfective aspect. It is quite likely that Greek lacks implicit modals of the kind posited for English, which is why the English-type middle is blocked in Greek by the existence of a passive with imperfective aspect. The obvious answer to the question why Greek would lack implicit modals is the availability of imperfective aspect.

One final question concerns the distribution of this abstract modal. If indeed there are good reasons to argue for its existence, as I have tried to show, why doesn't it appear everywhere? In other words, why can't we have *I walk to school* to mean 'I can walk to school'? One way to deal with this problem is the following. Recall what this operator does for us: it licenses the arbitrary agent. It is possible that the licensing is bi-directional, instead of unidirectional as we have had it until now. The arbitrary agent requires the presence of the abstract modal, which is only triggered in order to meet this purpose. In *I walk to school*, there is no arbitrary agent, and therefore no implicit modal may occur. Moreover, the relation between overt modals and overt agents might too be a bi-directional one, given the observation that overt *can* can only occur in agentive contexts. For now I can only suggest this as a possibility awaiting further research.[7]

A possible objection to these ideas could be that there are apparently other instances of this implicit modal where no arbitrary argument co-occurs. The following sentences from Fagan (1992) are considered ambiguous between a generic and a modal interpretation of the present tense:

(33)   a. Kim speaks German
       b. John rides horses
       c. This car goes 200 km/h

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[7] An additional question raised by Peter Ackema is why there is no language in which middles have the following characteristics: they involve an overt modal, that is, one not introduced by imperfective morphology as in Greek, but a lexical one, and also a syntactically active agent. In fact, this state of affairs does obtain, both in English and Greek, in case we have an overt ability modal with a passive and a by-phrase (licensed by the latter) with arbitrary reference. There is nothing in the above situation that poses a problem to the analysis proposed. The question would be whether this counts as a middle. Given the approach pursued here, the passive with an overt ability modal is equivalent to the middle, since the interpretation is the same. (Recall that Lyons (1995) claimed the same for middles and generic passives with arbitrary agents.)

If there is a modal operator present in the latter reading of these sentences, we probably would not want it to be a different one from the operator claimed to exist in middles. Note, however, that the second reading in all probability merely arises pragmatically, when the context makes it obvious that the relevant interpretation is not one which communicates what Kim, John and this car habitually do, but rather what they are capable of doing. But is that enough for positing the occurrence of a covert ability modal? I think not. Applying the test of adding the overt modal yields perfectly grammatical sentences, with no redundancy at all, which is what we would expect if the overt modal co-occurred with its covert counterpart (as in the case of the ungrammatical middles with overt ability *can*). I therefore conclude that there is no hidden modal operator in the logical form of the second readings of these sentences.

## 6 Conclusion and implications

In this paper I examined the so-called 'middle construction' in English and Greek and argued for an approach that takes as the starting point the interpretation that is targeted. I suggested a slightly different description of what this interpretation exactly is, namely one that involves root modality. More specifically, the ability of an arbitrary agent to act on the understood object in the way denoted by the verb. I then tried to explain why this interpretation is achieved by different means in the two languages. In English, middles are parasitic on unergatives, whereas in Greek on passives.

   Given the approach taken, the cross-linguistic variation associated with the realization of this notional category is far from unexpected, and is related to other morphosyntactic properties of the languages. I proposed that the crucial factor in the case of middle formation is imperfective morphology. In Greek, imperfective aspect in the verbal morphology may contribute an explicit modal operator that enables passives to encode the middle semantics. English, by contrast, where no such morphology is available, has to resort to an implicit modal operator which can only license an implicit, syntactically inert agent, which leads to middles taking the form of unergatives.

   The findings reported here have a bearing on the issue of the nature of the syntax-lexical semantics interface. The attested cross-linguistic variation in the status of the grammatical subject of the middle (Surface-/ Deep-structure subject) poses a challenge to any rigid mapping principle such as the UTAH. It also conflicts with a view of the syntax-lexical semantics interface a la Hale & Keyser (1993). According to the latter, the syntax is projected directly from the lexicon, the argument structure of a predicate is itself properly represented as syntax, and the processes that derive alternations are syntactic

in nature.

The data discussed here cannot be successfully accommodated in a theory of grammar which disposes of a distinct level of lexical representation from which arguments are projected to syntax proper. Middle formation being a presyntactic process in (at least) English and Dutch is an argument in favour of the existence of such a level of representation, in which the arguments of a predicate are represented and operated on in ways distinct from purely syntactic operations. Moreover, middle formation across languages provides evidence that a more flexible view of the interface is needed, according to which thematic roles are not (expected to be) realized by arguments appearing in unique structural positions. A structural definition of, for instance, the notion of 'Patient' is not feasible given the evidence reported here.

Last but not least, the very notion of 'the middle construction' needs to be revisited. To talk of such a thing as 'the middle construction' implies that there is a syntactic structure distinct from, say, active, passive, or unaccusative to which we thereby refer. For one thing, however, we have seen that middles are parasitic on independently available constructions: unergatives in English and Dutch, passives in Greek. In fact, there seems to be no language which uses a particular morpheme or syntactic structure solely for the purposes of expressing what has been identified as the middle semantics. Rather, languages employ means already available to them in order to convey the middle interpretation.

My stance throughout has been to argue that the middle is a semantic category, which we nonetheless need to define as accurately as possible. There seems, however, to be no sensible way in which we can refer to a syntactic notion of the 'middle'. Since there is nothing syntactically exclusive to 'the middle construction', there *is* no middle construction. Middle is the interpretation existing structures receive.

## References

Ackema, P. & Schoorlemmer, M. (1994). The middle construction and the syntax-semantics interface. *Lingua* **93**. 59-90.

Ackema, P. & Schoorlemmer, M. (1995). Middles and Nonmovement. *Linguistic Inquiry* **26.2**. 173-197.

Ackema, P. & Schoorlemmer, M. (2002). Middles. Ms. University of Utrecht.

Alexiadou, A. (1999). On the Properties of some Greek Word Order Patterns. In Alexiadou, A., Horrocks, G. & Stavrou, M. (eds.), *Studies in Greek Syntax*. Dordrecht: Kluwer. 45-65.

Carlson, G. & Pelletier, F.J. (eds.) (1995). *The Generic Book*. Chicago: The University of Chicago Press.

Chierchia G. (1995). Individual-level Predicates as Inherent Generics. In Carlson, G.& Pelletier, F. J., (eds.). 176-223.

Condoravdi, C. (1989). The Middle: where semantics and morphology meet. *MIT Working Papers in Linguistics* **11**. 18-30.

Fagan, S. (1992). *The Syntax and Semantics of Middle Constructions. A Study with special reference to German*. Cambridge: Cambridge University Press.

Giannakidou, A. (2001). The Meaning of Free Choice. *Linguistics and Philosophy* **24.6**. 659-735.

Giorgi A. & F. Pianesi, F. (1997). The Present and the Imperfect in Germanic and Romance. In Giorgi, A. & Pianesi, F.(eds.), *Tense and Aspect: from Semantics to Morphosyntax*. New York: Oxford University Press. 151-192.

Hale, K. & Keyser, S.J. (1993). On Argument Structure and the Lexical Expression of Syntactic Relations. In Hale, K. & Keyser, S.J. (eds.), *The View From Building 20*. MIT Press. 53-109.

Holton, D., Mackridge, P. & Philippaki-Warburton, I. (1997). *Greek: A Comparative Grammar of the Modern Language*. London: Routledge.

Jaeger, G. (2001). Topic-Comment Structure and the Contrast Between Stage Level and Individual Level Predicates. *Journal of Semantics* **18**. 83-126.

Kakouriotis, T. (1994). Theta Roles and Middle Constructions. In *Proceedings of the 8ᵗʰ International Symposium of English and Greek: Description and/or comparison of the two languages*, pp. 279-304. Thessaloniki.

Kratzer, A. (1995). Stage-level and Individual-level Predicates. In G. Carlson & F. J. Pelletier (eds.). 125-175.

Lyons, C. (1995). Voice, aspect, and arbitrary arguments. In Smith, J.C. & Maiden, M. (eds.), *Linguistic Theory and the Romance Languages*. Amsterdam: John Benjamins.

McConnell-Ginet, S. (1994). On the Non-Optionality of Certain Modifiers. In Harvey, M. & L. Santelmann (eds.), *Proceedings of SALT IV*. Ithaca: Cornell University. 230-250.

Papastathi, M. (2001). The Syntax and Interpretation of the Greek Middle. Talk given at the LAGB Autumn Meeting, University of Reading, September 2001.

Rapoport, T. R. (1999). The English middle and agentivity. *Linguistic Inquiry* **30**. 147-155.

Sioupi, A. (1998). *Dhomes Mesis Dhiathesis: sigritiki meleti Elinikis ke Germanikis* [Middles: a comparative study of Greek and German]. PhD Dissertation, University of Athens.

Sioupi, A. (1999). The genericity of middles. In *Greek Linguistics 1997. Proceedings of the 3ʳᵈ International Conference on the Greek language*. Athens: Elinika Gramata. 240-248.

Smith, C. S. (1997, 2ⁿᵈ edition). *The Parameter of Aspect*. Dordrecht: Kluwer.

Tsimpli, I. M. (1989). On the Properties of the Passive Affix in MG. *UCL Working Papers in Linguistics* **1**. 235-260.

Williams, E. (1991). The Argument-Bound Empty Categories. In Freidin, R.(ed.), *Principles and Parameters in Comparative Grammar*. MIT Press. 77-98.