Chapter 5
Middles in Syntax Languages

1. Introduction

The sample of languages that are in the focus of interest in this Chapter includes French, Italian, Polish and Serbian/Croatian (SC). For ease of reference, I label these “syntactic” or “syntax” languages, which simply means that the middle formation operation in these languages does not apply in the lexicon, but in the syntax (LF) instead. As already stated in previous chapters, the nature of the illusiveness of middles in “syntax languages” is somewhat different from the illusiveness of the middles in “lexicon languages”. With respect to lexicon languages like English, the existence of the middle has never been questioned. As discussed in Chapter 3, the task in a language like English involves the elimination of the “middle imposters”, like stative unaccusatives, rather than the justification of the existence of the category of the middle. In the literature on middles in Italian, however, one finds accounts that treat the Italian middle as being more similar to the English passive than to the English middle. Our first task, then, is examine the status of what is called the middle in French, Italian, Polish, and SC on a wider range of data with respect to the characteristics that have been identified as the core characteristics of the middle as a category. One would further like to understand why middles in

165 Stative unaccusatives seem, by far, the most serious imposters. In the literature, one finds examples like (i) and (ii) also treated as middles. I have not discussed them since these are ordinary transitive outputs of [+c]-verbs. There is nothing even remotely “middle” about them. The examples are drawn from Ackema and Schoorlemmer (2003) who share the view that they are not middles. Ackema and Schoorlemmer treat these as “instrumental clauses”, with the instrument role realized externally. I do not consider these “instrument clauses”, but ordinary [+ c] verbs in the Theta System whose external role is consistent with Agent, Cause and Instrument interpretation (cf. Chapter 1).

(i) The key opened the door
(ii) De zon droogt de tomaten
    The Sun dries the tomatoes.
syntactic languages give rise to such controversy. Whereas middles in syntactic languages will be argued to exhibit the characteristics of the middle identified in Chapter 3, I will also argue that differences between middles in lexicon languages and middles in syntactic languages exist. Both the similarities and the differences between the languages under consideration in this study will be summed up here and presented against a broader range of empirical data. As will be argued here, the differences between lexicon and syntactic middles are rooted in the fact that the middle formation operation applies in different modules, which - in turn - abide by different rules. The discussion is followed by a possible answer to why lexicon middle formation is not available in languages like SC. An additional issue that will be addressed in this chapter is the range of the application of Chierchia’s (1995) ARB-saturation in constructions other than the middle in syntactic languages.

2. Properties of Middles in Syntax Languages

2.1 The Puzzle of Si/Se/Się Constructions

It has already been said that the middle in languages under consideration here is morpho-syntactically indistinguishable from a special type of passive. Apart from copular passive (i.e. a participle preceded by be), Romance and Slavic languages also utilize si/se-passive. Passive-si in Italian is illustrated in (1a) – taken from Lepschy and Lepschy (1977) - and passive-se in SC is illustrated in (2a). Middle-si/se is illustrated in the examples in (b). The example in (1b) is taken from Cinque (1995). Just like the Italian examples in (1), the SC (2a) and (2b) are strikingly similar. The clitic – si in Italian and se in SC - marks both of these outputs. The notional object is in the surface subject position as witnessed by the agreement with respect to person and number features between the verb and this argument, which - in both Italian and SC - is obtained only between the verb and nominative DPs. The external argument is not linked in the syntax. It is implicit – present it the logical forms of the derivations in (1) and (2).

\[
\begin{align*}
(1a) & \quad \text{Questo giornalle si legge ogni mattina.} \\
& \quad \text{'This newspaper SI read every morning'}
\end{align*}
\]

\[
\begin{align*}
(1b) & \quad \text{Questo tavolino si trasporta facilmente.} \\
& \quad \text{'This table SI transports easily'}
\end{align*}
\]

\[
\begin{align*}
(2a) & \quad \text{Kuća se gradi.} \\
& \quad \text{'The house is being built.'}
\end{align*}
\]
(2b) Mrlje od crnog vina se ne skidaju.
Smudges from black wine SE not clean
‘Red wine stains do not clean.’

There is no doubt that the similarities between *si/se* derivations in (1) and (2) are uncanny. Notice now that - as seen in examples in (3) – drawn from Roberts (1985) – it is possible to license an agentive adverb with a *si*-output in Italian (3a) as well as with a SC *se*-output in (3b). Furthermore, purpose clauses – generally illicit to appear with middles in English and Dutch (cf. Chapter 3) – are legitimate with a *si*-output in (3c).\(^\text{166}\)

(3a) I bambini si lavano **volentieri**.   (Italian)
the children SI wash willingly.

(3b) Kuća se **dobrovoljno** gradi.   (SC)
house SE willingly build.

(3c) I bambini si lavano [per far piacere a Maria]   (Italian)
the children SI wash to give Maria pleasure.

Consequently, it should not come as a surprise that some authors were led to conclude that the middle in Italian “more closely resembles English passives than does the English middle” (Roberts (1985): 511).

### 2.2 Similarities between Middles in Lexicon and Syntax Languages

Cinque (1988), (1995), however, successfully argues that the middle in Italian is far more similar to the middle in English than previously acknowledged in the literature (cf. Keyser and Roeper (1984), Roberts (1985)). He points out that the status of middles in Italian is blurred by the fact that - in addition to middle-*si* - Italian also has passive-impersonal *si*. For that reason, Cinque (1988) resorts to testing the properties of middle-*si* in untensed contexts like (4). As seen in (4a), Cinque’s middle-*si* is only acceptable with generic time reference. As seen in (4b), the middle-*si* does not license agentive adverbs.

(4a) *? Il sindaco ha il vantaggio di essersi già corrotto ieri.
the mayor has the advantage of already being bribed yesterday

(4b) *Il libro ha il pregio di vendersi volutamente.
the book has the merit of selling voluntarily

\(^{166}\) Following the discussion in Chapter 3 regarding purpose clauses, I am presenting them here purely for the sake of completeness of the data.
Furthermore, as seen in examples (5) drawn from Cinque (1988), middle-	extit{si} does not allow control into purpose clauses and fails to license the 	extit{by}-phrase (cf. also di Sciullo (1990) for the same conclusion regarding Italian middles).

(5a) Quell’uomo politico hai il vantaggio di potersi corrompere facilmente [*per dimostrare le propria influenza].

that politician has the advantage of si bribing easily (to show one’s influence)

(5b) Questo vestito ha il vantaggio di potersi lavare *da tutti
this suit has the advantage of si being able to wash by everybody

Thus, Cinque’s (1988) careful separation of middle-	extit{si} from other 	extit{si}-outputs that he labels impersonal-passive 	extit{si} has the right effect of rendering English and Italian middle much more similar than assumed in Keyser and Roeper (1984) and Roberts (1985).

To account for the contrast between (6) and (7), Cinque (1988), (1995) postulates that the clitic 	extit{si} has a dual status: an argumental use and a non-argumental use. Cinque interprets the contrast between the data like (6) and (7) as being rooted in the presence of argument-	extit{si} in impersonal-passive constructions and the absence of it in middles in Italian.

(6a) Questi appartamenti si vendono volutamente occupati.
these apartments SI sell deliberately occupied

(6b) Quell’uomo politico si può corrompere (facilmente) per dimostrare la propria influenza.
that politician SI can bribe (easily) to show one’s influence

(7a) Questi appartamenti hanno il vantaggio di vendersi (*volutamente) occupati.
these apartments have the advantage of si being sold deliberately occupied

(7b) Quell’uomo politico ha il vantaggio di potersi corrompere facilmente [*per dimostrare la propria influenza]
that politician has the advantage of si bribing easily (to show one’s influence)

As already said, following the discussion in Chapter 3, I will not be use semantic control and the 	extit{by}-phrase to diagnose middles. As argued there, the problem with these two tests is not that middles in the languages under consideration here do not pass them, but in the fact that the one is not sure what the tests in question diagnose. It is for the sake of completeness of Cinque’s (1988) arguments that I am presenting them here.
Namely, he concludes that impersonal-passive si is compatible with agentive adverbs (6a) and can control the subject of a purpose clause (6b) because the former type of construction relies on the argument si, whereas middles - as in (7a) and (7b) - rely on the non-argument si. This part of Cinque’s (1988) analysis has been elaborately criticized by Dobrovie-Sorin (1998) who argues against the existence of [+arg (ument)] si. On her account, control configurations differ with respect to the type of controller they allow: some configurations require a syntactically realized controller, others allow control by implicit Agents (cf. also Koster (1984)). Since the control configurations that involve purpose clauses are not instances of syntactic control (cf. also Fellbaum and Zribi-Hertz (1989) for the same conclusion), they cannot be used to corroborate the argument status of si in examples like (6). In Chapter 6, I will return to the empirical problems posed by the dual status of the clitic.

Abstracting away from the postulation of the dual status of the clitic, Cinque conclusively shows that the middle in Italian behaves just like its counterpart in English as it fails/ passes the same tests as its counterparts in Dutch and English. Another important point of Cinque’s (1988), (1995) analysis is that in recognizing the differences between Italian and English middles, following Zubizarreta (1982), (1987), he proposes that the middle construction is syntactic in Italian and lexical in English. As evidence for the different level at which they are formed, Cinque notes that - unlike the middle in English - the middle in Italian “is possible with the verb taking non-affected theme objects, which disallow the middle construction in English” (Cinque (1988): 563). The Italian example in (8) - drawn from Cinque – is illustrative of this type of behavior. Indeed, it is a fairly standard assumption that whereas syntactic processes are productive, lexical processes are restricted.

(8) Certe lingue hanno la proprietà di impararsi con più facilità di alter.
certain languages have the property of SI acquiring more easily than others

Bearing these two major points of Cinque’s approach in mind, I conclude that the core of Cinque’s (1988), (1995) approach to middles does not differ from the core assumptions in this study. Firstly, attempting to show that middles in Italian pass/fail the same tests as middles in English amounts to working under the premise that there is a set of core properties that pertain to the middle as a category cross-linguistically, as argued in Chapter 3 of this study. Secondly, Cinque (1988), (1995) acknowledges that there are differences between middles in languages like English and Italian and that they follow from the different level at which the middle is formed in the respective languages. This is also true of the approach that I have been developing in this study. Namely, as argued throughout this study, the middle formation operation is a parameterizable operation. Thirdly, Cinque identifies that the core of the confusion regarding the status of the middle in Italian arises from the fact that - in addition to the middle-si - Italian also utilizes the passive-impersonal si. I concur with Cinque on this point as well. Unlike in Cinque (1988), (1995), on the
analysis here, the differences in behavior of various *si/se* derivations do not stem
from the different status of the clitic across different *si/se* construction, but follow
from the semantics of middles as opposed to the semantics of passives. On the
account here, the fact that middles do not license agentive adverbs does not stem
from the “absence of [+arg] si” with middles, but from the stative nature of middles.
The stativity of middles, in turn, can be viewed as a “by-product” of the genericity
of middles (cf. Chapters 3 and 4).

Repeated here as (9) are the core properties of middles identified in Chapter 3.

(9) Core Properties of Middles:

a. Middles are characterizing - generic statements (i.e.
ascribing properties to entities, involving quasi-universal
reading, typically with a modal flavor of capability or
potentiality).

b. The external role of middles is not linked in the syntax, but
it is always present in the semantics and interpreted as
ARB with +human flavor.

Let us now check the validity of (9) against a wider range of data in syntactic
languages. As already noted, there does not seem to be anything in purely syntactic
terms that would help us separate the middle-*si/se* from passive-*si/se*. Furthermore,
with both middle and passive-*si/se*, the external role of the input verb is suppressed
by the application of the arity operation of saturation. The role cannot be linked in
the syntax, but is present in semantics as witnessed by the availability of Instrument
phrases with both passives and middles. As seen in the SC examples in (10), both
the passive-*se* (10a) and the middle-*se* (10b) license Instrument phrases.

(10a) Put se gradi nano-mašinama.
road SE builds nano-machines-instrumental
‘The road is being built with nano-machines.’

(10b) Mrlje od crnog vina se lako skidaju belim vinom.
stains from red wine SE easily clean white wine-instrumental
‘Red wine stains clean easily with white wine.’
The derivations in (10) are marked with the clitic *se*, whose role is to absorb the offending ACC feature. The absorption of ACC triggers the movement of the internal argument to the Spec, IP position as in (11)\(^{168}\)\(^{169}\):

\[
(11) \quad [\text{IP DP} \ i \ SE [\text{VP} [\text{V} \ V t]]]
\]

Consequently, I conclude that there is no special morpho-syntax for middles in languages like SC that differentiates them from passive-*si/se*. The Instrument test – helpful in distinguishing stative unaccusatives from middles - will not be helpful either since both the middle *si/se/si* and the passive *si/se/si* have a semantically active external role.

Let us then resort to Cinque’s diagnostics of testing the *si/se* construction in an untensed context. As seen in (12), French *se* in an untensed context behaves on a par with Cinque’s *si* in an untensed context. As shown in (12a), it disallows agentive adverbs like *intentionally* and *deliberately* (12b). Secondly, whereas it licenses adverbs of generic time reference (12c), it is ungrammatical with adverbs of specific time reference (12d)\(^{170}\).

\[
(12a) \quad \text{Cette voiture a la propriété de se conduire de manière sportive.}
\]
\[
\text{this car has the property to SE drive in manner sportive}
\]

168 The representation in (11) depends on one’s inventory of functional projections. For ease of exposure, I am ignoring the inner structure of the IP (i.e. TP, AgrSP, and NegP). Unless relevant for the discussion, I will be opting for the ‘simplified’ representation as in (11). The precise structural position of the clitic is not the in focus of this inquiry and I leave it for further research. What we will be exploring here is the role of the clitic across different derivations that are marked with its presence. Its structural position is given as standardly assumed in the literature (cf. Cinque (1988) for Italian and Zribi-Hertz (1982) for French). Alternatively, the clitic could be base generated within the VP (cf. Kayne (1975) and Manzini (1983) (possibly on the verb itself) and then moved to I as proposed in Cinque (1995)). The reader will also notice that I am resorting to a more traditional motivation for movement. An alternative is, of course, that the movement is triggered by the EPP feature, not for Case reasons. On either account, the important thing for our discussion is to notice that both middles and passives share the common – unaccusative syntax.

169 For ease of reference, when referring to *si/se/si* I use the cover label “SE”, which should be understood as a cover-label for the varying realization of the Case-absorbing clitic across the languages under consideration here.

170 Note in passing that just like the Italian middle, the French middle disallows licensing of purpose clauses (i).

\[
(i) \quad ^*\text{Cette voiture avait la propriété de se conduire de manière sportive}
\]
\[
\text{This car had the property to SE drive in the manner sportive in+order show off}
\]

With respect to the licensing of *by*-phrases, French seems to behave like Polish and SC in disallowing them regardless of the type of *se*-construction.
(12b) *Cette voiture a la propriété de se conduire intentionnellement de manière sportive.
this car has the property SE drive intentionally in manner sportive.

(12c) Cette voiture avait la propriété de se conduire de manière sportive au vingtième siècle.
this car had the property to SE drive in the manner sportive in+ the 20th century.

(12d) *Cette voiture avait la propriété de se conduire de manière sportive hier soir.
this car had the property to SE drive in the manner sportive yesterday evening.

When applied to SC, Cinque’s test gives the same results for the middle-se in this language. The outputs like the ones in (13) do not admit either adverbs of specific time reference (14a) or agentive adverbs (14b).

(13a) činovnici su imali osobinu [da su se lako potkupljivali]
bureaucrats had the characteristic that are SE easily bribed.

(13b) Ova haljina ima osobinu [da se teško pere]
this dress has the characteristic that SE with difficulty wash.

(14a) *činovnici su imali osobinu [da su se juče lako potkupljivali]
bureaucrats had the characteristic that are SE yesterday easily bribed.

(14b) *Ova haljine ima osobinu [da se namerno teško pere]
this dress has characteristic that SE deliberately with difficulty wash.

As evident from the glosses in (13) and (14), there is one important difference between the SC data in (13) and the French data in (12). Namely, SC opts for finite da “that”-clauses, rather than infinitival clauses in (13). Since se in (13) does not occur in a non-finite environment, there must be something other than non-finiteness that makes agentive adverbs (14a) and adverbs of specific time reference (14b) illicit. The argument here is that it is the construction X has a property/characteristic itself that disambiguates between the possible readings of a SE-construction by enforcing the characterizing, generic reading. A number of such constructions that enforce generic reading are noted in the literature. Constructions in (15) drawn from Krifka et al. (1995) are but a sample of them.

(15a) John has an inclination to smoke a pipe.
(15b) Sue has the disposition/is disposed to get the flu in the winter.

What the construction *X has a property/characteristic* does is disambiguate among possible readings of a SE-construction by enforcing the generic reading and disallowing a particular reading. Consequently, regardless of the finiteness of the environment SE finds itself in – on a generic reading - adverbials that are incompatible with the stative nature of generic sentences should be automatically excluded. Again, this corroborates the conclusion reached in Chapter 3 that the middle is a semantic category, whose core characteristic is that it is a generic statement. Consequently, if one controls a SE output for the middle – generic – reading, a potentially ambiguous SE-construction in a tensed context is predicted to disallow adverbs of specific time reference, since generic sentences are aspectually stative. The opposite should also hold. Namely, if it is controlled for passive - particular reading, adverbs that are compatible with the sentences that describe particular events in time are predicted to be legitimate. Let us illustrate these points on SC. SC is a nice testing ground since a copular passive construction cannot be used to describe an ongoing event in the present. A SE-construction must be used instead. Thus, a sentence like (16a) is, in principle, ambiguous between the generic and a particular reading (i.e. can be used to describe a particular event). Under the generic reading, however, adverbials of specific time reference such as *at the moment* are rejected by native speakers. If it is used to describe a particular event in time like the ongoing event of removing/cleaning a red wine stain (as a particular sentence), the presence of such adverbials is legitimate. Crucially, the output in (16b) is grammatical but it has nothing to do with the characterizing, generic reading of middles. Finally, notice that the same contrast is observed when the *X has a characteristic* construction is used (16c). Since the construction enforces a generic reading, *at the moment* is not licensed to occur (16d).

(16a) Mrlja od crnog vina se skida belim vinom.
red wine stain SE cleans/removes with white wine.

(16b) Mrlja od crnog vina se **upravo** skida belim vinom.
‘*At the moment*, a red wine stain is being cleaned/removed with white wine.’

(16c) Mrlja od crnog vina ima osobinu da se skida belim vinom.
red wine stain has characteristic that SE cleans/removes with white wine.

(16d) *Mrlja od crnog vina ima osobinu da se **upravo** skida belim vinom.*
red wine stain has characteristic that SE at the moment cleans/removes with white wine.

Consequently, with respect to syntax languages, it is the semantics of middles that gives us some leverage in distinguishing them from passive derivations. Middles are
generic statements. As was argued in Chapters 3 and 4, generic statements are aspectually stative. The stativity of middles follows from the fact that the Gen operator binds the event variable in the middles. Unlike middles, passives can be eventive. This follows from the fact that the event (situation) variable in passives is bound by the existential operator. A direct consequence of the stativity of middles and eventivity of passives is that middles are predicted to be incompatible with specific time reference whereas passive-*se* is expected to be compatible with specific time reference. To further illustrate the difference between the passive and middle-*se*, let us refer to Progovac’s (1997), (1998a) account of the event pronominal *to* in SC (recall the discussion in Chapter 4: 3.4). One of its three uses is the “deictic *to*” (17a). In this referential use, “*to* refers deictically to an event/scene” (Progovac (1997): p. 80).171 In simple terms, for the deictic use of *to*, one needs a particular event to point to. Then, it follows that the deictic *to* can only be used in cases when the event variable is existentially closed. Indeed, Progovac points out that deictic *to* cannot be used in cases of universal quantification over events (17b).172

(17a) To Novak pliva.
That Novak swims
‘What you see is Novak swimming.’

(17b) *To Marina uvek pева.
That Marina always sings
(Progovac (1997))

Going back to our passive/middle-*se*, the deictic *to* is expected not to occur with middles (generic quantification) but is expected to occur with passives (existential closure). As seen in (18), both of these predictions are borne out.173 Since middles do not report particular events, *to* is not legitimate in (18a).

(18a) *To se krompir lako ljušti.  (middle)
To se potatoes easily peel

(18b) To se krompir *upravo* ljušti.  (passive)
To se potatoes at the moment peel
‘What you are witnessing is an event of peeling of potatoes.’

171 For an elaborate discussion, the reader is referred to Progovac (1997), (1998a).
172 Notice, in passing, that one could speculate the stative nature of middles is at the core of why middles generally do not license the purpose clauses (cf. Roberts (1985) for such an approach). As noted in the literature (cf. the discussion in Chapter 3), purpose clauses are as illegitimate with regular statives (i) as they are with middles.

(i) *He knows the answer [in order to annoy the teacher]

173 The same behavior observed with middles with respect to *to* is, of course, observed with habitual statements that have an overtly present adverbial such as *usually*. 
In terms of languages like Italian and SC, it is the fact that these languages use the same morpho-syntactic construction for a variety of semantic means that blurs the existence of the common characteristics that middles in these languages share with middles in languages like Dutch and English. The middle-SE passes and fails the same tests as the middle in Dutch and English. In both lexicon and syntactic languages, the generic operator binds any free variable in its scope. In the case of both lexicon and syntactic middles, both the event variable and the variable of the implicit role are bound by Gen. Since generic sentences are stative, the middle in both English and SC is incompatible with adverbs of specific time reference.

The second property (cf. (9b)) that middles share across languages is the presence of the implicit argument that is interpreted as ARB with +human flavor. As elaborated in Chapter 4, in lexicon languages, the middle formation operation utilizes the ARB role i.e. the [ ] cluster. The variable of ARB-role is not x but $x_{arb}$. In lexicon languages then, the Arbitrarization is of a cluster. This, in turn, is desirable since the level at which the Arbitrarization applies - the lexicon – contains only clusters. The question that now arises is what happens in syntactic languages. Recall that syntax cannot manipulate the content of the cluster. Recall (cf. Chapter 4), however, that following Chierchia (1995a), I assume that variable binding can also be ARB-binding. Unlike the variable introduced by ordinary saturation, the variable introduced by Arbitrarization comes with a built-in domain restriction, indicated by a special subscript $arb$, which ranges over groups of people. I argue that it is ARB-saturation that ensures that the saturated role in syntax languages is interpreted as ARB with +human flavor. Just like with lexicon languages, the fact that Gen binds the situation/event variable ensures that the middle is interpreted with a quasi-universal flavor.

The representation of English (19a) is given in (20a) and of its SC middle counterpart (19b) in (20b).

(19a)  *Tristram Shandy* reads easily.

(19b)  *Tristram Šendi* se lako čita.

(20a)  Gen $e$, $x_{arb}$ [reading ($e$) & [-c-m] ($e$, Tristram Shandy) & [ ] ($e$, $x_{arb}$)] [easy ($e$, $x_{arb}$)]

(20b)  Gen $e$, $x_{arb}$ [reading ($e$) & [-c-m] ($e$, Tristram Shandy) & [+c+m] ($e$, $x_{arb}$)] [easy ($e$, $x_{arb}$)]

Both the middle in SC (19b) and the middle in English (19a) are interpreted as “it is a generic property of events of reading *Tristram Shandy* by any arbitrary person, that they are easy events for that arbitrary person”. This is, indeed the desired outputs for both SC and English. Since the middle formation is bound to two different modules in these two languages, it is not surprising that they use different tools to achieve the
same semantic goal. Namely, lexicon languages like English have at their disposal the option of the \([\_\_\_]\) cluster i.e. the ARB-role. Syntax languages like SC cannot utilize cluster manipulation operations. What they have, however, is ARB-saturation (ARB-Genericization in the case of middles) at their disposal.

2.3 Differences between Middles in Lexicon and Syntax Languages

Having overviewed the shared characteristics of middles in lexicon and syntax languages, let us now focus on the differences between the two. It has already been stated that middles in Dutch and English are formed in the lexicon, whereas middles in French, Italian, Polish and SC are formed in the syntax. As argued in the previous section, Middle Formation in lexicon languages employs the ARB role – the \([\_\_\_]\) cluster, which requires Gen to bind its variable and (since Gen binds unselectively any variable in its scope) the event variable, Middle Formation in syntactic languages employs ARB-Genericization to achieve the same result. Consequently, though both lexicon and syntactic languages reach the common goal, the operation is executed differently in the lexicon than in the syntax. The same is true of other parameterizable operations. Recall that Reflexivization/Bundling - essentially identification function – is executed differently in the lexicon than in the syntax. Whereas in the lexicon, it bundles two roles by creating a complex role, in the syntax, the two roles are bundled by being assigned to the same argument upon merge. Different types of execution are expected on conceptual grounds. Namely active lexicon and syntax are two distinct modules. This, in turn, means that they abide by different rules and have different tools at their disposal. The operations permitted at a given level are those that are in accord with the laws that hold at that level. As already pointed out in Chapter 1, outputs derived in the syntax behave differently from those derived in the lexicon. As shown by Siloni (2003), a whole range of properties that lexicon and syntactic reflexives exhibit, follows from the fact that Reflexivization is parameterized across languages. As I will argue in this section, the same is true of lexicon and syntactic middles. Namely, just like in the case of reflexives – differences in the behavior of middles in lexicon and syntax languages follow from the level at which the operation applies in a given language. With respect to middles, there are also differences that follow from different executions of the middle formation operation in these two different modules. Let us then review both types of differences.

Recall first that the middle formation operation in the lexicon manipulates the \([/+c]\) cluster, creating an empty list i.e. \([\_\_]\). Recall that - in terms of co-occurrences of feature clusters - the empty list is indistinct from all other underspecified clusters. It can only co-occur with fully specified clusters. A \([-c]\) cluster is one of the instantiations of the unspecified cluster. Since the middle-entry of verbs like *teach* and *hand* (21a) is qualitatively different from the base-entry of these verbs (21b), the prediction is that the \([-c]\) cluster - which can normally co-realize on the grid of these verbs (22) - cannot realize in the middle derivation. As argued in Chapter 4, this prediction is borne out. As seen in (23a) and (24a), *teach* and *hand* form perfectly
acceptable middles. This is exactly what one would expect. They are visible to the lexicon middle formation operation since they have a [+c+m] cluster on their grid. As seen in (23b) and (24b), the [-c] cluster of these verbs, however, cannot be realized in the middle derivation as it is indistinct from the [ ] cluster. The examples in (23) and (24) are from Hoekstra and Roberts (1993).

(21a) middle-teach\(\text{hand}\): ([ ], [-c-m], [-c])
(21b) base-teach\(\text{hand}\): ([+c+m], [-c-m], [-c])
(22a) Peter taught children\([-c]\) these ideas
(22b) Peter handed some secrets to Mary\([-c]\)
(23a) These ideas\([-c-m]\) teach easily
(23b) *These children\([-c]\) teach easily
(24a) Secrets hand easily.
(24b) *Secrets hand easily to spies\([-c]\)

We have already established that utilizing the [ ] cluster is not an option for syntax languages. Instead of using the ARB-role, the syntactic languages utilize ARB-saturation. What are the predictions with respect to the co-occurrences of clusters of the base-entry in syntactic languages? Since the middle formation operation does not involve the manipulation of clusters in syntactic languages, one would expect all the co-realizable clusters of the input-verb to be able to co-realize in the middle derivation as well. Let us check the validity of this prediction. In syntax languages, one would expect the input three-place verb like izdavati “rent” (25a) to allow all the clusters of the base-entry to co-occur in the middle derivation. Since the middle formation operation in SC applies in the syntax, a direct empirical consequence of this should be that the [-c] role can realize in the middle in syntactic languages. As seen in (25c) from SC, this prediction is borne out. All the clusters that are realizable in (25b) are realizable in (25c).

(25a) izdavati “rent”: [+c+m], [-c-m], [-c]
(25b) Petar\([c+m]s\) je izdavao skufe stanove\([-c-m]\) studentima\([-c]\).
Peter is rented expensive apartments to students-dative
(25c) Skupi stanovi\([-c-m]\) se ne izdaju lako studentima\([-c]\).
Expensive apartments SE not rent easily students-dative

As seen in (26), French, Italian, and Polish pattern with SC in this respect. The underspecified clusters of the input verb – the [-c] cluster in (26a)-(26c) – can be
realized in the middle since no manipulation of the content of the \([/+c]\) cluster occurs in syntactic languages. No manipulation of the content of the \([/+c]\) role can occur since the syntax has no means of manipulating the content of feature clusters.

(26a) Les longues histoires ne se racontent pas facilement aux enfants\(_{[-c]}\)
Long stories not SE tell easily to children.
‘It is not easy for one/people, in general to tell long stories to children.’

(26b) Queste idée si insegnano/comunicano ai bambini\(_{[-c]}\) con facilita
These ideas teach to children with ease
‘It is easy for one/people, in general to teach these ideas to children.’

(26c) Tanie mieszkania łatwo wynajmują się studentom\(_{[-c]}\)
cheap apartments easily rent SIE students
‘It is easy for one/people, in general to rent cheap apartments to students.’

The fact that lexicon and syntax languages behave differently with respect to the co-realization of the clusters of the input grid follows from the fact that the middle formation operation is executed differently in these two types of languages.

Secondly, notice that middle derivations like (25) and (26) are marked with the presence of the clitic \(si/se/się\). The fact that the middle entry is morphologically marked with the presence of the clitic \(si/se/się\) can be seen as a consequence of the fact that the middle formation operation in French, Italian, Polish and SC does not involve the manipulation of clusters. Recall first that in lexicon languages like Dutch, a reflexive output requires the presence of the arity operation marker \(zich\). The role of the referentially deficient \(zich\) is to absorb the offending ACC case feature (cf. Reinhart and Siloni (2003)). Recall also that - regardless of the level of its application - Reflexivization/Bundling does not involve manipulation of the content of the clusters. Therefore the ACC marking that would otherwise (i.e. in the absence of any arity operation) be obtained, obtains also with reflexives. Recall further that the structural residue of ACC is taken care of by \(zich\) (27). Middle derivations in Dutch, on the other hand, are unmarked. In Chapter 4, it was argued that no Case-absorbing morphology in Dutch is needed since there is no ACC on the verb to start with. ACC is not marked on the middle-verb since - unlike the base-entry in Dutch - the middle-entry in Dutch – does not meet the criteria for ACC marking.

(27) Max wast \(zich\).
Max washed \(ZICH\)
Unlike in lexicon languages, the input to middle like in (25c) is the verbal entry given in (25a). The entry contains a [+c] cluster and a fully specified [-c,α] cluster. Such an entry meets the criteria for ACC marking. Since one of the arguments does not merge in the syntax, the verb is left with an “extra” Case feature that needs to be checked. Consequently, syntactic languages are predicted to employ some device to get rid of the offending ACC feature. The assumption here is that ACC has to be taken care of by the clitic si/se/sie.

Thirdly, recall that lexicon languages exhibit restrictions with respect to the type of verbs that give rise to felicitous middles. As argued in Chapter 4, only verbs with a [+c] role on their grid are visible to the lexicon middle formation operation. Recall that restrictions of this type are typical of lexicon processes. Syntactic processes are standardly assumed to be fully productive. Thus, in syntax languages, the LMF Visibility Requirement is not expected to be operative to start with. Indeed, as seen in (27a) – (27d), the LMF Visibility Requirement is not operative in SC, French, Italian, and Polish. Just like [+c] verbs, [+m] verbs form felicitous middles in syntactic languages. The Italian example in (28c) is from Cinque (1988).

(28a) Dobra deca se lako vole.  
Nice children SE love easily  
‘It is easy for one/people, in general to love good children.’

(28b) Les ennemis cruels se détestent facilement.  
Cruel enemies SE hate easily.  
‘It is easy for one/people, in general to hate cruel enemies.’

(28c) La luce gialla ha il vantaggio di vedersi bene anche nella nebbia più fitta.  
Yellow lights have the advantage of si seeing even in the thickest of fog

(28d) Małe rzeczy łatwo się gubią.  
Small objects easily SE lose  
‘It is easy for one/people, in general to lose small objects’

Notice further that it is quite clear that no manipulation of the cluster targeted by the middle formation operation happens in the syntax since the saturated [+m] role in the middle retains the properties of its syntactically realized counterpart. For instance, the implicit role in the middle in (29b) cannot license the Instrument any more than its syntactically realized counterpart in (29a). Consequently, unlike in lexicon languages, it is only ARB-saturation that applies in syntactic languages,

\footnote{With respect to the same conclusion for Italian, the reader is referred to Cinque (1988) and with respect to French; the reader is referred to Fellbaum and Zribi-Hertz (1987).}
making the [+m] unavailable for syntactic purposes, but nonetheless, interpretatively equivalent to its syntactically realized counterpart.\footnote{If the input verb to the middle formation operation in SC is a [+c+m]-verb like write or a [+c]-verb like break, Instruments can, of course, be licensed (cf. Chapter 3).}

\begin{align*}
(29a) & \text{ Maks mrzi neprijatne ljude (*nožem)} \\
& \text{ Max hates unpleasant people *with a knife}
\end{align*}

\begin{align*}
(29b) & \text{ Neprijatni ljudi se lako mrzi (*nožem)} \\
& \text{ unpleasant people SE easily hate *with a knife}
\end{align*}

Fourthly, recall that ECM-middles are available in languages like French (30a) and SC (30b) and disallowed in languages like English (30c).

\begin{align*}
(30a) & \text{ Ces maisons peuvent se croire belles facilement seulement avec beaucoup de bonne volonté.} \\
& \text{ These houses can SE think beautiful easily only with lots of good will.}
\end{align*}

\begin{align*}
(30b) & \text{ Nerazradjena ideja se teško smatra dobrom.} \\
& \text{ Un-worked idea SE with difficulty consider good.} \\
& \text{ ‘It is difficult to consider an idea that is not worked out good’.}
\end{align*}

\begin{align*}
(30c) & \text{ *John considers stupid easily.}
\end{align*}

ECM constructions like (30a) and (30b) involve theta roles of distinct predicates. The absence of ECM-middles in English follows straightforwardly if the middle formation operation in English takes place in the lexicon. The availability of such middles in languages like French and SC follows straightforwardly if the middle formation operation takes place in the syntax. Furthermore, the data in (30a)-(30b) clearly indicate that the surface subject of middles is a derived subject – it ends up in the surface subject position as a result of movement. Consequently, the availability of ECM-middles points to the fact that the middle in syntax languages is derived through movement. Indeed, the availability of ECM-middles in Italian is standardly used to argue that the middle in Italian is derived in the syntax through movement (cf. Zubizarreta (1982), (1987) Cinque (1988), (1995), for instance). The Italian ECM-middle in an untensted context (31) is illustrative of this behavior.

\begin{align*}
(31) & \text{ Certe armi hanno il vantaggio di potersi rendere facilmente [t inoffensive]} \\
& \text{ Certain weapons have the advantage of si rendering harmless easily}
\end{align*}

\begin{align*}
& \text{(Cinque (1988))}
\end{align*}
Last but not least, in Chapter 3, it was noted that the middle-predicate in lexicon languages cannot be used to form episodic sentences. Thus, the middle predicate like (32a) can never give rise to a particular sentence (32b).

(32a) This dress buttons.
(32b) *This dress is buttoning at the moment.

This behavior of middle-predicates in lexicon languages is quite unusual since basic eventive predicates can give rise to generic statements (33a) but, crucially, they are commonly used to form episodic sentences (cf. Krifka et al. (1995)). When such predicates occur in the progressive, the sentences are fully grammatical, though they lose their generic character. They are not reporting a stative property, but describing a particular event. Sentences like (33b) are grammatical since the input predicate is eventive and consequently compatible with the progressive, which is typically used to describe particular events in time.\textsuperscript{176}

(33a) The Italian/an Italian/Luigi drinks wine with his dinner.
(33b) The Italian/an Italian/Luigi is drinking wine with his dinner.

(Krifka et al. (1995))

Middles in Dutch and English are exclusively generic. Even when forced into progressive, middles are never episodic (cf. Roberts (1985), Bland (1988) Fagan (1992), Ackema and Schoorlemmer (1994), to name just a few). Instead of being eventive, progressive middles (34), express a change in properties over time (cf. Chapter 3: 2.1.1).\textsuperscript{177}

(34a) Bureaucrats are bribing more than ever in Reagan’s second term.

(Roberts (1985))

(34b) This manuscript is reading better every day.

(Fagan (1992))

\textsuperscript{176} For the semantics of progressive aspect, the reader is referred to Dowty (1979), Parsons (1990), and Delfitto (2002) and the references there.

\textsuperscript{177} The reader might note that this behavior of middle-predicates is parallel to that of “lexical characterizing predicates” like know French, like John, love, and weight of Krifka et al. (1995). I leave it for further research whether exploring properties of these predicates can shed further light on the behavior of middle-predicates in lexicon languages, and vice versa. On should, however, note that – as already said – even if one were to entertain a stipulation that stative verbs do not have an event variable, it cannot be extended to middle predicates in lexicon languages as they are derived from basic eventive predicates.
In Chapter 4, I have argued that this kind of behavior can be accounted for if we assume that the [-] cluster allows only for Gen to bind its variable. Recall that for the [-] cluster to be created, however, the input entry needs to have a [+c] cluster. Furthermore, as argued in Chapter 4, the middle formation operation always targets an n-place entry with a [+c] cluster, where n>1. Let us now provide a further piece of evidence that both of these conclusions are valid. If they are, then one would predict that the basic one-place entries that cannot undergo Agentivization, i.e. addition of the [+c+m] cluster (cf. Chapters 1 and 2), can never feed the middle formation operation, and consequently, never exhibit the type of behavior - illustrated in (32b) and (34) - that middle-predicates do.

Verbs like and blush and reek seem to be the best candidates to test this. Just like the input verbs to middles, both blush and reek are eventive verbs. Importantly for our discussion, both blush and reek are a) basic one-place verbs without a [+c] role and b) they cannot undergo Agentivization. If the type of manipulation the LMF involves (i.e. the creation of the [-] cluster that, in turn, enforces the presence of Gen) is contingent on the presence of a [+c] cluster, verbs like blush and reek are expected never to exhibit the behavior of middle-predicates. This prediction is borne out. Though they can give rise to generic statements (35), verbs like blush and reek are perfectly fine in particular sentences as well (36).

(35a) Max blushes
(35b) This dress reeks.

(36a) Max is blushing at the moment
(36b) This dress is reeking at the moment.

The fact that blush and reek cannot undergo Agentivization has some interesting repercussions for our discussion here. Let us elaborate on this point a bit further. Take a look at (37) first. Just like blush and reek, walk is a basic one-place entry (37a) that gives rise to the derivations like (37b).

(37a) walk: ([+c+m])
(37b) Fido walks.

Unlike blush and reek, recall (cf. Chapters 1 and 2) that verbs like walk can undergo Agentivization. The entry of the derived walk is given in (38a). In principle, one

---

178 Again, the use of the label ‘eventive’ here covers “activities”, “achievements” and “accomplishments”, with only love-type verbs being labelled as stative (cf. Parsons (1990) as well). By Vendler’s classification, they are activities. For the purposes of our discussion here, however, no further fine-grinding of the aspectual classes is needed.
could expect that verbs like walk can feed the middle formation operation, once they undergo Agentivization. This prediction is borne out (38c).179

\[(38a)\] \hspace{1cm} \text{walk: (}[+c+m], [-c+m])\]

\[(38b)\] \hspace{1cm} ‘It is easy for one to walk Fido.’

This is consistent with the analysis developed here. The entry in (38a) is a two-place verb (i.e. \(n>1\)) with the \([+c+m]\) cluster on its grid. Recall that by the LMF Visibility Requirement, all entries containing a \([/-c]\) cluster are visible to the middle formation operation in lexicon languages. As argued in Chapter 4, the result of the application of the Lexicon Middle Formation operation is the \([\_\_]\) cluster. The special thing about the \([\_\_]\) cluster is that it enforces Gen to bind its variable. Thus, just like in the case of the middle-verb in (32a), the prediction is that the middle-walk can never give rise to a particular sentence. Indeed, this prediction is borne out. When progressivized, the output like (39) can no longer be treated as a middle. The only source for the grammatical (39) is the one-place entry in (37).

\[(39)\] \hspace{1cm} Fido is walking easily at the moment.

Thus, the middle formation operation in lexicon languages always applies to an \(n\)-place entry with a \([/-c]\) cluster where \(n>1\). It targets the \([/-c]\) cluster of such entries and deletes its content – creates the \([\_\_]\) cluster. Once the middle predicate has been created, it cannot be used to form episodic sentences since the \([\_\_]\) cluster enforces Gen to bind its variable.

Let us now go back to syntactic languages. If the restriction on the type of the operator that can bind free variables in middles in lexicon languages stems from the presence of the \([\_\_]\) cluster, the prediction is that this type of restriction will be absent in syntactic languages. Indeed, this prediction is borne out. Recall now that a SE-construction is, in principle, ambiguous between the generic and episodic reading. The stative versus eventive character of the outputs then will be dependent on the presence/absence of Gen in the logical form of a SE-sentence. On an eventive reading, the semantic representation of (40a) is given in (40b). As already said, an output like (40a) is compatible with \(\text{at the moment}\) type of adverbial since it

179 Some of the native speakers I have interviewed showed a preference for middles of agentivized march (i) and run (ii) rather than those of walk. I have no explanation for this preference. Importantly for our discussion, since the grid of all three verbs is the same in its basic and derived form, the point can be made with either one of them.

\[(i)\] \hspace{1cm} (One general to another :) Untrained soldiers march with difficulty.

\[(ii)\] \hspace{1cm} (One lab assistant to another :) Trained mice run easily through the maze.
describes a particular event in time. The only difference between the copular passive and the passive in (40a) is in the fact that the variable of the implicit role is bound by ARB-saturation. 180

(40a) Tristram Šendi se (upravo) čita.
Tristram Shandy SE (at the moment) reads
‘At the moment), Tristram Shandy is being read.’

(40b) \[\exists e \exists x_{arb} (\text{reading} (e) \& [-c-m] (e, TS) \& [+c+m] (e, x_{arb}) \& \text{Hold} (e, \text{now}))\]

Consequently, the fact that the verbs like read in syntax languages can be used to form both generic and episodic sentences (ARB-passives like (40a)) is exactly expected on the account here.

To sum, the differences between the middle in lexicon and the middle in syntactic languages follow from the fact that the middle formation operation is a parameterizable operation. In languages like SC and Italian, it applies in the syntax (LF). In languages like English and Dutch, it applies in the lexicon. Some of the differences between lexicon and syntactic middles (e.g. the availability of ECM-middles in syntactic but not in lexicon languages) follow from the fact the operation applies in different modules. Other differences (e.g. restrictions on the co-realization of the clusters of the input verb) follow from the different executions of the middle formation operation in these two different modules.

3. Parameterizability of UG Arity Operations

What remains to be explained is why Lexicon Middle Formation is not available in languages like SC, French, Italian, and Polish. To understand this issue, we have to look at the broader picture of arity operations. Recall (Chapter 1) that the set of arity operations includes parameterizable and non-parameterizable ones. Recall that Expletivization applies cross-linguistically in the lexicon. Since Expletivization is cross-linguistically bound to the same module, it is reasonable to assume that it is executed in the same way across languages. From this, it follows that there should not be cross-linguistic variations with respect to Expletivization. Indeed, the outputs of Expletivization behave uniformly across the language sample under investigation here (cf. Reinhart’s work). The level of the application of other operations – Reflexivization/Bundling (cf. Reinhart (2002), Reciprocalization (cf. Siloni (2003), and Middle Formation - is a matter of parametric choice. The availability of an

180 I leave it for further research whether in some languages like SC and Polish the by-phrases are always illicit since the xarb can never be referential. Though a possible alley to explore, the first problem that arises with such an assumption is that SC and Polish outputs like (40a) do not allow even for arbitrary by-phrases.
operation \( \alpha \) to apply in the lexicon or in the syntax is captured by the generalization in (41). Since the syntax and the lexicon are distinct modules, one would expect that variations across languages exist with respect to parameterizable operations. Indeed, as already said, the availability of ECM-middles in SC follows from the fact that Middle Formation applies in the syntax. The fact that English disallows ECM-middles follows from the fact that Middle Formation in this language is bound to the lexicon (cf. Chapters 3 and 4).

(41) **The Lexicon-Syntax Parameter**

UG allows thematic arity operations to apply in the lexicon or in the syntax.

The question that (41) raises is whether the choice of the parameter-setting is determined for each operation individually. The answer to this question seems to be negative. The set of languages that sets the parameter onto syntax with respect to the middle formation operation turns out to be the same set that fixes the parameter onto syntax with respect to other parameterizable operations. Languages that fix the parameter onto the lexicon with respect to Middle Formation are the same ones that fix the parameter onto lexicon with respect to other parameterizable operations. Languages that fix the parameter onto lexicon with respect to other parameterizable operations.

Let us illustrate this. SC is a syntactic language. It follows then that the parameterizable operations: Reflexivization, Reciprocalization, and Middle Formation apply in the syntax. Given this, one would expect SC to allow not just ECM-middles, but ECM-Reflexives and Reciprocals as well. This prediction is borne out (42).

(42a) Maks se smatra glupim.
Max SE considers stupid
‘Max considers himself stupid.’

(42b) Nerazradnjena ideja se teško smatra prihvtljivom.
Idea that is not worked out SE with difficulty consider acceptable
‘It is difficult for one to consider an idea that has not been worked out acceptable.’

(42c) Maks i Petar se smatraju budalama.
Max and Peter SE consider fools
‘Max and Peter consider each other fools.’

English has been argued to set the parameter for the middle formation operation onto lexicon. For that reason, ECM-middles are disallowed in English. By (41), one

---

181 For elaborate presentations with respect to cross-linguistics variations reflexive and reciprocal predicates exhibit, the reader is referred to Siloni (2001), (2002) and Reinhart and Siloni (2003).
would further expect ECM-reflexives and ECM-reciprocals to be disallowed in English as well. This prediction in borne out (43). Consequently, the answer to the question of why SC cannot utilize lexicon middle formation is because it sets the parameter for all the parameterizable operations to syntax.

(43a)  *John considers intelligent.
(intended reading: ‘John considers himself intelligent.’)

(43b)  *Such ideas consider smart with difficulty.
(intended reading: It is difficult for one to consider such ideas smart.’)

(43c)  *Max and Peter consider fools.
(intended meaning: ‘Max and Peter consider each other fools.’)

Let us further test the generalization with respect to a parameter-setting here with a language not tackled so far. Hebrew is argued to be a lexicon language. With respect to Reflexivization and Reciprocalization, there is an ample amount of evidence to corroborate this. (cf. Siloni (2003) and Reinhart and Siloni (2003)). 182 As seen in (44), ECM-reflexives and well as ECM-reciprocals are unavailable in Hebrew.

(44a)  *dan mitxašev inteligenti.
Dan considers(refl.) intelligent

(44b)  *Max ve-peter mitxashvim xaxamim.
Max and Peter consider each other smart

(Reinhart and Siloni (2003))

How about the Hebrew middle? Let us first establish that an output like (45) is comparable to middles in languages we have explored so far.

(45)  xulca zo mitkabeset be-kalut im Ariel.
‘This shirt washes easily with Ariel.’

An output like (45) is a generic statement (with the modal flavor of capability or potentiality), whose implicit role is interpreted as ARB with +human flavor. The derivation in (45) cannot have the punctual interpretation in present or past. Furthermore, Agentive Adverbs like voluntarily and deliberately cannot be licensed in (45). Just like with middles in the languages that have been considered so far, the middle in (45) licenses Instruments. Again, Instrument licensing is expected since the external role in middles is saturated, not reduced. Consequently, a Hebrew

182 For an elaborate discussion, the reader is referred to Reinhart and Siloni (2003) and Siloni (2001), (2002).
middle in (45) exhibits the cross-linguistic characteristics of middles identified so far.

If the generalization in (41) is right, the prediction is that Hebrew middles should behave like middles in Dutch and English. This prediction is borne out. Firstly, the LMF Visibility Requirement is operative in Hebrew. Just like in English and Dutch, only verbs with a [+/c] role are visible to the middle formation operation in Hebrew. Henceforth, just like in Dutch and English, middles like (46) are illicit in Hebrew.

(46a)  *anashim ka'ele nisna'im be-kalut.
        people-such hate in easiness

(46b)  *muzika ro'eshet nishma'at be-kalut.
        music loud hears in -easiness

One would further expect the middle-entry in Hebrew to exhibit the same restriction on the co-realization of clusters of the input verb as has been observed in Dutch and English middles (cf. Chapter 4 and the Section 2.3 of this Chapter). This prediction is borne out. As seen in (47a), the verb teach is visible to the lexicon middle formation operation since it contains a [+/c] cluster. However, since the LMF involves manipulation of the [+/c] cluster, which results in the creation of the [-c] cluster, the [-c] cluster can no longer be realized in the middle derivation in Hebrew (47b).

(47a)  matanot zolot nitanot be-kalut.
        presents cheap give-Pl Fem. in-easiness
        ‘Cheap presents give easily.’

(47b)  *matanot zolot nitanot le-xaverim[-c] be-kalut.
        presents cheap give-Pl Fem. to friends in-easiness

Recall that restrictions with respect to the co-realization of feature clusters pertain only to arguments of the verb (cf. Chapters 2 and 4). Just like in English and Dutch, verbs like send form perfectly acceptable middles in Hebrew (48).

(48)    xavilot ktanot nishlaxot be-kalut.
        ‘Small parcels send easily.’

Just like in other lexicon languages, the contrast between the behavior of locative Goals (adjuncts with respect to the verbal predicate) and Recipient Goals (i.e. arguments with respect to the verbal predicate) in Dutch and English is observed in the middle derivation in Hebrew (49).

(49a)  *xavilot ktanot nishlaxot be-kalut le-xaverim.
        small parcels send easily to friends [Recipient Goal]
Thus, the Hebrew data corroborate the generalization in (41): a set of parameterizable operations: Middle Formation, Reflexivization, and Reciprocalization all apply in the lexicon in Hebrew. The fact that the generalization in (41) holds for various parameterizable operations with respect to a single language, makes the setting of the parameter during acquisition much easier: by setting the parameter for one parameterizable operation, the child fixes the parameter for all of them.\footnote{Though German is not the subject of this study, it is interesting to note that empirical data point to the fact that Middle Formation applies in the syntax in German (cf. Marej (2002a)). This, on the other hand, is exactly what one would expect under (41) as Reflexivization and Reciprocalization apply in the syntax in German (cf. Reinhart and Siloni (2003)). My same seems to be true of Spanish, in which Middle Formation seems to apply in the lexicon and which is argued to be a syntactic language with respect to Reflexivization and Reciprocalization (cf. Reinhart and Siloni (2003)).}

Last but not least, notice that extending the inquiry to Hebrew might also be beneficial for the dispute regarding the unergative versus unaccusative analysis of middles in lexicon languages. Recall first that though the tests Ackema and Schoorlemmer (1994) present for the unergativity of Dutch middles do not constitute exclusive evidence for it, the results of their tests are consistent with the unergative analysis of Dutch middles. Having established that middles in Hebrew are formed in the lexicon, it seems reasonable to test whether they exhibit unergative or unaccusative behavior. In the literature on Hebrew, the possessive dative test is standardly taken to be a reliable test for unaccusativity. As argued by Borer and Grodzinsky (1986) possessive datives can only modify internal arguments in Hebrew. Thus, they can serve as possessors to subjects of unaccusatives (50a), but not the subject of unergatives (50b). The examples in (50) are from Reinhart and Siloni (2003).

\begin{itemize}
  \item \begin{tabular}{ll}
    \text{(50a)} & šney sfarim naflu le-dan.  \\
    two books fell to Dan  \\
    ‘Dan’s books fell.’
  \end{tabular}  \\
  \begin{tabular}{ll}
    \text{(50b)} & *ha-kelev šaxav le-dina.  \\
    the dog lay to-Dina  \\
    ‘Dina’s dog lay.’
  \end{tabular}
\end{itemize}

Notice now that the subject of Hebrew middles fails the test of possessive dative, from which it follows that the middle in Hebrew exhibits unergative behavior. The example in (51) is from Reinhart and Siloni (2003).
(51) *sdiney kutna mitkabsim le-kitan be-kalut. sheets cotton wash Kitan-possessive easily (intended reading: ‘Kitan’s cotton sheets wash easily.’)

Taken together with Ackema and Schoorlemmer’s (1994) findings on Dutch, Hebrew data like (51) point to another area of difference between middles in syntactic and lexicon languages. If no other factor intervenes, the prediction is that the middles in lexicon languages are expected to exhibit unergative behavior, whereas middles in syntax languages are expected to exhibit unaccusative behavior.\textsuperscript{184} On the account developed here, the unergativity of middles in lexicon languages is expected considering the properties of the [ ] cluster and the assumptions about the way Marking Procedures operate. Namely, I argued that it is reasonable to assume that Marking Procedures do not apply in the case of the middle-entry in lexicon languages, since the [ ] cluster has no syntactic life (cf. Chapter 4: section 4.4). From this, it follows that for the purposes of merging, the middle entry in lexicon languages is treated as an unergative one-place verb.

4. Arbitrarization

Chierchia’s (1995a) ARB-saturation proved to be an invaluable tool in accounting for middles in syntactic languages. Though Chierchia’s analysis is primarily developed for the impersonal construction in Italian, his prediction is that ARB-saturation extends to cover other si-constructions as well. Here, I would like to briefly show that Chierchia’s ARB-saturation extends to account for impersonals in SC and Polish as well as another construction, which, for the lack of better term, I will label Object-Arbitrarization.\textsuperscript{185}

\textsuperscript{184} I leave the issue for further research as – among other things - it requires the extending the sample of languages one is taking into consideration. Namely, it is plausible to assume that other factors might influence the syntactic behavior of the middle derivations. For instance, recall that, apart from clitics, referentially deficient pronouns like \textit{zich} in Dutch might also be utilized to check the ACC feature. Unlike the clitic SE, an element like \textit{zich} needs to merge VP-internally as a complement. Suppose, now, that there is a syntactic language that uses this referentially deficient pronoun rather than the clitic to check Case. I would expect the middle in such a language to be syntactically unergative and, at the same time, to behave on a par with other syntactic languages with respect to other tests.

\textsuperscript{185} As already said, the crucial point of difference between Chierchia’s account and the account here is that the ARB-saturation is in the treatment of the clitic. On the account here, the role of the clitic is simply to absorb the case feature. In Chapter 6, I will return to the role of the clitic in some detail. Here, I would like to remind the reader that divorcing the clitic from the operation has the immediate consequence of allowing one to account for the \textit{haten}-middles, which seem to utilize ARB-saturation, but which do not exhibit the use of the clitic.
4.1 Impersonals

Cross-linguistically, the best known among the constructions that involve arbitrary reference is the third-person plural construction, illustrated in (52).\textsuperscript{186} The pronoun they receives arbitrary interpretation.

(52) In Italy, they sing in the street.

The same strategy is available in SC and Polish. The difference between the English third-person plural construction in (52) and that of SC in (53a) is that the pronoun in SC is obligatorily null. When the third plural pronominal is overtly expressed in SC, the construction loses its arbitrary reading for the subject and becomes fully referential (53b).\textsuperscript{187,188}

(53a) U Italiji, pevaju na ulici in Italy, pro sing-3PsPl in the street

(53b) U Italiji, oni pevaju na ulici. In Italy, they sing in the street.

Far more commonly, though, South (e.g. SC) and West (e.g. Polish) Slavic languages employ the se/się-construction to express the arbitrary reference.\textsuperscript{189} The SE-construction in (54a) and (54b) and the third person plural construction as in (53a) are roughly equivalent.\textsuperscript{190} The same construction is pervasively used in Italian (54c). The example is drawn from Chierchia (1995a).

\textsuperscript{186} For other constructions with arbitrary reference, the reader is referred to Roberts (1985) on English, Cinque (1995) and Chierchia (1995a) on Italian, and Franks (1995) on Slavic languages, for instance.

\textsuperscript{187} Franks (1995) notes that this is not the case in Russian. Unlike in SC, the overt they is consistent with arbitrary interpretation. This follows from the fact that, unlike SC, Russian is a “discourse”-drop and not a “proper” pro-drop language (cf. Franks (1995) and the references there).

\textsuperscript{188} Though not pertinent to our discussion, the issue is extremely important for readers interested in null subject phenomena as such. The reader is referred to Montalbetti (1984), Jaeggli (1986b) and Franks (1995) for illuminating analyses regarding the relation between the overtness of plural pronominals and thematic pro-drop parameter.

\textsuperscript{189} This is yet another difference among the Slavic subgroups. Namely, East Slavic (e.g. Russian), employ the third-person plural strategy much more pervasively that South and West Slavic. The use this type of arbitrary construction is far more restricted.

\textsuperscript{190} The subtle differences between the two arbitrary constructions are not quite clear. For instance, in Franks (1995) the third person plural construction is said to always correspond to semantic plurality. Though, generally, this seems to be the case, it does not seem to be the rule. Take (i), for instance.

(i) Jutros su te tražili iz kancelarije. Telefonska veza je bila loša, ali mislim da je bila Marija.
Middles in Syntax Languages

(54a) U Italiji se peva na ulici
In Italy SE sings-3PsSg in the street

(54b) We Włoszech się śpiewa na ulicy
in Italy SE sing-3Sg in the street
"People in general sing in the street"

(54c) In Italia, si canta
In Italy, si sings-3PsSg
‘In Italy, people sing.’

The construction in (54) is usually referred to as impersonal construction. The term “impersonal” most often reflects the lack of agreement such constructions exhibit. The Spec, IP position is non-thematic. It is occupied by the expletive pro. Since there is no Nominative thematic argument for the verb to agree with, the agreement is default - depending on the richness of agreement system in a given language – it

This morning (they) looked for you from the office. The telephone line was bad but I think it was Maria.

As the continuation of the sentence shows, there is no commitment to the semantic plurality: the sentence is true even if only a single individual (e.g. Marija in (i)) was found to satisfy the description. As argued by Cinque (1988), the same is true in Italian. The second area of difference noted in Franks (1995) is that whereas the arbitrary SE-construction has a modal interpretation, the third-person plural one does not. The observation seems essentially right though it is not quite clear what it should be related to. For instance, other constructions with arbitrary interpretation can have the modal reading. A sentence like (ii) in Dutch can have the reading of prescriptive modality. I leave such issues for further research.

(ii) Je zingt in de straat.
‘One should sing in the street.’

The only clear difference between the two constructions in SC as well as in other languages (cf. Chierchia (1995a) for Italian and Jaeggli (1986b) for Spanish) is that the arbitrary third person plural construction obligatorily excludes the speaker whereas the SE-constructions do not. As pointed out by Jaeggli (1986b), “verbal agreement, then, is ‘defective’ in the sense that one of the formal features present lacks significance, but it is not completely without sense” (p. 54).

The term impersonal might be a somewhat misleading since it is often used to cover all the constructions where the agreement features on the verb are “default”. The term is, thus, used to cover cases like (i) with Datives as the logical subject. The agreement features on the verb are default since Max does not check nominative. Constructions like the one in (i) are not the subject of investigation here.

(i) Maksu-Dat je bilo-3PsSg žao
Max-Dat is been-3PsSg sorry.
ranges from 3PsSg (Italian) to 3PsSgNeuter (SC and Polish). The syntax of (54) is given in (55)

\[(55) \quad [\text{IP proexpletive} \ [\text{I SE} [\text{VP sing}]]]\]

The external argument is not linked in the syntax. It is however, present in the semantics of impersonals. For instance, just like in (56a), the Instrument is licensed in the impersonal in (56b). Thus, the impersonal cannot be the output of reduction. It must be the output of some sort of saturation.

(56a) Maks zviždi zviždaljkom.  
Max whistles with a whistle

(56b) Zviždi se zviždaljkom.  
‘One should whistle/whistles with a whistle.’

In Italian (cf. Chierchia (1995a)), Polish and SC, the saturated external argument of impersonals is interpreted as unspecified, generally – though not exclusively - plural, human entity. As already said (cf. Chapter 4: 4.4.2), for Italian impersonals, Chierchia proposes the use of ARB-saturation. Recall that the crucial point about ARB-saturation is that it introduces the index \(arb\) that ranges over groups of humans. The interpretation of an impersonal like (54c) is (57).

\[(57) \quad \exists x_{arb} [\text{sing}(x_{arb})] \]
\(x_{arb}\) a variable restricting to ranging over groups of humans

The fact that, due to ARB-saturation, impersonals can be used to describe only the situations involving +human entities becomes particularly striking if one takes into account the interpretation of examples like (58). The only way to interpret (58a) in SC and (58b) in Polish is relating to humans, not cats.

(58a) Na ulici/ovde se mjauče  
In the street/here SE meows

(58b) Na ulicy/tutaj się miałczy.  
In the street/here SIE meows  
‘One/people (should) meow in the street/here.’

In Chierchia’s analysis, an impersonal like (59a) is expected to be ambiguous depending on whether it is understood generically or episodically. The same is true of its SC counterpart in (59b).

(59a) Si canta.  
si sings
As already said, in Chierchia’s analysis, the ambiguity is formally represented in terms of the presence or absence of the generic operation in the semantic representation of the relevant sentence. Episodic reading arises in contexts given in (60a) and (60b) - taken from Chierchia (1995a). Consequently, on the episodic reading, the logical form of (59) is (60c).192

(60a) Q: Che sta succedendo qui? A: Si canta.
Q: What is going on here? A: People are singing

(60b) Cosa é successo ieri in campleggion? A: Si é cantata
What happenend yesterday in the campground? A: People sang.

(60c) \( \exists e \exists x_{arb} \text{[singing (e) \& [+c+m] \text{(e,x}_{arb})]} \)

A generic reading arises from the presence of a Gen-operator in the logical form of (59a). According to Chierchia, there are two possibilities depending on how the scope of Gen is selected. The one relevant for our purposes is the one where Gen takes a sentential scope. “Since the argument of cantare is existentially closed by si, the only possibility is for Gen to bind the event/situation variable” (Chierchia (1995a): 123). Chierchia’s formula for the generic reading is given in (61).193

(61) Gn s [C(s)] [\( \exists x_{arb} \text{[singing (s, x}_{arb})]} \] (Chierchia (1995a))

The formula in (61) states that in “every contextually relevant situation, there is singing going on”. As argued by Chierchia (cf. also Krifka et al. (1995) and Krifka (1995)), the value for C can be provided in different ways. In (62a), for instance, the previous context makes it clear how the variable C is to be interpreted.194

---

192 Tense is not captured in this formalism. A simplified formula is given since our focus here is on arb.

193 Recall (cf. Chapter 4) that in DRT, the existential disclosure freely applies in the domain of quantificational adverbs. Recall also that the generic operator is a phonologically null counterpart of the adverb of quantification such as usually or typically (cf. Chapter 3). Note also that the partitioning developed by Chierchia (1995a) is different from the partitioning presented in Chapter 3, as the restrictor coincides with the material that is not c-commanded by Gen. Last but not least, Chierchia’s representations are not based on event-semantics. I am glossing over all of these specifics here since the crucial point of our discussion is to show that the special type of saturation that introduces the index arb is an invaluable tool in accounting for the properties of middles, impersonals and object-arbitrarizations.

194 Considering (62a), the reader should note that the verb ends up in the matrix if focus is taken to be the determining factor as well.
Q: Casa is fa’ di solito in campeggio? A: Si canta.
What do people usually do while camping? They sing.

(Chierchia (1995a))

In (54) – repeated here as (63) - a syntactically overt restrictor for Gen in the form of a locative is present.

U Italiji se peva na ulici.
in Italy SE sings-3PsSg in the street

We Włoszech sie spiewa na ulici.
in Italy SE sing-3Sg in the street
‘People in general sing in the street.’

In Italia, si canta.
in Italy, si sings
‘In Italy people sing.’

As argued throughout this section, the core of Chierchia’s analysis of Italian impersonals extends to Polish and SC impersonals as well. As for the clitic, I argue that its function is consistent with what we have seen so far. It is a Case-absorber. The difference between the Case absorbing properties of SE that we have seen so far is in the fact that the Case absorbed with impersonals like in (62) is Nominative rather than ACC. The ability of the clitic to absorb Nominative case should not come as a surprise. Namely, a regular case absorbing morphology - in impersonal-passive in Dutch and German (64) - is argued to absorb nominative (cf. Jaeggli (1986a), for instance).

Es wird getanzt.
There is danced

Er werd gedanst.

Last but not least, note that there seems to be an indication that ARB-saturation rather than regular existential closure is involved in German and Dutch impersonal-passives as well. Native speakers of Dutch and German that I have interviewed interpret the implicit argument in sentences like (64) as unspecified, generally plural, human subject. Note further that even in the cases like *bark* where the world knowledge would ‘dictate’ the interpretation to be - at least - consistent with – human *animate* entities like *dogs*, Frajzyngier (1982) claims that impersonal-passives in Dutch and German are consistent only with +human entities, just as it is the case in SC and Polish (57). If this is correct, then - once divorced from the presence of the clitic - Chierchia’s ARB-saturation but might also be responsible for
the interpretation of the implicit argument in German and Dutch impersonal-passives.

4.2 Object-Arbitrarization

Apart from Impersonals, Chierchia’s (1995) ARB-saturation seems to apply in yet another SE-construction that I label Object-Arbitrarization (65).195

(65a) Maks se gura.     (SC)
Max SE pushes
‘Max pushes people/others.’

(65b) Maks bije się.    (Polish)
Max beats SE
‘Max beats people/others.’

The construction is truly intriguing for various reasons. Firstly, unlike the SE-constructions examined so far, the Object-Arbitrarization seems to be restricted to Slavic languages as no Romance language is reported to have the SE-use exhibited in (65).196

In SC, verbs that typically give rise to the Object-Arbitrarization construction are gurati “push”, udarati “hit”, tući “beat”, pljuvati “spit at”, prskati “splash with water, sprinkle”, gristi “bite” ujedati “bite”, šutati “kick”, grliti “hug”, ljubiti “kiss”, bosti “sting/prick”, stipati “pinch”, and grebati “scratch”. Generally speaking,197 the set of transitive verbs – whose precise definition requires further research - that allow for Object-Arbitrarization is not a garden variety “object-drop” verbs like eat.198 Namely, just like in English (67), SC push (66b) – unlike SC eat

195 The reader is referred to Rivero (1999) and the references there for Polish, Dimitrova-Vulchanova (1996) for Bulgarian, and Progovac (1998) for the SC Object-Arbitrarization construction.
197 There is, however, one interesting thing to note about English here. In (i) – taken from Levin (1993) – the author reports that the understood object is interpreted as something like people. Furthermore, the set of verbs that allow for this construction seems to be a subset of verbs that allow for Object-Arbitrarization in SC. The set is reported to be fairly restricted and that “the action named by the verb is, in some sense, characteristic of the subject” (Levin (1993): p. 39). I leave the question of if and how it is related to the Object-Arbitrarization and to the Arbitrarization in the lexicon for further research.

(i) That dog bites.

198 Notice further that in the cases of “object-drop” or unspecified NP deletion” alternation “the verb in this variant is understood to have as object something that qualifies as a typical object of the verb” (Levin (1993): p. 33). This alternation seems to be still quite illusive.
Chapter 5

(66a) - does not allow object-drop. Still, as we saw, *push in SC allows object arbitrarization.

(66a) Maks je jeo.
Max is eaten

(66b) *Maks je gurao.
Max is pushed

(67a) Max ate.

(67b) *Max pushed.

The interpretation of (65) is such that the internal role is present in the semantics of the construction. Consequently, I assume that the constructions like (65) are the outputs of some sort of saturation, rather than reduction. I propose that the saturation in question is ARB-saturation. Just like with impersonals and middles, the internal argument in Object-Arbitrarization is interpreted as an unspecified, generally plural, and +human entity. To illustrate this, compare the transitive use of *push (68a) and hit (69a) with the derived Object-Arbitrarization in (68b) and (69b). The interpretation of the internal argument in (68a) and (69a) is consistent with +/-animate and +/-human. The internal role of derivations like (68b) and (69b), however, can only be +human.

(68a) Maks gura sto/Mariju.
Max is pushing the table/Maria.’

(68b) Maks se gura
Max se pushes

(69a) Maks udara Mariju/psa
Maks hits Marija/the dog
‘Max is hitting the dog/Maria.’

(69b) Maks se udara
Max se hits

Thus, just like with impersonals in the previous section, the implicit argument is interpreted as an unspecified, generally plural, human entity. It is important to stress that just like with impersonals (cf. Chierchia (1995a)), the group –drawn from a salient set – most commonly includes the speaker. Consequently, just like with the Italian impersonal in (70a) drawn from Chierchia (1995a), the speaker-oriented interpretation is quite often favored with Object-Arbitrarization (70b) as well.

There are various proposals in the literature regarding the analysis of this alternation (cf. Levin (1993) and the references there).
Though generally plural – provided the right context - the saturated +human entity can be singular.\textsuperscript{199} If you are in a crowded bus and you are being persistently pushed by another passenger for the past 10 minutes, you are quite likely to utter something like (71).

\begin{exe}
\item[71] Ne gurajte se, molim vas!
\end{exe}

\begin{exe}
\item[71] Not push-Imperative2Ps SE
\end{exe}

\begin{exe}
\item[71] ‘Stop pushing me/us, please!’
\end{exe}

Just like in the case of impersonals, the Object-Arbitrarization construction can give rise to both a particular and a generic interpretation. As with the impersonals, I assume that the difference can be formally captured by the presence of Gen in the logical form of the Object-Arbitrarization construction. Let us take a look at the examples in (72).

\begin{exe}
\item[72a] Ovo dete se ne udara.
\end{exe}

\begin{exe}
\item[72a] this child SE not hits
\end{exe}

\begin{exe}
\item[72b] Max se grize.
\end{exe}

\begin{exe}
\item[72b] Max SE bites
\end{exe}

An output like (72a) is likely to get a generic interpretation stating that in every contextually relevant situation that includes \textit{this child}, our child does not hit people, most likely, children. The most salient interpretation of (72a) is that of a characterizing sentence roughly equivalent to something like \textit{This child is not a bully}. The most salient reading of (72b), on the other hand, is of an episodic sentence reporting a particular event of biting that includes \textit{Max} and a group of people - most likely - children.

\textsuperscript{199} As already said (cf. fn.138) this is quite typical of different arbitrary constructions across languages. For instance, Jaeggli (1986b) notes that the arbitrary plural construction in Spanish like (i) - taken from Jaeggli (1986b) - is undetermined with respect to the number of individuals referred to. Namely, something like (i) would be true even if “only one individual was found, or was know to be, knocking at the door”.

\begin{exe}
\item[i] Llaman a la puerta.
\end{exe}

\begin{exe}
\item[i] pro are-calling at the door.
\end{exe}
The difference between the ARB-saturation in impersonals and middles, on the one hand, and in the Object-Arbitrarization construction, on the other hand, is that it applies to the internal role in the case of the latter. The saturated argument is present in the semantics, but not in the syntax. The syntactically realized DP/NP is base-generated as the external argument of the verb. As with the other constructions dealt with so far, the valency of the verb is taken care of by the clitic. Thus - just like in middles and impersonals - SE in (72) absorbs the offending Case feature - ACC - in this instance.

To sum up, the ARB-saturation of Chierchia (1995a) is not just an invaluable tool in accounting for impersonals in a variety of syntax languages, but it extends to middles and ARB-passives in such languages as well as to the Object-Arbitrarization construction, which is pervasive across Slavic languages. Note, importantly, that the fact that the implicit role in all these three constructions is interpreted as an unspecified, generally plural, human entity becomes straightforwardly accounted for if one resorts to this special type of saturation.

5. Concluding Comments

In accordance with the hypothesis that the middle formation operation is a parameterizable operation (cf. Chapters 3 and 4), the main objective of this Chapter was to account for the properties of middles in syntactic or syntax languages – languages in which the middle formation operation applies in the syntax (LF). The first step was to show that middles in syntactic languages exhibit the cross-linguistic characteristics identified for middles in Chapter 3. This exploration allowed us to pinpoint the root of the illusiveness of middles in syntactic languages. The existence of the middle comparable to the middle in Dutch and English is blurred in syntax languages due to the fact that it shares the morpho-syntax with passives, which are, semantically, quite different from middles. As argued in this Chapter, the existence of these ARB-passives in syntactic languages is not just explained - it is actually predicted on the account here. Unlike in lexicon languages, since no clusterm-manipulation occurs in syntactic languages, there is nothing to enforce Gen.

In both lexicon and syntax languages, middles are generic statements. Both types of middles obligatorily retain the implicit external role, which is interpreted as ARB, with +human flavor. Since the middle-formation operation is bound to different

200 If SC were to behave on a par with Italian, comparing Object-Arbitrarization here to Rizzi’s (1986) object-arb construction would, in principle, be a good testing ground to show that the internal argument in Object-Arbitrarization is syntactically inactive. Having tested the object-arb construction of Rizzi in SC, I conclude that it behaves like English object-arb, rather than like Italian object-arb. Since the English arbitrary object is argued to be syntactically inactive (cf. Rizzi (1986)), comparing the two in SC would not lead to any illuminating results. I am grateful to Željko Bošković for the discussion regarding the object-arb construction in SC.
modules, lexicon and syntax languages use different tools to reach their common semantic goal. Whereas lexicon languages utilize the ARB-role i.e. the [ ] cluster, syntactic languages utilize ARB-saturation. Namely, in lexicon languages, the process is arbitrarization of a cluster, while in syntax languages, it is arbitrarization of a variable. This, in turn, is perfectly consistent with the levels at which these two types of Arbitrarization apply. Whereas Arbitrarization in lexicon languages applies in the lexicon, where there are only clusters, Arbitrarization in syntactic languages applies at LF. As argued further in this Chapter, ARB-saturation of Chierchia (1995a) is not just an invaluable tool in accounting for impersonals in a variety of syntactic languages, but it extends to middles and ARB-passives in such languages as well as to the Object-Arbitrarization construction, which is pervasive across Slavic languages. As noted, without appealing to this special type of saturation, it is quite difficult to account for the fact that in all three constructions, the implicit role is interpreted as an unspecified, generally plural, human entity.

The differences between lexicon and syntax languages exist and they follow from the fact that the middle formation operation is a parameterizable operation. Whereas some of the differences follow from the very fact that the middle is derived at different levels (e.g. the availability of ECM-middles in syntactic and unavailability of ECM-middles in lexicon languages), others follow from the way the operation is executed in these two distinct modules (e.g. restrictions on co-realization of clusters, which is active in the lexicon but not in syntactic languages). As shown on the sample of languages in this study, the choice of the parameter-setting does not seem to be determined for each of the parameterizable operation individually. Rather, it follows from the generalization in (41) - repeated here as (73) - and holds for various parameterizable operations with respect to a single language.

(73) The Lexicon-Syntax Parameter

UG allows thematic arity operations to apply in the lexicon or in the syntax (LF).

This, in turn, makes the setting of the parameter during acquisition much easier: by setting the parameter for one parameterizable operation; the child fixes the parameter for all of them.

Though most of the puzzling characteristics of middles – both in individual languages and across languages presented in this study - have been explained and derived on the analysis here, some of the issues are left for further research. The solution to the licensing of by-phrases is one of them. Another issue pending further research is the definition of a set of adverbs admissible in middles. As already said, further research should also focus on expanding the sample of languages. As illustrated in Section 3 of this Chapter, expanding the sample of languages is of crucial importance in testing the validity of the criteria that hold of lexicon and syntactic middles as well as in testing the validity of the generalization in (73).
Among the further issues that are related to the subject matter of this study in a broader sense, the interaction between the actional-aspectual realm and genericity, particularly with respect to Slavic languages seems quite intriguing. Namely, it is standardly assumed in the literature that generics tend to go with imperfective aspect. As pointed out in Dahl (1985), (1995), Slavic languages seem to be somewhat different as they can use the “perfective aspect for generics when a ‘bounded’ event is referred to” (Dahl (1995)): p 420). The SC example (74) – taken from Dahl after Mønnesland (1984) - is illustrative of the behavior Dahl refers to. The verb *popiti* in (74) is traditionally referred to as a perfective verb, as opposed to the imperfective *piti drink.*

(74)  
Svako jutro popijem čašu rakije.  
‘Every morning I drink a glass of brandy.’

Last but not least, I hope the study has shown that the allure of middles goes well-beyond their empirical elusiveness and curiousness. The theoretical relevance of middles - pointed out and exploited in many studies (cf. Keyser and Roeper (1984), Zubizarreta (1987), Fagan (1992), and Hoekstra & Roberts (1993), to name just a few) – has been exploited in this study as well. I hope this study has shown that middles are truly fruitful ground for testing hypotheses about the intricate interplay between the system of concepts, computational system, inference and discourse as well as an invaluable testing area for different assumptions about the languages faculty itself. The value of middles with respect to the current issues and on-going debates in theoretical linguistics is immense. A particular issue that I would like to stress here is the relevance of middles for the on-going lexicalist versus non-lexicalist dispute. In this respect, it is of paramount importance to stress again that, as shown on a sample of languages in this study, differences between middles across-languages can be straightforwardly captured only if one works under the hypothesis that the language faculty contains an active lexicon. Namely, as shown in 2.3 of this Chapter, a whole range of properties that lexicon and syntactic middles exhibit follows from the fact that Middle Formation is a parameterizable operation. The parameterization, in turn, can only be accommodated in a model that contains an active, dynamic component of the lexicon.

201 With respect to the peculiarities of the aspectual marking in of Slavic languages - as opposed to Romance and Germanic - the reader is referred to Delfitto (2002).