

# NON-CANONICAL *LASSEN*-MIDDLES

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Vorgelegt von

**Marcel Pitteroff**

aus Ludwigsburg

Hauptberichterin:	Prof. Dr. Artemis Alexiadou
1. Mitberichterin:	Prof. Susi Wurmbrand PhD
2. Mitberichter:	Prof. David Embick PhD

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# TABLE OF CONTENTS

<b>ACKNOWLEDGEMENTS</b>	ii
<b>TABLE OF CONTENTS</b>	iv
<b>LIST OF ABBREVIATIONS</b>	vii
<b>SUMMARY</b>	viii
<b>DEUTSCHE ZUSAMMENFASSUNG</b>	xii
<b>CHAPTER 1 – INTRODUCTION</b>	<b>17</b>
1.1 ( <i>Lassen</i> -) Middles	17
1.2 Main Hypothesis	18
1.3 Theoretical Background	20
1.3.1 Architecture	20
1.3.2 Case	23
1.3.3 German Syntax	27
1.4 Outline	28
<b>CHAPTER 2 - THE PROPERTIES OF <i>LASSEN</i>-MIDDLES</b>	<b>32</b>
2.1 Introduction	32
2.2 Similarities Between Canonical and <i>Lassen</i> -Middles	33
2.2.1 Argument Realization	33
2.2.2 Aspectual Properties	35
2.2.3 Genericity	37
2.2.4 Dispositionality	41
2.2.5 The Implicit Agent	43
2.3 Differences Between Canonical and <i>Lassen</i> -Middles	46
2.3.1 Complexity	46
2.3.2 <i>By</i> -Phrase	46
2.3.3 Modification	48
2.3.4 Verb Class Restriction	49
2.3.5 Impersonal Middles	53
2.4 Summary	54
<b>CHAPTER 3 - PERIPHRASTIC CAUSATIVES</b>	<b>55</b>
3.1 Introduction	55
3.2 General Background	55
3.3 The Different Readings of <i>Lassen</i>	57
3.4 The Size of the Infinitival Complement	61
3.5 Deriving PCCs	74

3.6 <i>Lassen</i> -Passives	77
3.6.1 Similarities Between <i>Lassen</i> -Passives and Verbal Passives	82
3.6.2 Differences Between <i>Lassen</i> -Passives and Verbal Passives	84
3.6.3 An Embedded VoiceP for <i>Lassen</i> -Passives	89
<b>CHAPTER 4 - THE SYNTAX OF LASSEN-MIDDLES</b>	<b>93</b>
4.1 Introduction	93
4.2 Similarities Between Middle and Causative <i>Lassen</i>	94
4.2.1 Ordering Restrictions	94
4.2.2 IPP-Effect	96
4.2.3 Event Modification	97
4.3 The Size of the Infinitival Complement	101
4.3.1 Absence of CP	102
4.3.2 Absence of TP	103
4.3.3 A Restructuring Infinitive	104
4.3.4 Presence of VoiceP	106
4.4 The Reflexive Analysis of <i>Lassen</i> -Middles	113
4.4.1 Two Problems for the Reflexive Analysis	116
4.4.2 The Revised Reflexive Analysis	119
4.5 Arguments for the Unaccusative Analysis of <i>Lassen</i> -Middles	125
4.5.1 C-Selection	126
4.5.2 Passive <i>Se Faire</i> in French	128
4.5.3 Lexical Datives	131
4.5.4 Information Structure	133
4.5.5 Binding	143
4.5.6 <i>Wh</i> -Indefinites	148
4.5.7 Summary	150
4.6 Against a Low Position for the Reflexive Pronoun	151
4.6.1 Everaert (1986)	151
4.6.2 Klingvall (2012)	154
4.6.3 The Reflexive Pronoun and Movement	159
4.6.4 The Reflexive Pronoun as Marker of Argument Reduction	161
4.6.5 Summary	162
4.7 The Syntax of <i>Sich Lassen</i>	163
4.7.1 Against <i>Sich Lassen</i> as Inherent Reflexive	163
4.7.2 Against <i>Sich Lassen</i> as Canonical Middle	165
4.7.3 <i>Sich Lassen</i> as (Reflexively Marked) Anticausative	166
4.7.4 The Syntax of (Reflexively Marked) Anticausatives	172
4.8 Deriving <i>Lassen</i> -Middles	174
4.8.1 <i>Lassen</i> -Middles and Case Theory	176
4.8.2 <i>Lassen</i> -Middles and Binding Theory	178
<b>CHAPTER 5 - CANONICAL &amp; LASSEN-MIDDLES – EXPLAINING THE DIFFERENCES</b>	<b>179</b>
5.1 Introduction	179
5.2 The Syntax of Canonical Middles	179
5.3 Explaining the Differences	187
5.3.1 <i>By</i> -Phrase	187
5.3.2 Adverbial Modification	189
5.3.3 Verb Class Restriction	199

<b>CHAPTER 6 - THE MIDDLE AS A NOTIONAL CATEGORY</b>	<b>204</b>
6.1 Introduction	204
6.2 The Middle as a Notional Category	204
6.3 <i>Lassen</i> -Middles and Greek-Type Middles	209
6.4 Dispositional Semantics in <i>Lassen</i> -Middles	215
<b>CHAPTER 7 - ON UNMARKED PASSIVES AND RESTRUCTURING INFINITIVES</b>	<b>222</b>
7.1 Introduction	222
7.2 Unmarked Passives in <i>Lassen</i> -Passives and <i>Lassen</i> -Middles	222
7.2.1 The Issue	222
7.2.2 The Analysis	224
7.3 Restructuring Infinitives as VoicePs	233
7.3.1 The Issue	233
7.3.2 Restructuring and Voice	235
7.3.3 Wurmbrand (2013a,b)	239
7.3.4 Voice Matching, <i>Lassen</i> -Passives, and <i>Lassen</i> -Middles	242
<b>CHAPTER 8 - EXPANDING THE SCOPE</b>	<b>248</b>
8.1 Introduction	248
8.2 <i>Lassen</i> -Middles Cross-Linguistically	248
8.2.1 Dutch	248
8.2.2 Swedish	253
8.2.3 Danish	257
8.2.4 Summary	258
8.3 Impersonal <i>Lassen</i> -Middles	259
8.3.1 General Properties	259
8.3.2 The Type and the Function of the Expletive	259
8.3.3 On the Optionality of the Expletive in <i>Lassen</i> -Middles	266
8.3.4 Loose Ends	269
<b>CHAPTER 9 – CONCLUSIONS</b>	<b>273</b>
<b>REFERENCES</b>	<b>278</b>
<b>EIDESSTATTLICHE ERKLÄRUNG</b>	<b>295</b>

## LIST OF ABBREVIATIONS

ACC	accusative	NOM	nominative
ACT	active	NPL	non-plural
AV	active voice	OBL	oblique
CAUS	causative	PART	participle
CM	canonical middle	PASS	passive
COMP	complementizer	PAST	past
CP	complementizer phrase	PCC	periphrastic causative construction
DAT	dative	PERF	perfective
DEF	definite	PF	phonological form
DP	determiner phrase	PL	plural
ERG	ergative	PP	prepositional phrase
FEM	feminine	PRES	present
GEN	generic operator	PSF	passive <i>se faire</i>
HAB	habitual	PV	patient voice
IN	intransitive	REFL	reflexive pronoun
INF	infinitive	RL	realis
INSTR	instrumental	RI	restructuring infinitive
IMPERF	imperfective	SG	singular
LM	<i>let</i> -middle	TP	tense phrase
MASC	masculine	TR	transitive
NACT	non-active		



## SUMMARY

The literature discussing the phenomenon of dispositional middles has mainly focused on the constructions in (1).

- (1) a. The book reads easily.                      English  
      b. Das Buch liest sich leicht.              German  
          *the book reads REFL easily*

Based on the properties of the constructions in (1), the main characteristics of dispositional middles have been defined, which is why I call this type of construction ‘canonical’ middle. Although, traditionally, the middle has been defined as a particular grammatical construction, involving a lexical process or a syntactic configuration that is ‘middle-specific’, a different view of the middle has recently gained some ground. Starting with Condoravdi (1989), it has been argued that the middle is not a grammatical category, but rather a particular interpretation that independently available argument alternations may give rise to. This means that there is nothing middle specific about the derivation or the syntax of the sentences in (1).

In this thesis, I approached the topic of dispositional middles from a particular construction in German, the so-called *lassen*-middle in (2), which was shown to have a particular bearing on the debate concerning the status of the middle in the Grammar.

- (2) Das Buch lässt sich leicht lesen.  
      *the book lets REFL easily read*  
      ‘The book reads easily.’

As the paraphrase indicates, (2) is virtually identical semantically to the canonical middles in (1). In fact, *lassen*-middles exhibit all the core properties of middles that have been defined based on the constructions in (1): *lassen*-middles are generic statements that express that a particular property holds of the subject in virtue of some inherent and implicit property of the subject. Syntactically, the structural subject in the *lassen*-middle in (2) corresponds to the theme argument of the embedded predicate *lesen* ‘to read’, while the external argument of this predicate is suppressed. As a consequence, *lassen*-middles qualify as middles proper; therefore they have to be taken into account when discussing the nature of middles.

Since *lassen*-middles have not figured prominently in the literature (neither in general nor in the literature on middles in particular), one main goal of this thesis was to provide a detailed syntactic analysis of this construction. Since the occurrence of the causative predicate *lassen* in *lassen*-middles does not constitute its canonical use, an investigation of the syntax of *lassen*-middles required an analysis of the periphrastic causatives in (3), where *lassen* is prototypically found.

- (3) a. Der Lehrer lässt die Schüler das Buch lesen.  
*the teacher lets the students the book read*  
 ‘The teacher makes/lets the students read the book.’
- b. Der Lehrer lässt das Buch lesen.  
*the teacher lets the book read*  
 ‘The teacher makes someone read the book.’

I provided evidence that *lassen*-middles and periphrastic causatives, in particular the so-called *lassen*-passive in (3b), are to a certain extent syntactically identical. First, I showed that there is no reason to assume that the use of *lassen* in *lassen*-middles differs syntactically or semantically from its occurrence in periphrastic causatives. Second, the infinitival complement in *lassen*-middles and periphrastic causatives was shown to be structurally identical: in both cases, *lassen* embeds a structure that projects up to the external argument introducing projection (VoiceP in the terminology adopted in this thesis), but no further. While this constitutes no uncommon assumption for periphrastic causatives of the type in (3a), this was a novel approach to (3b), where it is normally assumed that the infinitival complement lacks Voice.

Crucially, since neither in *lassen*-middles nor in *lassen*-passives must the embedded VoiceP introduce an argument in its specifier (which renders it identical to the VoiceP found in verbal passives), I concluded that both constructions involve an embedded unmarked passive.

A number of arguments was provided to show that, unlike in the periphrastic causatives in (3), the structural subject in *lassen*-middles is not base-generated as the external argument of the matrix predicate *lassen*, but is first merged as the internal argument of the embedded predicate. I further argued that the reflexive pronoun that surfaces in *lassen*-middles is not part of the infinitival complement, but must be associated with the matrix predicate. In particular, *sich lassen* in *lassen*-middles was shown to function as the reflexively marked anticausative of causative *lassen*. Adopting Schäfer’s (2008, 2012a) analysis of reflexively marked anticausatives, I proposed that *sich* blocks the introduction of an external argument in matrix Spec,VoiceP by occupying this very position. The inability of matrix Voice to introduce the external argument derives the observed raising property of *lassen*-middles. In sum, with respect to the syntax of *lassen*-middles, I proposed that this type of construction involves the combination of a reflexively marked anticausative and a (truncated) verbal passive. The modality involved in *lassen*-middles was argued to stem from the lexical semantics of the causative predicate *lassen* (which can express modality even in periphrastic causatives), rather than from some covert generic operator. The structures I arrived at for periphrastic causatives and *lassen*-middles are seen below (irrelevant projections omitted).

- (4) a. **Periphrastic Causative Construction (= (3a))**  
 [VOICEP DP [VP [VOICEP DP [VP DP + √ROOT + v ] Voice ] v-√LASS ] Voice]  
 b. **Lassen-Passive (= (3b))**  
 [VOICEP DP [VP [VOICEP [VP DP + √ROOT + v ] Voice<sub>PASS</sub> ] v-√LASS ] Voice]  
 c. **Lassen-Middle (= (2))**  
 [VOICEP REFL [VP [VoiceP [VP DP<sub>NOM</sub> + √ROOT + v ] Voice<sub>PASS</sub>] v-√LASS ] Voice<sub>EXPLETIVE</sub>]

The fact, then, that *lassen*-middles qualify as middles proper and can be derived using building blocks that exist independently in the language is an argument in favor of the treatment of the middle as a notional rather than a grammatical category, thereby supporting the approach to middles in Condoravdi (1989), Marelj (2004) and Lekakou (2005).

A comparison of canonical and *lassen*-middles showed that, despite the similarities mentioned above, there are certain differences, such as the availability of a *by*-phrase introducing the suppressed agent, the optionality of the manner adverb, and the less severe verb-class restriction in *lassen*-middles. I showed that the presence of the embedded (passive) VoiceP in *lassen*-middles and the absence of such a VoiceP in canonical middles accounts for these differences. Interestingly, with respect to the properties just mentioned, it could be shown that *lassen*-middles pattern with Greek and French-type middles, which Condoravdi (1989) and Lekakou (2005) have argued are parasitic on (reflexive) passives. This was taken to further support the analysis of *lassen*-middles in (4c).

I also showed in this thesis that *lassen*-middles have consequences outside the domain of middle constructions. For example, the question of how a passive argument constellation can surface without morphological marking (pace Haspelmath 1990) had to be addressed. I suggested that the existence of such unmarked passives is tied to the restructuring status of the infinitival complement, which lacks the projection that is involved in the introduction of passive morphology. This explanation is dependent on the assumption that passive morphology is dissociated from Voice in German. This finding supports approaches to passives such as those in Embick (2004) or Bruening (2012).

Furthermore, since the infinitival complement in *lassen*-passives and *lassen*-middles was shown to qualify as a restructuring infinitive with respect to the tests provided in Wurmbrand (2001), but nevertheless involves Voice, the two constructions affect the theory of restructuring. This point is further stressed by the observation that the presence of a VoiceP in a restructuring infinitive is not restricted to constructions involving *lassen*, but is rather a property of restructuring infinitives in general. As a consequence, this thesis provided evidence against approaches to restructuring infinitives that rely on a base-generated complex predicate as in Haider (1986a,b, 1993, 2003, 2010), as well as against an analysis that treats

restructuring as VP-complementation (Wurmbrand 2001, 2004, 2007). With Wurmbrand (2013a,b), I discussed a theory that takes the presence of VoiceP into account and showed that under certain assumptions concerning the nature of expletive Voice, such an approach can derive *lassen*-passives and *lassen*-middles.

I also took a look at *lassen*-middles in languages other than German - Dutch, Swedish, and Danish in particular - and showed that these languages have the building blocks necessary for the formation of *lassen*-middles (i.e. they have reflexively marked anticausatives, *lassen*-passives, and a causative ECM-predicate of the *lassen*-type, which is underspecified with respect to the type of causation expressed), thereby confirming a direct prediction of my account of *lassen*-middles.

I also investigated how the developed analysis extends to impersonal *lassen*-middles as in (5).

- (5) Dort lässt (es) sich gut tanzen.  
*there lets it REFL well dance*  
'One can dance well there.'

The issue surrounding impersonal (*lassen*-) middles is the following: Dispositional sentences are subject oriented, i.e. they involve the assignment of the dispositional property to the structural subject. Yet, unlike in personal middles, impersonal middles lack a referential structural subject. Instead, one observes the presence of an expletive pronoun *es* and an (additional) obligatory modifier (*dort* 'there' in (5)), to which the dispositional property is assigned. I argued that the presence of these two elements has one and the same explanation: Since dispositional statements are subject oriented, but the dispositional property in (5) is attributed to the locative modifier *dort*, this element must somehow be connected to the subject position. I proposed that this is done via expletive *es*, which takes the modifier as associate and links it to an argument position – a function of *es* that was shown to be independently motivated in cases of, e.g., sentential extraposition. The optionality of *es* in impersonal *lassen*-middles, I claimed, is a consequence of the structural complexity of this construction, which provides two adjunction sides for the modifier. I showed that if the modifier adjoins to the matrix vP, it directly modifies the source of the dispositional semantics and it is not necessary to link it to the subject position. As a consequence, the expletive is not expected to surface. If, in turn, the modifier adjoins low (i.e. to the embedded vP), it does not modify the modal element directly and therefore has to be associated with the subject position via the expletive *es*.

## DEUTSCHE ZUSAMMENFASSUNG

Die Forschung bezüglich der dispositionalen Medialkonstruktion hat sich vorwiegend auf Sätze wie in (1) bezogen.

- (1) a. The book reads easily.                    Englisch  
      *das Buch liest leicht*  
      'Das Buch liest sich leicht.'  
      b. Das Buch liest sich leicht.            Deutsch

Basierend auf solchen Beispielen wurden die charakteristischen Eigenschaften der Medialkonstruktion definiert, weshalb ich Konfigurationen der Art in (1) als 'kanonische' Medialkonstruktion bezeichne. Traditionell wurden diese als eigenständige Konstruktion behandelt, welche eine 'medial-spezifische' lexikalische Operation oder syntaktische Struktur beinhaltet. In letzter Zeit hat jedoch ein anderer Ansatz an Prominenz gewonnen. Beginnend mit Condoravdi (1989) wurde argumentiert, dass die Medialkonstruktion keine grammatische Kategorie ist. Vielmehr stellt sie eine bestimmte Interpretation dar, die mittels unabhängig existierender Argumentalternationen ausgedrückt werden kann. Dies bedeutet, dass die Derivation der Beispiele in (1) keinen Bezug nimmt auf Operationen oder syntaktische Projektionen, welche ausschließlich in Medialkonstruktionen vorkommen.

In dieser Arbeit wurde das Phänomen der dispositionalen Medialkonstruktion nicht von den kanonischen Fällen in (1) angegangen, sondern von der so-geannten *lassen*-Medialkonstruktion in (2), welche, so wurde gezeigt, eine Rolle für die Diskussion bezüglich des Status der Medialkonstruktion in der Grammatik spielt.

- (2) Das Buch lässt sich leicht lesen.

(2) ist semantisch identisch zu der kanonischen Medialkonstruktion in (1). Darüber hinaus zeigt die *lassen*-Medialkonstruktion alle Kerneigenschaften der kanonischen Medialkonstruktion: *Lassen*-Medialkonstruktionen sind generisch und bringen zum Ausdruck, dass eine bestimmte Eigenschaft dem Subjekt aufgrund von inhärenten und impliziten Eigenschaften desselben zugeschrieben wird. Auch die typischen syntaktischen Eigenschaften der Medialkonstruktion sind in (2) zu finden: Die Subjekt-DP entspricht thematisch dem internen Argument des eingebetteten Verbs *lesen* und das externe Argument dieses Prädikats ist nicht realisiert. Aufgrund dieser Parallelen ist es durchaus legitim, die *lassen*-Medialkonstruktion als 'eigentliche' Medialkonstruktion zu behandeln. Dies bedeutet gleichermaßen, dass sie in einer Diskussion bezüglich des Phänomens *Medialkonstruktion* nicht unberücksichtigt bleiben darf.

Da *lassen*-Medialkonstruktionen bislang keine vordergründige Rolle in der Forschung spielten (weder generell, noch spezifisch in der Forschung bezüglich der Medialkonstruktion) stellte ein Hauptziel dieser Arbeit die syntaktische Analyse dieser Konstruktion dar. Da die Verwendung von *lassen* in (2) nicht dem Hauptgebrauch dieses Verbs entspricht, war dafür ebenfalls eine Analyse der periphrastischen Kausative in (3) von Nöten, in welchen der prototypische Gebrauch von *lassen* vorliegt.

- (3) a. Der Lehrer lässt die Schüler das Buch lesen.  
b. Der Lehrer lässt das Buch lesen.

Es wurde gezeigt, dass *lassen*-Medialkonstruktionen zu einem bestimmten Grad syntaktisch identisch mit den periphrastischen Kausativen in (3) sind – insbesondere dem so genannten *lassen*-Passiv (3b). Erstens ließ sich kein Grund finden, der darauf hinweist, dass die Verwendung von *lassen* in (2) syntaktisch oder semantisch von der in (3) zu unterscheiden ist. Desweiteren stellte sich heraus, dass das Infinitivkomplement in *lassen*-Medialkonstruktionen und periphrastischen Kausativen strukturell identisch ist: In beiden Fällen bettet *lassen* eine Struktur ein, welche maximal die Projektion enthält, die das externe Argument einführt (VoiceP in der hier verwendeten Terminologie). Jede weitere höhere funktionale Projektion ist nicht enthalten. Während die Annahme nicht neu ist, dass *lassen* in (3a) eine VoiceP selektiert, stellt diese Analyse ein Novum für das *lassen*-Passiv in (3b) dar.

Während VoiceP in (3a) ein externes Argument einführt, darf dies jedoch weder in (2), noch in (3b) der Fall sein. Dies bedeutet, dass die eingebettete VoiceP in diesen Konstruktionen identisch ist mit jener, welche in verbalen Passiven zu finden ist. Diese Tatsache führte zu der Annahme, dass *lassen*-Medialkonstruktionen und *lassen*-Passive ein morphologisch unmarkiertes Passiv einbetten.

Eine Vielzahl an Argumenten wurde angeführt, um zu zeigen, dass das strukturelle Subjekt in *lassen*-Medialkonstruktionen nicht als externes Argument des Matrixprädikats *lassen* basisgeneriert wird (wie etwa in den periphrastischen Kausativen in (3)), sondern als das interne Argument des eingebetteten Verbs. Darüber hinaus wurde in dieser Arbeit argumentiert, dass das Reflexivpronomen nicht Teil des Infinitivkomplements ist, sondern mit dem Matrixprädikat assoziiert werden muss. Es wurde gezeigt, dass *sich lassen* in der *lassen*-Medialkonstruktion das reflexiv markierte, antikausative Gegenstück zu kausativem *lassen* ist (welches in den periphrastischen Kausativen in (3) auftritt). Im Anschluss an Schäfers (2008) Analyse von reflexiv markierten Antikausativen wurde deshalb vorgeschlagen, dass das Reflexivpronomen *sich* die Einführung des externen Arguments von *lassen* blockiert, indem es den Spezifikator der Matrix-VoiceP besetzt. Dies ist letztlich auch ausschlaggebend dafür,

dass sich die *lassen*-Medialkonstruktion wie eine Anhebungsstruktur verhält. Zusammenfassend lässt sich demnach sagen, dass die in dieser Arbeit entwickelte Analyse die *lassen*-Medialkonstruktion als Kombination eines reflexiv markierten Antikausativs und eines Passivs behandelt. Die Modalität der *lassen*-Medialkonstruktion ist dabei in der lexikalischen Semantik des kausativen *lassens* verankert.

Die (abstrakten) syntaktischen Strukturen von periphrastischen Kausativen und der *lassen*-Medialkonstruktion, welche in dieser Arbeit entwickelt wurden, sind in (4) wiedergegeben (irrelevante Projektionen sind dabei ausgelassen).

- (4) a. **Periphrastische Kausativkonstruktion (= (3a))**  
 [VOICEP DP [VP [VOICEP DP [VP DP + √ROOT + v ] Voice ] v-√LASS ] Voice]  
 b. **Lassen-Passiv (= (3b))**  
 [VOICEP DP [VP [VOICEP [VP DP + √ROOT + v ] Voice<sub>PASS</sub> ] v-√LASS ] Voice]  
 c. **Lassen-Medialkonstruktion (= (2))**  
 [VOICEP REFL [VP [VoiceP [VP DP<sub>NOM</sub> + √ROOT + v ] Voice<sub>PASS</sub>] v-√LASS ] Voice<sub>EXPLETIVE</sub>]

Die Tatsache, dass die *lassen*-Medialkonstruktion als ‘eigentliche’ Medialkonstruktionen behandelt werden muss, kombiniert mit der Beobachtung, dass deren Derivation ausschließlich auf Operationen oder syntaktische Projektionen zurückgreift, welche unabhängig von Medialkonstruktionen existieren, führte zu folgendem Schluss: Der Begriff *Medialkonstruktion* bezeichnet eine notationelle, keine grammatische Kategorie. Die Medialkonstruktion repräsentiert somit keine spezifische Konstruktion, sondern, wie in Condoravdi (1989), Marelj (2004) und Lekakou (2005) vorgeschlagen, eine bestimmte Interpretation.

Ein Vergleich von kanonischen und *lassen*-Medialkonstruktionen wies neben den bereits erwähnten Parallelen auch Unterschiede auf: Nur die *lassen*-Medialkonstruktion erlaubt eine *von*-Phrase, welche das eigentliche externe Argument overt realisiert; nur in dieser Art der Medialkonstruktion ist ein Adverb der Art und Weise optional; und, im Vergleich zur kanonischen Medialkonstruktion, weist die *lassen*-Medialkonstruktion weniger Restriktionen hinsichtlich der Verben auf, welche in dieser Konfiguration auftreten können. Es wurde argumentiert, dass die beobachteten Unterschiede durch die Struktur in (4c) motiviert sind. Dabei spielt die Annahme einer passivischen VoiceP in *lassen*-Medialkonstruktionen (und ihr Fehlen in kanonischen Medialkonstruktionen) die entscheidende Rolle. Es konnte auch gezeigt werden, dass sich im Hinblick auf die eben genannten Eigenschaften *lassen*-Medialkonstruktionen parallel zu griechischen oder französischen Medialkonstruktionen verhalten. Für diese schlugen Condoravdi (1989) und Lekakou (2005) vor, sie syntaktisch als

(reflexive) Passive zu behandeln. Dies, wiederum, stützte die entwickelte Analyse von *lassen*-Medialkonstruktionen in (4c).

Es wurde ebenfalls herausgearbeitet, dass *lassen*-Medialkonstruktionen Konsequenzen außerhalb des Bereichs der Medialkonstruktion haben. Beispielsweise bedurfte die Frage, wie eine passivische Argumentkonfiguration existieren kann, ohne morphologisch entsprechend markiert zu sein, einer Antwort (cf. Haspelmath 1990 für die Behauptung, dass unmarkierte Passive nicht existieren). Die Existenz von unmarkierten Passiven in *lassen*-Passiven und *lassen*-Medialkonstruktionen, so wurde argumentiert, ist eng mit dem Restrukturierungsstatus des infinitiven Komplements verbunden. Die verkürzte Struktur von Restrukturierungsinfinitiven führt dazu, dass die Projektion, welche verantwortlich ist für die Einführung der Passivmorphologie, nicht vorhanden ist. Diese Erklärung beruht auf folgender Annahme: Die Projektion, welche Passivmorphologie einführt, muss von VoiceP distinkt sein, was wiederum Passivanalysen wie Embick (2004) oder Bruening (2012) stützt.

Desweiteren hat die Beobachtung, dass das Infinitivkomplement in *lassen*-Medialkonstruktionen und *lassen*-Passiven alle Eigenschaften eines Restrukturierungsinfinitives zeigt und dennoch eine VoiceP beinhaltet, bedeutende Konsequenzen für die Analyse von Restrukturierungsinfinitiven. Wichtig ist in diesem Zusammenhang, dass das Auftreten einer VoiceP innerhalb eines Restrukturierungsinfinitives keine spezifische Eigenschaft von *lassen*-Konstruktionen ist, sondern von Restrukturierungskonfigurationen generell. Restrukturierungsinfinitive, dies machte diese Arbeit deutlich, sind demnach nicht als basisgenerierte Verbalkomplexe wie in Haider (1986a,b, 1993, 2003, 2010), aber auch nicht mittels VP-Komplementation wie in Wurmbrand (2001, 2004, 2007) zu analysieren. Mit Wurmbrand (2013a,b) wurde eine Analyse präsentiert, die diesen Aspekt berücksichtigt und welche unter bestimmten Annahmen hinsichtlich der Natur von expletivem Voice in der Lage ist, die Eigenschaften von *lassen*-Passiven und *lassen*-Medialkonstruktionen abzuleiten.

Zuletzt wurden *lassen*-Medialkonstruktionen außerhalb des Deutschen in Betracht gezogen. Der Fokus lag dabei auf dem Holländischen, dem Schwedischen und dem Dänischen. Es wurde gezeigt, dass all diese Sprachen die notwendigen Bausteine für die Bildung von *lassen*-Medialkonstruktionen besitzen (i.e. in diesen Sprachen existieren reflexive markierte Antikausative, *lassen*-Passive als auch kausative ECM-Prädikate, welche hinsichtlich der ausgedrückten Art der Kausation semantisch unterspezifiziert sind). Eine direkte Vorhersage der entwickelten Analyse von *lassen*-Medialkonstruktionen wurde somit bestätigt.



Außerdem wurde überprüft, wie sich die vorgeschlagene Analyse auf unpersönliche *lassen*-Medialkonstruktionen (5) übertragen lässt.

(5) Dort lässt (es) sich gut tanzen.

Die Kernproblematik ist Folgende: Dispositionale Sätze sind subjektorientiert, so dass sich die Eigenschaftszuschreibung auf das Subjekt beziehen muss. In unpersönlichen Medialkonstruktionen, anders als in persönlichen, existiert jedoch kein referentielles Subjekt. Anstelle dessen tritt ein Expletivum sowie eine obligatorische Ergänzung (*dort* in (5)) auf. Der Ergänzung wird die dispositionale Eigenschaft zugeschrieben. Es wurde dafür argumentiert, dass diese beiden Elemente (Expletivum und Ergänzung) eng miteinander verbunden sind. Das Expletivum nimmt die Ergänzung als *associate* und verbindet diese mit einer Argumentposition. Diese Eigenschaft des Expletivums ist bekannt aus Kontexten der Satzextraposition (Korrelat-*es*) und demnach nicht spezifisch auf Medialkonstruktionen zugeschnitten. Die Optionalität des Expletivums in (5) wurde mittels der strukturellen Komplexität der *lassen*-Medialkonstruktion erklärt, welche im Gegensatz zur kanonischen Medialkonstruktion zwei Positionen für die Adjunktion der Ergänzung bereitstellt. Adjungiert die Ergänzung an die Matrix-vP, modifiziert sie direkt die Projektion, welche die Modalität einführt. Dadurch ist eine Verbindung zur Subjektposition nicht notwendig und das Expletivum folglich überflüssig. Bei tiefer Adjunktion hingegen (i.e. Adjunktion an die eingebettete vP) besteht keine direkte Modifikation des modalen Elements und die Verbindung mit der Subjektposition mittels des Expletivums wird notwendig.

# CHAPTER 1

## INTRODUCTION

### 1.1 (*Lassen-*)Middles

Middle constructions have figured prominently in the literature on argument alternations since at least the 1980s. Syntactically, the structural subject in middles corresponds to the logical object, while the otherwise external argument is suppressed. Semantically, middles qualify as generic sentences that attribute a property to the structural subject. ‘Canonical’ examples of middles are illustrated in (1) and (2) for English and German, respectively.

(1) This novel reads easily.

(2) Dieser Roman liest sich leicht.  
*this.NOM novel readsREFL easily*  
‘This novel reads easily.’

I will call middles of the type in (1) and (2) ‘canonical’ middles, as they constitute the core configurations that have been discussed in the literature.<sup>1</sup>

As to the grammatical status of the middle, two types of approaches can generally be distinguished. Either middles are identified as an independently existing grammatical category/construction, or the middle is treated as a notional category. In the former type of approach, there is something middle-specific about the derivation of the sentences in (1) and (2), be it a particular lexical rule (e.g. Abraham 1986, 1994; Roberts 1987; Fagan 1988, 1992; Ackema & Schoorlemmer 1994, 1995, 2005), or a middle specific syntax (e.g. Zwart 1998). The other view, most explicitly formulated in Condoravdi (1989), and implemented in Lekakou (2004, 2005) and Schäfer (2008), holds that the middle is a particular interpretation that independently available constructions may give rise to. According to this approach, there are no middle-specific processes, but the middle is syntactically parasitic on other argument alternations such as, e.g. anticausatives or passives (see also Hale & Keyser 1987 for a similar suggestion). The middle semantics are then attributed to the presence of a (covert) generic operator.

While canonical middles have figured prominently in the discussion concerning the status of the middle, in this thesis, I approach the topic from a different angle by focusing on a particular construction in German: the so-called *lassen*-middle exemplified in (3).<sup>2</sup>

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<sup>1</sup> Note that the term *middle* that I use in this thesis is not identical to the Middle (Voice) discussed in much of the typological literature (e.g. Kemmer 1993). It is used here only for generic sentences that involve the assignment of a dispositional property (to the structural subject).

- (3) Dieser Roman lässt sich leicht lesen.  
*this.NOM novel lets REFL easily read*  
'This novel reads easily.'

*Lassen*-middles are generic statements and express that a certain property, denoted by the embedded predicate, holds of the structural subject. Syntactically, the theme argument of the embedded predicate surfaces as subject, and the external argument of the embedded predicate is suppressed. *Lassen*-middles thus exhibit all the core properties that have been attributed to middle constructions in the literature (cf. Ackema & Schoorlemmer 2005 for an overview), legitimizing a treatment of this construction as a *middle* proper. Since *lassen*-middles have largely been neglected in the literature (on middles, as well as in general; see Höhle 1978; Everaert 1986; Fagan 1992; Marelj 2004; Ackema & Schoorlemmer 2005; Broekhuis & Corver, in prep. for some discussion. Kunze 1996 and Pitteroff & Alexiadou 2012 provide the most elaborate analysis to date), they can be called 'non-canonical'.

A direct consequence of the fact that *lassen*-middles qualify as middles proper is that they bear on the question of whether the middle is a grammatical or a notional category. In the former case, one would expect that there is a middle-specific process/syntactic projection that is present in the derivation of both canonical and *lassen*-middles, accounting for the similarities between the two constructions. In the latter case, *lassen*-middles are predicted to only involve argument alternations that are independently available. The syntax of *lassen*-middles therefore has a bearing on the status of the middle in linguistic theory.

## 1.2 Main Hypothesis

The main goal of this thesis is to provide an in depth syntactic analysis of *lassen*-middles in German, which, as I will show, crucially support a treatment of the middle as a notional category.<sup>3</sup> In doing so, I address the following core questions: (i) What are the similarities and differences between canonical middles and *lassen*-middles, and how can they be accounted for?; (ii) In comparison to canonical middles, *lassen*-middles involve an additional verbal element *lassen* 'let', which also surfaces in the two variants of the periphrastic causative construction in (4).

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<sup>2</sup> Where a corresponding canonical middle exists, I will use it to paraphrase the *lassen*-middle. Where this is not the case, I employ a natural paraphrase that comes closest in meaning.

<sup>3</sup> The terms *canonical* and *non-canonical* middle are therefore, strictly speaking, inadequate, as both constructions exhibit the canonical middle semantics. I will nevertheless use this terminology as a means to refer to and distinguish the two constructions.

- (4) a. Der        Lehrer lässt den        Schüler diesen        Roman lesen.  
*the.NOM teacher lets the.ACC students this.ACC novel read*  
 ‘The teacher makes/lets the students read this novel.’
- b. Der        Lehrer lässt diesen        Roman lesen.  
*the.NOM teacher lets this.ACC novel read*  
 ‘The teacher makes someone read this novel.’

Is there a relation between *lassen*-middles and the two constructions in (4) and if so, how can it be defined?; (iii) It has often been argued that canonical middles have an unergative syntax, with the theme argument merged in the external argument position (e.g. Fagan 1992; Ackema & Schoorlemmer 1994, 1995, 2005; Cabredo Hofherr 2005). This raises the question concerning the base-position of the structural subject in *lassen*-middles.; and (iv) *lassen*-middles, just as canonical middles, involve the reflexive pronoun *sich*. What is the nature, function, and position of this reflexive pronoun in *lassen*-middles?

By answering the above questions, I will show that *lassen*-middles can be derived syntactically (pace Fagan 1992) and involve transitivity alternations that exist independently. In particular, I argue that *lassen*-middles involve a reflexively marked anticausative (*sich lassen*) which embeds a truncated verbal passive. Adopting the view that transitivity alternations are Voice-related (where I follow Kratzer 1996 in assuming that VoiceP is the projection that introduces the external argument), this means that the syntactic building blocks *lassen*-middles make use of involve an expletive VoiceP (as it surfaces in reflexively marked anticausatives, cf. Alexiadou, Anagnostopoulou & Schäfer 2006, 2014; Schäfer 2008, 2009, 2012a), as well as a passive VoiceP (see e.g. Embick 2004; Harley 2013). In other words, there is no evidence for a middle-specific syntactic projection and no need for a middle specific lexical process in the derivation of *lassen*-middles.

If, then, the middle-properties of *lassen*-middles follow from building blocks that occur outside of middle constructions, it is more than reasonable to assume that the same is true of canonical middles. The evidence from *lassen*-middles thus strongly supports the view that middles in general are parasitic on the Voice system of a language, which is in line with the claim in Condoravdi (1989) that the middle is a notional category. A direct consequence of this conclusion is the following: if anticausatives are derived syntactically (as argued in, e.g. Alexiadou, Anagnostopoulou & Schäfer 2006, 2014), and canonical middles in German, English, or Dutch are parasitic on anticausatives (as suggested in Hale & Keyser 1987 and Schäfer 2008), the formation of middles in general does not require the existence of a (generative) lexicon (pace Abraham 1986, 1994; Fagan 1992; Ackema & Schoorlemmer

1994, 1995, 2005; Marelj 2004 and, to a certain extent, Lekakou 2005), but can exclusively take place in the syntax.

A further goal of this thesis is to show that *lassen*-middles are relevant not only for the discussion of the grammatical status of middles, but also for the theory of passivization and the theory of restructuring.

With respect to the former, I argue for the presence of an embedded (passive) VoiceP in *lassen*-middles, meaning that (verbal) passive structures do not necessarily entail the presence of passive morphology (pace Haspelmath 1990). As a consequence of this claim, the traditional GB-account of passives provided in Jaeggli (1986), or Baker, Johnson & Roberts (1989) cannot be upheld. If passive morphology realizes the external argument, as proposed in their accounts, the absence of passive morphology should entail the syntactic absence of the agent argument, falsely predicting that ‘unmarked passives’ exhibit the behavior of unaccusative predicates with respect to the licensing of the *by*-phrase and agent-oriented modifiers, among other things. With respect to the question of how unmarked passives can arise, I will propose that their existence depends on the restructuring status of the infinitival complement. This leads to certain conclusions concerning the way passive morphology needs to be introduced in a passive syntax.

Concerning the theory of restructuring, *lassen*-middles show that restructuring infinitives necessarily involve a Voice layer. This is, first of all, a strong argument against any approach to restructuring that postulates that the matrix and the embedded predicate enter the derivation as a complex head (e.g. Haider 1986a,b, 1993, 2003, 2010). If an embedded VoiceP is present in restructuring infinitives, the embedded predicate must be associated with its own verbal domain, which is incompatible with any approach that postulates a base-generated complex predicate. *Lassen*-middles, then, strongly support an analysis of restructuring infinitives in terms of truncated clausal structures as in Wurmbrand (2001, 2004, 2007). Yet, since her analysis involves the claim that restructuring infinitives lack the external argument introducing projection, *lassen*-middles show that her approach requires some rethinking.

## **1.3 Theoretical Background**

### **1.3.1 Architecture**

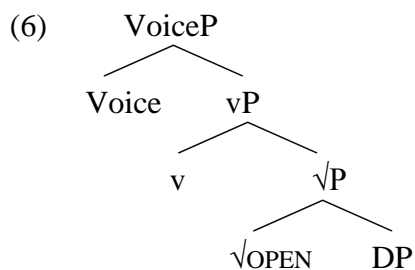
In general, the architectural assumptions adopted here are drawn from the Minimalist Program (Chomsky 1995 and subsequent work) combined with Distributed Morphology (cf. Halle & Marantz 1993; Marantz 1997; Harley & Noyer 1999 a.o.). In particular, I assume that the basic syntactic process is *Merge*, which takes two elements and combines them to create a

bigger syntactic object. In the system I am adopting, the operation *Move* will be treated as Internal Merge, i.e. the merger of an element that is already contained in the built structure. A further syntactic operation that becomes relevant for the proposed analysis is Agree, which I assume involves the valuation of unvalued features on a probe by corresponding valued features on a goal (cf. Pesetsky & Torrego 2001, 2007 among many others).

With respect to the pieces the syntax operates with, I follow the claims of Distributed Morphology that the basic syntactic operation Merge applies to two different types of morphemes: Roots and functional morphemes respectively, which can be defined as follows (taken from Embick 2010).

- (5) a. **Functional Morphemes:** Terminal nodes consisting of (bundles of) grammatical features, such as [past] or [pl], etc.; these do not have phonological representations.  
 b. **Roots:** Members of the open-class or ‘lexical’ vocabulary: items such as  $\sqrt{\text{CAT}}$ ,  $\sqrt{\text{OX}}$ , or  $\sqrt{\text{KICK}}$ .<sup>4</sup>

According to this view, verbs, for example, are syntactically decomposed into a number of verbal layers on top of a category-neutral Root, as illustrated for *open* in (6).



If the Root  $\sqrt{\text{OPEN}}$  occurred in a different context, for example, immediately below the adjectival projection aP, the result would be adjectival *open* as in ‘The door is open.’

Based on the structures in (6), let me briefly address the decomposition of the verbal layer I assume. In the context of lexical causative verbs such as *break* or *open*, which in their event decomposition involve a stative subevent (e.g. Levin & Rappaport Hovav 1995), the Root merges with the object DP and names the state the DP is in. In other words, the  $\sqrt{\text{P}}$  in (6) corresponds to the stative subevent.

Since not all predicates are causative, I have to add at this point that the position in (6) is not the only one a (verbal) Root can occupy. Some Roots are directly merged with little v. The choice is not arbitrary but makes a difference in meaning: while Roots merged with a DP

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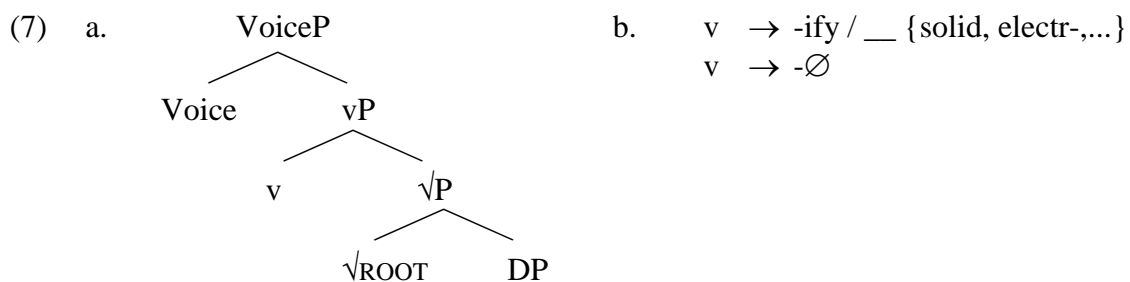
<sup>4</sup> In general, I remain neutral with respect to whether Roots possess an underlying phonological form, or whether they undergo Vocabulary Insertion just as functional morphemes (Late Insertion). See, however, Chapter 4 for more discussion.

name a state, Roots that modify little *v* provide information concerning the manner in which the event is carried out (see e.g. Embick 2004 for details).

Turning to the projection that dominates  $\sqrt{P}$  in (6), I assume that little *v* has two functions: first, it identifies the Root as verbal, and second, it introduces an event(uality). With respect to this latter aspect, I will follow Schäfer (2008, 2012c), Marantz (2009), Wood (2012), and Alexiadou, Anagnostopoulou & Schäfer (2014) in rejecting the existence of different flavors of little *v* with a dedicated semantics (e.g.  $v_{CAUS}$  and  $v_{BE}$  as in Harley 1995; Folli & Harley 2005, 2007 a.o.). Instead, little *v* is semantically underspecified, such that e.g. causative semantics are read off the syntactic structure at the CI-interface whenever little *v* combines with a state (as is the case in (6), accounting for the fact that *open* implies causation).

Finally, as mentioned in section 1.2, I assume a split between  $vP$  and VoiceP, where the latter introduces the external argument and is thus the locus of (syntactic) transitivity and thematic agentivity (see e.g. Pykkänen 2002; Alexiadou, Anagnostopoulou & Schäfer 2006, 2014; Harley 2013 for arguments in favor of this split).

The morphemes the syntax operates with lack a phonological matrix, which in the framework adopted here will be inserted post-syntactically at PF. The process that associates syntactic heads with a phonological exponent is known as Vocabulary Insertion. This is to say that at PF a list of Vocabulary Items is made accessible that specify the syntactic context in which a particular exponent occurs. Often, different Vocabulary Items compete for insertion into the same terminal node, in which case the most specified one (which has no conflicting features, see Halle & Marantz 1993) will be inserted. As an illustration of this process, consider again the structure in (6) (repeated here as (7a) for the sake of convenience), and the different Vocabulary Items in (7b).



The two Vocabulary Items in (7b) compete for insertion into the *v*-node, with the most specified winning the competition. In (7), the identity of the Root will determine which exponent will ultimately be inserted, such that the difference between e.g. *break-∅* and *solid-ify* is ultimately an instance of contextually triggered allomorphy. If the Root is *solid*, *-ify* will

be inserted into  $v$ , blocking the zero-exponent. If the Root is not part of the list of the *-ify* exponent, the default form  $-\emptyset$  will be used.<sup>5</sup>

I also adopt the position that derivations are cyclic, which means that at certain points in the derivation, i.e. at the Phase-level, part of the structure that has been assembled in the syntax is transferred to PF and LF, and is inaccessible for further syntactic computation (Phase Theory; see especially Chomsky 2000, 2001, 2008). This is the essence of the Phase Impenetrability Condition (PIC) as given in (8) (taken from Chomsky 2000:108).<sup>6</sup>

(8) a. [ $\alpha$  [H  $\beta$ ]]

b. **Phase Impenetrability Condition**

In phase  $\alpha$  with the head H, the domain of H is not accessible to operations outside  $\alpha$ , only H and its edge [its specifier(s)] are accessible to such operations.

With respect to the timing of the Transfer operation, I will assume that once the phase is completed (i.e. all relevant features of the head are checked or valued), the Phase domain will be sent off to the interfaces. I follow Chomsky (2000, 2001, 2008) in treating C and active Voice (Chomsky's  $v^*$ ) as phase heads.

### 1.3.2 Case

In this thesis, I follow Marantz (1991/2000) in his claim that C/case is not involved in the licensing of nominal elements. This means that movement cannot be motivated by the need to be assigned abstract Case, but rather is exclusively triggered by EPP-features. In terms of case-assignment, I assume that the association of a DP with a particular morphological case happens at PF. In this regard, I essentially adopt the dependent case approach originally outlined in Marantz (1991/2000).

Marantz distinguishes four different cases: lexical case, dependent case, unmarked case, and default case. Since only the first three are of relevance for us, I will ignore default case in the following.

Lexical case is assigned syntactically by certain predicates, as German *helfen* 'to help', which assigns lexical dative to its complement DP.

(9) Mark hilft dem Kind.

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<sup>5</sup> At this point, I am glossing over the important point that contextual allomorphy is subject to certain locality constraints (see e.g. Embick & Marantz 2008, and Embick 2010). Alongside the requirement that the contextual trigger and the insertion side need to be active in the same cycle, contextual allomorphy is shown to require linear adjacency (see Embick 2010 for details, and chapter 4 for discussion).

<sup>6</sup> I am introducing an anachronism here. In his 2000 paper, Chomsky assumes that Transfer is delayed until the next highest phase-head is merged. Only in later papers does he formulate the PIC without the 'higher-phase' restriction.

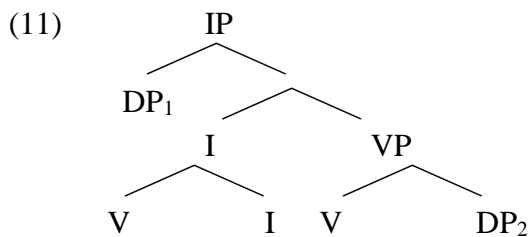


*Mark helps the.DAT child*  
 ‘Mark helps the child.’

Structural accusative is a dependent case in Marantz’s system. It will be assigned post-syntactically based on the structural environment a particular DP occurs in. In Marantz (1991/2000), dependent case is defined as follows (Marantz 1991/2000:25).

- (10) Dependent case is assigned by V+I to a position governed by V+I when a distinct position governed by V+I is:  
 a. not ‘marked’ (not part of a chain governed by a lexical case determiner)  
 b. distinct from the chain being assigned dependent case

Consider, for example, the following abstract structure (adapted from Marantz 1991/2000: 23)



If DP<sub>2</sub> is not part of the chain that contains DP<sub>1</sub>, it will surface with dependent accusative in line with (10), since a distinct chain exists which is governed by V+I, and is not ‘marked’ for lexical case (i.e. the chain containing DP<sub>1</sub>).

Since in (11), DP<sub>1</sub> is neither marked for lexical case nor can it be assigned dependent accusative, it will receive unmarked nominative case. This is specified in the Case Realization Disjunctive Hierarchy in (12).

(12) **Case Realization Disjunctive Hierarchy**

Lexical case < Dependent case < Unmarked case < Default case

(12) holds that only if a DP is neither marked for lexical nor for dependent case can it receive unmarked case, which is nominative in English or German. In other words, the structure in (11), combined with the principles in (10) and (12), creates a simple transitive sentence, where the subject surfaces with nominative, and the object with accusative case (13a).

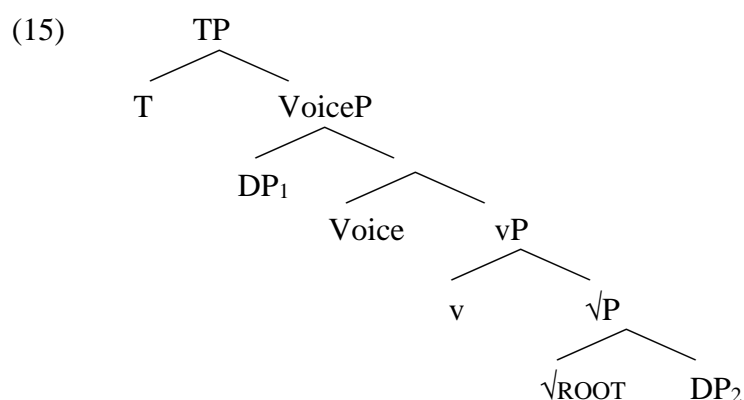
- (13) a. Der Junge sieht den Bus.  
*the.NOM boy sees the.ACC bus*  
 ‘The boy sees the bus.’  
 b. Der / \*den Junge fällt.  
*the.NOM the.ACC boy falls*  
 ‘The boy falls.’

With an unaccusative predicate as in (13b), the situation is different. Under the assumption that (13b) has the structure in (11) (see e.g. Burzio 1986 for evidence that the subject in the

context of unaccusative predicates is merged as an internal argument), DP<sub>1</sub> and DP<sub>2</sub> would be part of the same chain (the latter arguably as trace of the former). According to (10), DP<sub>2</sub> cannot be assigned dependent accusative, because there is no chain distinct from the one that contains DP<sub>2</sub> which is also governed by V+I. As a consequence, unmarked case will be assigned to the chain containing DP<sub>1</sub> in line with (12), resulting in nominative case on the structural subject in (13b). The same derivation would lead to nominative case on the subject in passive and raising contexts. Note in this regard, however, that according to (12), lexically determined case takes precedence over all structural cases (dependent, unmarked), which means that if a DP is merged into a position where it is assigned lexical case by e.g. the verb, this case value cannot be changed during the derivation, no matter whether the DP stays in its base-position or not. This accounts for the fact that lexical case is retained in contexts of passivization as in (14b).

- (14) a. weil er ihm geholfen hat.  
*because he.NOM him.DAT helped has*  
 ‘because he has helped him.’  
 b. weil \*er / ihm geholfen wurde.  
*because he.NOM / him.DAT helped became*  
 ‘because he was helped.’

Having outlined Marantz’s original conception of the Dependent case approach, let me update it to suit the theoretical assumptions made in this thesis.<sup>7</sup> Consider to this end the structure in (15).



Based on the well-known observation that DPs in German need not move to Spec, TP (see section 1.3.3), I assume that the relation of a DP to T that is relevant for the post-syntactic case calculation is one of agreement, i.e. the valuation of unvalued  $\phi$ -features on T (this

<sup>7</sup> See Sigurðsson (2003), McFadden (2004), Schäfer (2008, 2012a), Campanini & Pitteroff (2013), Pitteroff & Campanini (2013), Wood & Sigurðsson (to appear) for different implementations of the dependent case approach in a minimalist framework.

relation corresponds to government by V+I in Marantz' original formulation). This results in the definition of dependent case in (16).

(16) **Dependent Case – Updated Version #1**

Dependent case is assigned to a DP if a distinct DP:

- a. is not 'marked' (not specified for lexical case)
- b. has valued the unvalued  $\phi$ -features on T<sup>8</sup>

According to (16), DP<sub>2</sub> in (15) would be assigned dependent accusative post-syntactically (presupposing again that neither DP<sub>1</sub> nor DP<sub>2</sub> have been assigned lexical case), while DP<sub>1</sub>, which is in an Agree-relation with T, surfaces with unmarked nominative. This correctly predicts the case properties of a canonical transitive sentence like (13a).

Some adjustment of (16) is required, however, in order to make the dependent case approach compatible with Phase Theory. Under the assumption that active Voice is a phase, DP<sub>2</sub> will be transferred to PF before T is even merged. It is thus plainly impossible at this point in the derivation to know whether there is a distinct DP that values the features on T (without making reference to some process of look-ahead). Sticking to the assumption that T is the head relevant for the determination of nominative vs. accusative case, two possibilities present themselves: (i) the domain in which case is calculated is bigger than the phase domain (see Campanini & Pitteroff 2013; Pitteroff & Campanini 2013 for such an approach), or (ii) no reference to a distinct DP-T Agree-relation is made in the definition of dependent case.

The first possibility has the drawback that, since Vocabulary Insertion applies to phase domains, some non-trivial assumptions would have to be made about the interaction of Vocabulary Insertion and case realization. For this reason, I follow possibility (ii) in this thesis, and adopt the definition of dependent case in (17).

(17) **Dependent Case – Final Version**

Dependent case is assigned to a DP if:

- a. it is not 'marked' (not specified for lexical case)
- b. it has not valued the unvalued  $\phi$ -features on T

Since in (15), T has not even been merged when DP<sub>2</sub> is transferred, DP<sub>2</sub> cannot possibly have valued the features on T and will thus be assigned accusative. At the point that DP<sub>1</sub> is transferred (arguably upon the completion of TP/CP), it will have agreed with T such that DP<sub>1</sub> will be assigned unmarked nominative.

In a passive sentence such as (18), things are different.

(18) She/\*her was kissed.

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<sup>8</sup> The  $\phi$ -features on T may be inherited from the phase head C, as in Chomsky (2008). See Richards (2007) and den Dikken (2011) for a discussion of the process of Feature Inheritance.

Since VoiceP in (18) is passive, it does not qualify as a phase in my system (see also Chomsky 2000, 2001, 2008). As a consequence, the theme DP will remain accessible once T is merged, and can thus agree with it. Hence, the phase domain that contains the theme DP also contains T, and the Agree relation between DP and T will block the assignment of dependent accusative in favor of the assignment of unmarked nominative case.

Although the definition of dependent case in (17) requires additional assumptions in the context of Icelandic DAT-NOM verbs, it will suffice for the purposes of this thesis.<sup>9</sup>

### 1.3.3 German Syntax

Since the core language of investigation is German, I will briefly introduce three assumptions about German clause-structure that will be relevant in this thesis.

First, for the sake of concreteness I will take the position that word order is a matter dealt with in the syntax proper. Since German is generally acknowledged to be an OV-language, I thus employ head-final (extended) verbal projections.

Second, German root clauses, unlike English ones, require the verb to occur in second position, independent of the type of constituent that appears sentence initially (19).

- (19) a. Yesterday Peter read a book.  
b.\*Yesterday read Peter a book.  
c.\*Gestern Peter las ein Buch.  
d. Gestern las Peter ein Buch.

The V-2 property of German will be implemented by assuming that German root clauses are always CPs, that the German verb moves to C (in the absence of an auxiliary or a modal verb, that is), and that C has a (general) EPP-feature that triggers movement of any type of phrase into Spec, CP.

Third, as has already been mentioned in section 1.3.2, it is well-known that German does not require movement of the subject to Spec,TP, but instead that the nominative marked DP may stay in VP-internal position (e.g. den Besten 1982; Haider 1993, 2010; Wurmbrand 2006, a.o.). This is illustrated in (20) (where word order is relevant, I use embedded clauses to avoid potential interference due to the V-2 property).

- (20) a. weil der Mann dem Kind den Schnuller weggenommen hat.  
*because the.NOM man the.DAT child the.ACC pacifier taken.away has*  
'because the man has taken away the pacifier from the child.'

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<sup>9</sup> See, e.g., Sigurðsson (2003) and Schäfer (2008, 2012a) for the claim that the head that is relevant for nominative/accusative assignment is Voice rather than T. In footnote 42 of Chapter 3, I briefly address certain problems the syntax of periphrastic causatives and *lassen*-passives raise for such an assumption.

- b. weil dem Kind der Schnuller weggenommen wurde.  
*because the.DAT child the.NOM pacifier taken.away became*  
 ‘because the pacifier was taken away from the child.’

Following Lenerz (1977), I assume that (20a) reflects the base order of arguments where the nominative precedes the dative and the dative precedes the accusative. The passive sentence in (20b) then shows that a thematic object may stay in its base-position below the dative, even though it functions as the structural subject (i.e. it is marked with nominative case and triggers verb-agreement).<sup>10</sup> I will implement this observation by assuming that German T lacks an EPP-feature, and that subject-verb agreement follows from an Agree relation between T and the subject DP (as outlined in the preceding section) (see Haider 1993, 2010 for the even stronger conclusion that German lacks TP altogether; I will not adopt this position for reasons that should become clear in chapter 7).

#### 1.4 Outline

The thesis is structured as follows. In chapter 2 I compare canonical middles and *lassen*-middles. I show that a treatment of the latter under the notion *middle* is well motivated since they exhibit all the properties that have been identified as characteristic of middle constructions. Crucially, despite these similarities, a number of differences can be identified relating to the acceptability of *by*-PPs, the obligatoriness of adverbial modification, the difference in the class of verbs that can occur in the two middles, and the obligatoriness of the expletive pronoun *es* ‘it’ in impersonal canonical and *lassen*-middles.

In chapter 3, I turn towards the more common use of *lassen* in the periphrastic causative construction (4a), as well as the so-called *lassen*-passive (4b) (repeated here as (21a,b), respectively). This discussion will prove to be relevant as I will later argue that *lassen*-middles and the *let*-constructions in (21) share certain syntactic and semantic properties.

- (21) a. Der Lehrer lässt den Schüler diesen Roman lesen.  
*the.NOM teacher lets the.ACC students this.ACC novel read*  
 ‘The teacher makes/lets the students read this novel.’  
 b. Der Lehrer lässt diesen Roman lesen.  
*the.NOM teacher lets this.ACC novel read*  
 ‘The teacher makes someone read this novel.’

I discuss the syntax of both constructions and come to the conclusion that periphrastic causatives as in (21a) do not embed a fully-fledged clausal structure, but only a VoiceP; I will

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<sup>10</sup> One could propose that the subject does move to Spec,TP in German, albeit covertly. Yet, Wurmbrand (2006) has extensively shown that a nominative DP can occur in a non-Spec,TP-position from which covert movement is generally blocked, suggesting that movement to subject position in German is indeed optional.

then illustrate how certain binding facts which have been advanced as evidence for the biclausal nature of this construction can nevertheless be accounted for. With respect to the syntax of *lassen*-passives such as those in (21b), I provide evidence that, even though the infinitival complement qualifies as a restructuring infinitive (e.g. a truncated structure lacking all (higher) functional projections; cf. Wurmbrand 2001, 2004, 2007), it is not a bare vP/VP, but rather must contain the Voice-layer (pace e.g. Grewendorf 1983; Gunkel 2003; Enzinger 2010, as well as Wurmbrand's analysis of restructuring infinitives). The infinitival complement in (21a,b) is thus structurally identical except for the introduction of an overt agent in Spec,VoiceP in the former, but not in the latter type of construction. Hence, the embedded VoiceP in (21b) is identical to the one that appears in passives, thus accounting for a number of similarities between *lassen*-passives and (verbal) passives.

Chapter 4 discusses the syntax of *lassen*-middles. In addressing question (ii) from section 1.2, i.e. what *lassen*-middles preserve from the syntax and semantics of periphrastic causatives, I will first show that a number of similarities exist between the occurrence of *lassen* in the two *let*-constructions in (21) and *lassen* in *lassen*-middles: this leads to the claim that *lassen* has the same syntactico-semantic status in all three contexts. Amongst these parallels is the observation that *lassen* in *lassen*-middles embeds a restructuring infinitive that contains a specifierless VoiceP - just as in *lassen*-passives.

I will also provide evidence that the structural subject in *lassen*-middles is not base-generated in the specifier of matrix VoiceP, but instead is the internal argument of the embedded predicate (question (iii) from section 1.2).

With respect to question (iv) ('What is the nature, function, and syntactic position of the reflexive pronoun *sich* in *lassen*-middles?'), I will argue that *sich* can only be reasonably treated as belonging to the matrix predicate *lassen*, which leads me to conclude that *sich lassen* is the reflexively marked anticausative variant of the causative/transitive use of *lassen* in the periphrastic causative construction. Following Schäfer's (2008, 2009, 2012a) analysis of reflexively marked anticausatives, the reflexive pronoun in *lassen*-middles is merged in the specifier of the matrix (expletive) VoiceP, blocking the introduction of an agent argument, and thereby turning *lassen*-middles into a raising configuration.

In chapter 5 I address the second part of question (i), i.e. how the differences between *lassen*-middles and canonical middles can be accounted for. I show that the differences identified follow from a particular structural difference between the two constructions, namely the presence vs. absence of a thematic VoiceP.

Chapter 6 critically discusses the evidence that led Condoravdi (1989) to formulate the hypothesis that the middle is a notional, and not a grammatical category. Although not all of her arguments hold up upon closer scrutiny, her observation that English and Greek-type middles differ in certain ways is shown to be particularly relevant. Following Marelj (2004) and Lekakou (2005), I introduce the hypothesis that two classes of middles exist: while English or Dutch-type middles lack a syntactically represented agent argument, Greek, French, and Serbo-Croatian-type middles are parasitic on (reflexive) passives, and thus involve an implicit agent. Importantly, the differences between these two classes of middles are identical to the ones identified between canonical and *lassen*-middles in German. In other words, the cross-linguistic split of middle constructions identified in Marelj's and Lekakou's work is present language-internally in German. This strongly supports the core claim of this thesis, namely that the middle is a special interpretation certain syntactic configurations may give rise to, rather than a distinct grammatical construction.

I conclude with a discussion of how the middle semantics in *lassen*-middles arise. I propose that the modality is not introduced by a covert modal operator (as is generally assumed for canonical middles), but instead it is hard-wired into the lexical semantics of the matrix predicate *lassen*.

In chapter 7, I discuss the impact the proposed analysis of *lassen*-middles and *lassen*-passives has for the morphological encoding of verbal passives as well as the theory of restructuring infinitives. With respect to the former, I explain how the fact that the embedded predicate in these constructions surfaces as a bare infinitive (despite being passive) can be accounted for, even though it is generally assumed that argument alternations such as passivization have a morphological reflex (e.g. Haspelmath 1990).

The second part of the chapter is concerned with how the claim that restructuring infinitives involve Voice interferes with Wurmbrand's (2001, 2004, 2007) theory of restructuring. I provide further evidence that restructuring infinitives must be allowed to contain the projection that introduces the external argument. This makes *lassen*-passives and *lassen*-middles appear less exotic. I will also discuss the approach to restructuring in Wurmbrand (2013a,b), where this particular observation is taken into consideration. I show how her theory of Voice matching can be extended to *lassen*-passives, and under which assumptions it accounts for *lassen*-middles.

Finally, chapter 8 addresses two predictions the proposed analysis of *lassen*-middles makes. First, it is expected that *lassen*-middles should only be acceptable in languages that have (i) a causative predicate 'let' which is underspecified with respect to the type of

causation expressed; (ii) the ability to leave the causee in periphrastic causative constructions unexpressed (i.e. the existence of *let*-passives), and (iii) the ability to form reflexively marked anticausatives. Taking a closer look at the three Germanic languages for which *lassen*-middles have been attested (Dutch, Swedish, and Danish), this prediction is borne out.

Second, the proposed analysis of *lassen*-middles should cover impersonal *lassen*-middles as well (i.e. *lassen*-middles that lack a (referential) subject). Building on Lekakou's (2005) discussion of impersonal canonical middles, I propose an analysis of impersonal *lassen*-middles that builds on the results from the preceding chapters. In particular, I argue that the expletive in impersonal middles functions as a mediating element, taking an obligatory modifier as associate and linking it to the subject position, to which the dispositional property is ultimately assigned.

A conclusion is provided in chapter 9.



## CHAPTER 2

### THE PROPERTIES OF *LASSEN-MIDDLES*

#### 2.1 Introduction

The goal of this chapter is two-fold. First, I show that a discussion of *lassen*-middles (LMs henceforth) within the domain of (dispositional) middle constructions is legitimate. In other words, LMs have to be treated as middle constructions proper. Evidence for this view comes from the fact that, with respect to the properties that have been identified in the literature as characteristics of 'canonical' middle constructions (CMs henceforth; Ackema & Schoorlemmer's 2005 *Type 1* middles), LMs pattern exactly like CMs. As there are different views on the actual delimitation of this set of characteristics, I will make use of the properties identified in Ackema & Schoorlemmer (2005), as given in (1). LMs will be shown to exhibit all of these properties.

(1) **The Properties of CMs**

- a. The external argument of the non-middle counterpart of the middle verb cannot be expressed as a regular DP-argument in the middle.
- b. If the non-middle counterpart of the middle verb has a direct internal argument role, the subject of the middle sentence carries this role.
- c. In a middle, the logical subject argument of the underlying verb is semantically present.
- d. The middle verb is stative, non-episodic. The middle sentence is a generic statement. It expresses that the argument mentioned in (b) has a particular individual-level property, or that events denoted by the verb or the verb-argument combination have a particular property in general.

The statements in (a), (b), and (c) can be subsumed as properties related to argument realization; these will be the topic of section 2.2.1. (d) relates to the interpretation of middles and will be split up into the discussion of aspectual properties (section 2.2.2), the generic nature of middles (section 2.2.3), and the property ascription involved in CMs (section 2.2.4). I conclude the discussion of the parallels by considering the interpretation of the implicit agent (section 2.2.5).

The second goal of this chapter is to outline the differences between LMs and CMs, which essentially revolve around (i) the possibility to overtly realize the agent argument in a *by*-phrase (section 2.3.2), (ii) the obligatoriness of manner modification (section 2.3.3), (iii) the class of predicates that can occur in the two constructions (section 2.3.4), and (iv) the need for an expletive subject in the impersonal variants of LMs and CMs (section 2.3.5). Section 2.4 summarizes the results of this chapter.

## 2.2 Similarities Between Canonical and *Lassen*-Middles

### 2.2.1 Argument Realization

On a purely descriptive level, it is a well-known fact that middle constructions differ from active sentences with respect to the realization of the arguments of the verb: whereas in the active voice, both arguments of a transitive predicate are realized (2a), only the argument corresponding to the logical object (i.e. the theme argument) surfaces in middles, while the logical subject (i.e. the agent) is not overtly realized (Abraham 1986, 1994; Hale & Keyser 1987; Fagan 1988, 1992; Ackema & Schoorlemmer 1994, 1995, 2005; Steinbach 2002; Alexiadou & Doron 2012; Alexiadou 2012 among many others; see Troseth 2009 for whom this is in fact the core property of middles). The theme argument in middles functions as the structural subject, as can be seen by the fact that it receives nominative case (2b) and triggers agreement on the verb (2c).

- (2) a. Der Autor liest den Roman. (active)  
*the.NOM author reads the.ACC novel*  
'The author reads the novel.'
- b. Der / \*den Roman liest sich gut.<sup>1</sup> (CM)  
*the.NOM/\*ACC novel reads REFL well*  
'The novel reads well.'
- c. Die Romane lesen/\*liest sich gut. (CM)  
*the novels read.3PL/3SG REFL well*  
'The novels read well.'

With respect to the 'advancement' of the theme argument to the subject position, and the absence of the agent argument, middles appear to pattern with verbal passives (3), or (reflexively marked) anticausatives (4b).

- (3) Der/\*den Roman wurde gelesen. (passive)  
*the.NOM/\*ACC novel became read*  
'The novel was read.'
- (4) a. Der Einbrecher öffnete den Tresor. (causative)  
*the burglar opened the.ACC safe*  
'The burglar opened the safe.'
- b. Der/\*den Tresor öffnete sich. (anticausative)  
*the.NOM/\*ACC safe opened REFL*  
'The safe opened.'

CMs, however, differ from passives or anticausatives in various ways. For example, unlike anticausatives, CMs imply the presence of an agent (e.g. a reader in (2b,c)).<sup>2</sup> Fellbaum (1986) provides evidence for this difference by noting that the interpretation of a modifier such as

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<sup>1</sup> Note that German CMs involve a reflexive pronoun *sich*, which, as the paraphrase shows, is not present in English. I will turn to the nature, syntactic position, and function of this element in chapter 4.

*leicht* 'easily' depends on the semantic presence or absence of an agent argument. Consider the ambiguity of the adverbial modifier in (5).

- (5) Diese Türen öffnen sich leicht.  
*these doors open REFL easily*  
 a. 'One does not have to put much effort into opening these doors.' (on middle reading)  
 b. 'These doors open at the slightest provocation.' (on anticausative reading)

If an agent is implied semantically, *leicht* 'easily' is interpreted as 'not difficult to do', whereas it is interpreted as 'at the slightest provocation' if no agent is implied (see Ackema & Schoorlemmer 2005 for these paraphrases). This means that CMs are semantically transitive: they imply an agent and are more similar to passives in this regard.

Yet, there are also differences between CMs and verbal passives. While in the latter the verb is marked with participial morphology and the implicit agent is syntactically active, the verb in CMs occurs in its active form and there is no evidence for a syntactically represented implicit agent (Abraham 1986, 1994; Fagan 1992; Ackema & Schoorlemmer 1994, 1995, 2005; Schäfer 2008; Troseth 2009; Kiparski 2013, a.o.; but see Stroik 1992, 1995; Hoekstra & Roberts 1993 for a different view). This is shown in (6) by the differing acceptability of *by*-phrases, whose presence is typically taken as an indication of a syntactically represented implicit agent.<sup>3</sup>

- (6) a. Dieses Schloß wurde (von einem Einbrecher) geknackt.  
 'This lock was picked by a burglar.'  
 b. Dieses Schloß knackt sich leicht (\*von Einbrechern).  
 'This lock can be picked easily by burglars.'

Turning to LMs, they behave exactly like CMs with respect to argument realization. Ignoring the additional verbal element *lassen* 'let' for the moment, the structural subject corresponds to the thematic object of the infinitival predicate, whose agent argument, in turn, is not overtly realized. This is illustrated in (7), where subjecthood of the theme argument is again indicated via the nominative form of the determiner, and the plural agreement on the finite verb).

- (7) a. Der/\*den Roman lässt sich gut lesen.  
*the.NOM/\*ACC novel lets REFL well read*  
 'The novel reads easily.'

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<sup>2</sup> Typically, this property has been illustrated by the incompatibility of CMs and *by itself* (e.g. Hale & Keyser 1987, a.o.). In this regard, middles pattern like passives and unlike anticausatives, which has been tied to an implied agent in middles and passives. As this test is not feasible for German (*by itself* is acceptable in passives in certain contexts, see Schäfer 2007; Alexiadou, Anagnostopoulou & Schäfer 2014), I will not use this test here.

<sup>3</sup> I leave open at this point how a 'syntactically active implicit argument' is to be formally represented. See chapter 7 for discussion.

- b. Die Romane lassen/\*lässt sich gut lesen.  
*the novels let.3PL/3SG REFL well read*  
 'The novels read easily.'

As in CMs, the fact that a modifier such as *leicht* 'easily' can only receive the interpretation of 'not difficult to do', and not the one of 'at the slightest provocation' (cf. (8)), is evidence for the semantic presence of an agent in LMs.<sup>4</sup>

- (8) Diese Türen lassen sich leicht öffnen.  
*these doors let REFL easily open*  
 a. 'One does not have to put much effort into opening these doors.'  
 b.\*'These doors open at the slightest provocation.'

Furthermore, (7) and (8) show that the verb(s) in LMs pattern with those in CMs in not being morphologically marked.

### 2.2.2 Aspectual Properties

It is generally noted that the predicate in CMs behaves like aspectually stative predicates, and therefore has to be classified as a (derived) stative (Keyser & Roeper 1984; Condoravdi 1989; Fagan 1992; Ackema & Schoorlemmer 1994, 1995, 2005; Marelj 2004; Lekakou 2005; Broekhuis & Corver in prep., a.o.). Like states and achievements, and unlike activities or accomplishments, English CMs are incompatible with progressive aspect (9).

- (9) a.\*The book is reading easily. (middle)  
 b.\*John is knowing the answer. (stative)  
 c.\*John is recognizing Mary. (achievement)  
 d. John is running. (activity)  
 e. John is reading the book. (accomplishment)

Like states and unlike achievements, middles are typically incompatible with a specific time reference (10).

- (10) a.#The book reads easily at 5 o'clock.  
 b. John recognized Mary at 5 o'clock.

Aspectually, German CMs behave exactly like their English counterparts. As German lacks progressive inflection, I use the test in (11) (see Ackema & Schoorlemmer 2005 and Broekhuis & Corver (in prep.), who use the same test as evidence for the stativity of Dutch middles) as an equivalent. (11a) shows that German CMs are not a good answer to the question 'What is happening (at the moment)?' - an indication that points to the aspectual status of CMs as (derived) statives. LMs pattern with CMs in this regard (11b).

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<sup>4</sup> LMs, however, differ from CMs with respect to the acceptability of *by*-phrases, see section 2.3.2.

- (11) Q: Was geschieht gerade?  
 ‘What is happening at the moment?’  
 a. \*Der Roman liest sich gut.  
*the novel reads REFL well.*  
 b. \*Der Roman lässt sich gut lesen.  
*the novel lets REFL well read*  
 ‘The novel reads well.’

CMs and LMs pattern like states also in the context of an *X ist am V-en* ‘X is in the process of V-ing’ frame (*Rheinische Verlaufsform*; (12a,b)), which functions as the German correlate of English progressive aspect. While activities and accomplishments are acceptable in this construction (12d,e), stative predicates (12c) are not.

- (12) a. \*Das Buch ist sich am gut lesen. (CM)  
*the book is REFL at.the well read*  
 b. \*Das Buch ist sich am gut lesen lassen. (LM)  
*the book is REFL at.the well read let*  
 ‘The book is reading well.’  
 c. \*Der Junge ist die Antwort am wissen. (state)  
*the boy is the answer at.the know*  
 ‘The boy is knowing the answer.’  
 d. Der Junge ist am lesen. (activity)  
*the boy is at.the read*  
 ‘The boy is reading.’  
 e. Der Maler ist die Wand am streichen. (accomplishment)  
*the painter is the wall at.the paint*  
 ‘The painter is painting the wall.’

The grammaticality of (12d) underlines the derived stativity of CMs and LMs, as it shows that the stativity is not a consequence of the predicate involved (but see Ackema & Schoorlemmer 2005, who speak of a ‘middle verb’ that is stative. This assumption follows from their pre-syntactic analysis of middle constructions).

Before proceeding to the source of the stativity in middles, let me briefly point out that – just like their English counterparts – German CMs are incompatible with specific time reference. In that regard, CMs pattern with states and unlike achievements. In the case of LMs, the addition of a specific temporal PP leads to semantic deviance, underlining the parallelism to CMs.

- (13) a. #Das Buch liest sich um 17 Uhr gut. (CM)  
*the book reads REFL at 5 o'clock well*  
 b. #Das Buch lässt sich um 17 Uhr gut lesen. (LM)  
*the book lets REFL at 5 o'clock well read*  
 ‘The book reads well at 5 p.m.’

- c. #Mark weiß um 17 Uhr die Antwort.<sup>5</sup> (state)  
*Mark knows at 5 o'clock the answer*  
 'Mark knows the answer at 5 p.m.'
- d. Mark erreicht den Gipfel um 17 Uhr. (achievement)  
*Mark reaches the summit at 5 o'clock*  
 'Mark reaches the summit at 5 p.m.'

Based on a number of tests, I have shown in this section that CMs and LMs are best treated as derived statives. So far, it is not clear what the source of the stativity is, as it cannot be the verbal predicate itself. I discuss this issue in the next section.

### 2.2.3 Genericity

The stativity of CMs is a consequence of their generic nature. In general, CMs report a property of the subject, thus expressing regularities rather than particular events (e.g. Keyser & Roeper 1984; Abraham 1986, 1994; Condoravdi 1989; Fagan 1992; Steinbach 2002; Marelj 2004; Lekakou 2005; Schäfer 2008). In this section, I provide evidence that LMs pattern with CMs in being generic statements.

The generic nature of middles is supported by the fact that CMs exhibit the properties of characterizing sentences in the sense of Krifka et al. (1995). For example, adding a modifier such as *usually* to a characterizing sentence does not affect its meaning as drastically as its addition to an episodic sentence does. Consider the following examples from Krifka et al. (1995: 9).

- (14) a. A lion has a bushy tail.  
 b. A lion usually has a bushy tail.
- (15) a. A lion stood in front of my tent.  
 b. A lion usually stood in front of my tent.

(14a) is a characterizing sentence and the addition of *usually* in (b) changes the interpretation only slightly in stressing that there are exceptions to the general rule. Adding the adverb to the episodic sentence in (15a), however, has more radical consequences, involving a change from a report of a specific event to a regularity.

Adding *normalerweise* 'usually' to a CM (16a), or an LM (16b) leads to an interpretation where it is stressed that exceptions might exist. This illustrates that CMs and LMs behave like the characterizing sentence in (14a) rather than the episodic one in (15a).

- (16) a. Diese Tür öffnet sich normalerweise leicht.  
*this door opens REFL usually easily*

<sup>5</sup> There is an acceptable interpretation of this sentence in which the present tense receives a future interpretation, such that the sentence means 'By 5 p.m. Mark will know the answer.' This reading is irrelevant here.

- b. Diese Tür lässt sich normalerweise leicht öffnen.  
*this door lets REFL usually easily open*  
 ‘Usually, this door opens easily.’

Krifka et al. also note that indefinite singulars in a non-generic context cannot be kind-referring DPs except under a taxonomic interpretation. This is shown by the fact that definite DPs or bare plurals, but not indefinite singulars, can occur as subject of a kind predicate (e.g. a predicate such as *aussterben* 'die out' which requires a kind-referring interpretation of its subject).

- (17) a. Der Dinosaurier starb in der Kreidezeit aus.  
 ‘The dinosaur died out during the Cretaceous period.’  
 b. Dinosaurier starben in der Kreidezeit aus.  
 ‘Dinosaurs died out during the Cretaceous period.’  
 c.\*Ein Dinosaurier starb in der Kreidezeit aus.  
 ‘A dinosaur died out during the Cretaceous period.’

If (non-taxonomic) indefinite singulars can only get a kind-referring interpretation in the context of a characterizing sentence, this reading should be available in CMs and LMs if they are generic sentences. This prediction is borne out.

- (18) a. Ein Kaninchen hält sich als Haustier gut.  
*a rabbit holds REFL as pet well*  
 b. Ein Kaninchen lässt sich als Haustier gut halten.  
*a rabbit lets REFL as pet well hold*  
 ‘A rabbit can be kept well as a pet.’

The singular indefinite in (18) can get a generic/kind-referring interpretation, which is expected if middles are characterizing/generic sentences.<sup>6</sup>

Further evidence for the generic nature of middles comes from the aspectual properties discussed in the preceding section. As Krifka et al. note, characterizing sentences are typically stative, and are thus incompatible with progressive aspect. The ungrammaticality of (11) and (12a,b) is hence further support for the treatment of CMs and LMs as generic sentences. This automatically means that the genericity is not a consequence of the stativity of CMs, but that instead the aspectual properties of CMs follow from the genericity of CMs and LMs.

Finally, the lack of an actuality entailment is also considered a side-effect of genericity. While episodic sentences are incompatible with a continuation which negates that the event denoted by the predicate has taken place (19), CMs and LMs allow such a continuation (20).

- (19) Mark liest das Buch, #aber das Buch wurde nicht gelesen.  
 ‘Mark reads the book, but the book was not read.’

<sup>6</sup> With stress on the indefinite article, a specific interpretation of the singular indefinite is possible as well, but crucially not a non-specific indefinite one.

- (20) a. Orangen pressen sich mit diesem Gerät leicht aus, aber noch niemand hat es  
*oranges press REFL with this machine easily out but yet no one has it*  
 jemals benutzt.  
*ever used*
- b. Orangen lassen sich mit diesem Gerät leicht auspressen, aber noch niemand  
*oranges let REFL with this machine easily out.press but yet no one*  
 hat es jemals benutzt.  
*has it ever used*  
 ‘Oranges can be crushed easily with this machine, but no one has ever used it.’

The absence of an actuality entailment in both CMs and LMs further supports the view that both constructions qualify as generic sentences.

The claim defended here that CMs and LMs are identical in terms of genericity has not gone unchallenged. Ackema & Schoorlemmer (2005), for example, use the contrast in (21) to show that while CMs are obligatorily generic, LMs allow episodic readings.

- (21) a. Het probleem liet zich in tien minuten oplossen.  
*the problem let REFL in ten minutes solve*  
 ‘The problem could be solved in ten minutes.’
- b. <sup>?</sup>\*Het bleek dat dit boek makkelijk in tien minuten leest.  
*it turned.out that this book easily in ten minutes reads*  
 ‘It turned out that it is easy to read this book within ten minutes.’  
 (Ackema & Schoorlemmer 2005: 144, (43))

Note, however, that (21) does not form a minimal pair, and can thus not be taken as evidence for the alleged contrast between CMs and LMs.<sup>7</sup> While the LM in (a) occurs in the past tense, the CM in (b) is in the present tense. Crucially, tense interacts with the genericity/modality of middles in complex, and so far ill-understood ways (due to the fact that tense in middles is often ignored). Troseth (2009), for example, argues that genericity is not a defining characteristic of CMs, but rather it is an epiphenomenon of the fact that only present tense middles are discussed. She provides the examples of progressive and past tense CMs in (22). The data in (23) from Ahn & Sailor (to appear) are taken to illustrate the same point.

- (22) a. The chickens are killing nicely.  
 b. The bureaucrats were bribing easily until that new law got passed.  
 c. The walls are painting poorly. I think we should have cleaned them first.  
 (Troseth 2009: 8, (9-11))
- (23) a. Spam sold faster than we could restock it yesterday.  
 b. This poem by Catullus is translating quite easily now.  
 (Ahn & Sailor, to appear, (26))

<sup>7</sup> In fact, the contrast cannot be replicated in German, where (i) and (ii), corresponding to (21a) and (21b) respectively, are acceptable (thanks to Florian Schäfer for pointing this out to me).

(i) Das Problem ließ sich in zehn Minuten lösen.

(ii) Es stellte sich heraus, dass sich dieses Buch problemlos in 10 Minuten liest.



I will not go into the details of this issue here, but I would simply like to stress two points. First, if Troseth and Ahn & Sailor are right in their claim that CMs may receive episodic interpretations, there is no need to attribute a different status to LMs based on the possibility of interpreting them as particular, non-generic sentences. Second, I believe that none of the examples above convincingly shows that LMs/CMs need not be generic. Krifka et al. (1995) point out that it is not the case that generic sentences express 'timeless truths', as it is possible that a characterizing property held in the past without any implications for the present. In other words, the period of time in which a certain property holds can be restricted (see also Greenberg 1998 for a discussion of temporally restricted genericity). With this in mind, it is not at all clear that (21a) is episodic. It rather expresses that until it was solved, the problem had the property to be (easily) solvable. To put it differently, (21a) is no different from the CM in (24).

(24) Trabbis verkauften sich gut, solange sie produziert wurden.  
*trabants sold REFL well as.long.as they produced became*  
 'Trabants sold well, as long as they were being produced.'

(24) also involves temporally restricted genericity, which expresses that until trabants were no longer produced, they sold well (the same type of restricted genericity is shown in Troseth's example in (22b)).<sup>8</sup>

The proposed view that middles are non-episodic even when they occur in the past tense is also defended in Roberts (1987). He shows that even when middles occur in the past tense, they behave like other stative predicates (and unlike non-stative ones) in that stative verbs do not have to be included in the interval denoted by temporal adverbs ((25), taken from Roberts 1987).

- (25) a. John visited China last year.  
 b. John knew the answer last year.  
 c. Last week, chickens killed nicely.

Whereas (25a) implies that John's visit is over, John can still know the answer at the present moment in (25b). The same is true for the past tense middle in (25c), showing that middles pattern with statives and are therefore incompatible with an episodic interpretation. Turning to the middles that involve progressive aspect (e.g. (23b)), Fagan (1988) points out that even statives can occur in the progressive under certain circumstances, as (26) illustrates.

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<sup>8</sup> See also the following examples of temporally restricted genericity outside the domain of middle constructions.  
 (i) A good Catholic goes to Church today.  
 The indefinite singular DP receives a generic interpretation, which, following Krifka et al. (1995), requires a generic context. Yet, (i) also involves a specific time adverbial, which is normally considered to be incompatible with genericity.

(26) Young kids are knowing more and more about sex and violence these days.

In (26), the progressive is acceptable since it focuses on a change of state. Crucially, (23b) implies such a change of state in that it presupposes that prior attempts to translate the poem were more difficult. Troseth's examples of progressive middles, by contrast, were judged unacceptable by the native speakers I consulted.

In summary, I conclude that so far no convincing evidence has been advanced to show that CMs or LMs can be episodic. I therefore assume that genericity is a characterizing feature of middles, and that both CMs and LMs are obligatorily generic. In the next section, I will show that it is in fact a particular type of genericity that is involved in CMs and LMs: dispositionality.

#### 2.2.4 Dispositionality

It has frequently been observed that middles involve some type of modality (Fagan 1992; Ackema & Schoorlemmer 2005, a.o.). This was shown by the fact that the paraphrase of middles involves the ability modal *can* (27c). Since (27c) is also an adequate paraphrase of the LM in (27b), LMs arguably involve the same type of modality.<sup>9</sup>

- (27) a. Dieses Auto fährt sich gut. (CM)  
*this car drives REFL well*  
b. Dieses Auto lässt sich gut fahren. (LM)  
*this car lets REFL well drive*  
'This car drives well.'  
c. Man kann dieses Auto gut fahren.  
*one can this car well drive*  
'One can drive this car well.'

Following Lekakou (2005), I will assume that the modality component involved in middles is a consequence of the particular type of genericity involved. To be more precise, I treat middles as (a subclass of) dispositional generic sentences (see also Schäfer 2008; Holl 2010), which Lekakou specifies as follows:

- (28) **Disposition Ascriptions**  
a. express 'in virtue of' generalizations  
b. employ a VP-level Gen  
c. are subject-oriented

(Lekakou 2005: 68, (134))

In this section, I focus on the points in (a) and (c). The VP-level generic operator in (b) will be discussed in chapter 6.

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<sup>9</sup> For a discussion of the nature of the implicit argument which I express with the generic indefinite pronoun *man* 'one' in the paraphrase, see sections 2.2.5 and 2.3.2.

(28a,c) extend the semantic description of middles that is typically found in the literature. Middles involve not just the ascription of a property to the subject (as in Abraham 1986; Fagan 1992; Ackema & Schoorlemmer 2005; Troseth 2009, a.o.), they also stress that this property holds in virtue of some inherent and contextually defined property of the subject. This is illustrated for the middle in (29) with the paraphrase in (29b).

- (29) a. Dieser Boden reinigt sich leicht.  
*this floor cleans REFL easily*  
 ‘This floor cleans easily.’  
 b. ‘In virtue of some inherent property of the floor (its flat surface, the fact that it is not susceptible to chemical detergents, etc.), cleaning the floor is easy.’

As originally observed by van Oosten (1977), the implicit property which facilitates the eventuality denoted by the infinitival predicate has to be a property of the subject. Consider the following contrast:

- (30) This car drives well...  
 a. ...because the suspension is engineered well.  
 b.#...because we're driving on smooth pavement.

The continuations in (30a,b) overtly realize the implicit property in virtue of which the car drives well. While the continuation in (a) is felicitous, as it locates that property in the subject referent, the one in (b) is not, because the property in virtue of which the car drives well is attributed to some external factor, e.g. the pavement.<sup>10</sup>

As discussed in Lekakou (2005), what exactly this implicit property is has to be accommodated by the hearer of the utterance and is highly context-sensitive. Readability in an out-of-the-blue context (31a), for example, is dependent on other factors as readability in the context provided by the embedded clause in (31b).

- (31) a. Dieser wissenschaftliche Artikel liest sich gut.  
*this scientific article reads REFL well*  
 ‘This scientific article reads well.’  
 b. Dafür, dass der Artikel in eine Pfütze gefallen ist, liest er sich gut.  
*therefore, that the article in a puddle fallen is, reads it REFL well*  
 ‘Despite the fact that the article has fallen into a puddle, it reads well.’

In (31a) world-knowledge dictates that it is the style of the article that determines the degree of readability. In (31b), by contrast, it is the physical condition the article is in that is relevant – (31b) does not say anything about the way the article is actually written (in fact, the sentence could be truthfully uttered even if the article itself was poorly written).

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<sup>10</sup> Note that the two properties in (28a,c) correspond to the responsibility condition that has been claimed to restrict the set of predicates that can occur in CMs. See section 2.3.4 and chapter 5 for discussion.

Having sketched this interpretative aspect of CMs, note that LMs exhibit the same type of dispositional semantics. This is shown in (32a,b) using the same predicates as in (29) and (31).

- (32) a. Dieser Boden lässt sich leicht reinigen.  
*this floor lets REFL easily clean*  
 ≈ In virtue of some inherent property of the floor (its flat surface, the fact that it is not susceptible to chemical detergents, etc.), cleaning the floor is easy.
- b. Dieser wissenschaftliche Artikel lässt sich leicht lesen.  
*this scientific article lets REFL easily read*  
 ≈ In virtue of some inherent property of the article (e.g. the fact that it is well written, the topic is easy, etc), reading the article is easy.

In addition, parallel to CMs, the implicit property in virtue of which the embedded event can be realized in a certain manner has to be a property of the subject.

- (33) Das Auto lässt sich gut fahren...  
*the car lets REFL well drive*  
 ‘The car drives well...’
- a. ...weil die Radaufhängung gut konstruiert ist.  
 ...because the suspension is engineered well.’
- b.<sup>#</sup>...weil wir auf ebenem Asphalt fahren.  
 ...because we drive on smooth pavement.’

In sum, CMs and LMs qualify as dispositional generic sentences.

### 2.2.5 The Implicit Agent

The implied agent in LMs, just as the one in CMs, has the middle-specific interpretation of a generic indefinite (*man* ‘one’). Before I proceed, however, let me comment on a potential caveat. It has sometimes been claimed that the generic unaccusatives in (34) also qualify as middles (Condoravdi 1989; Klingvall 2007).

- (34) a. Glas zerbricht leicht.  
*glass breaks easily*  
 ‘Glass breaks<sub>INCHOATIVE</sub> easily.’
- b. Die Sonne geht im Osten auf.  
*the sun goes in.the east up*  
 ‘The sun rises in the east.’

The examples in (34) do not imply an agent that is potentially involved in the glass-breaking or the sun-rising event (in fact, (34a) can only imply an agent if the reflexive pronoun *sich* is present. See chapter 5 for discussion). If such generic unaccusatives were included in the discussion of middles, the presence and interpretation of the implicit agent would not be a core characteristic of middle constructions. As a consequence, an analysis of the implied

agent in LMs would not contribute anything to the question of whether LMs are middles or not. Since, however, most researchers have adopted the more narrow view that agentivity is a core characteristic of middles (e.g. Abraham 1986, 1994; Hale & Keyser 1987; Fagan 1992; Stroik 1992, 1995; Ackema & Schoorlemmer 1994, 2005; Marelj 2004; Lekakou 2005; Troseth 2009), I will do so, too.

It can be shown that CMs and LMs are also identical when it comes to the interpretation of the implicit agent. Recall that even though the agent argument is not overtly realized in either construction, both imply its existence, thereby differing fundamentally from other intransitive constructions such as anticausatives or unaccusatives. Traditionally, the implied agent in CMs has been taken to be generically quantified over, thus receiving an arbitrary interpretation (e.g. Fagan 1988, 1992; Cardinaletti 1990; Ackema & Schoorlemmer 1994, 2005; Steinbach 2002; but see Condoravdi 1989 for the claim that middles do not involve generic quantification over the implicit agent, but rather over events). This aspect of the interpretation of the implicit agent is particularly obvious in Fagan's (1988, 1992) or Ackema & Schoorlemmer's (1994, 2005) analysis of CMs, where a lexical rule such as (35) is invoked to assign arbitrary reference to the agent argument, thereby blocking it from projecting into the syntax.<sup>11</sup>

- (35) **Middle Formation** (following Fagan 1988)  
 Assign *arb* to the external theta-role

Fagan (1988) argues that the generic, arbitrary implicit agent in CMs can be paraphrased by 'people in general'. I will use the impersonal pronoun *man* 'one' instead. The fact that the agent in LMs can be paraphrased with the same type of pronoun as shown in (36) provides a first indication that LMs are parallel to CMs with respect to the interpretation of the implicit agent.

- (36) a. Papier lässt sich leicht zerreißen.  
*paper lets REFL easily tear*  
 'Paper tears apart easily.'  
 b. Man kann Papier leicht zerreißen.  
*one can paper easily tear*  
 'One can tear apart paper easily.'

If CMs involve an arbitrary implicit agent, it is expected that the addition of a specific agent to CMs is semantically incoherent (37b). In this regard, CMs behave in an identical way as 'canonical' disposition ascriptions (37a), suggesting that the particular interpretation of the implicit agent is a consequence of the dispositional semantics: dispositions are conceptualized to hold across agents (thus, the semantic properties of CMs do not follow from the nature of

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<sup>11</sup> The nature of this rule goes back to Rizzi's (1986) treatment of null objects.

the implicit agent, as suggested in Fagan 1988, 1992. Rather the interpretation of the agent is a consequence of the dispositional semantics, as argued in Lekakou 2005).

- (37) a. <sup>??</sup>Sugar is disposed to dissolve when put into water by John.  
 b. Zucker löst sich leicht auf, indem <sup>??</sup>Hans/man ihn ins Wasser legt.  
*sugar dissolves REFL easily up in.that Hans/one him in.the water puts*  
 c. Zucker lässt sich leicht auflösen, wenn <sup>??</sup>Hans/man ihn ins Wasser legt.  
*sugar lets REFL easily dissolve if John/one him in.the water puts*  
 ‘Sugar can be dissolved easily if Hans/one puts it into water.’

(37c) shows that the addition of a specific agent to LMs also results in semantic deviance, further supporting the claim that the implicit agent in CMs and LMs is interpreted identically.

Further evidence for this parallelism comes from the fact that the implicit external argument in CMs must be human (see e.g. Cardinaletti 1990; Holl 2010). To this end, consider the scenario in (38).

- (38) **Scenario:** Living in an area where tornados arise frequently, John decides to change his windows from ones that are made of normal glass to ones of bullet-proof glass. He hopes that this prevents them from breaking. Yet, they do not survive the next tornado.
- a. Die Fenster wurden wieder zerbrochen.  
*the windows became again broken*  
 ‘The windows were broken again.’
- b.\*Auch diese Fenster zerbrechen sich leicht.  
*also these windows break REFL easily*
- c.\*Auch diese Fenster lassen sich leicht zerbrechen.  
*also these windows lets REFL easily break*  
 ‘These windows can easily be broken, too.’

Under the given scenario, the passive sentence in (a) can be successfully uttered, suggesting that the implicit argument of passives can be construed as a (non-human) causer. CMs, by contrast, are not acceptable in such a context, which follows if the implicit argument of CMs has to be human. Such a human restriction is again expected if the implicit argument is a generically bound variable or is interpreted as an impersonal pronoun.<sup>12</sup> The fact that LMs are also unacceptable in this context suggests that the human restriction holds for these constructions as well, supporting the claim that the implicit argument in CMs and LMs is semantically identical.

In this section, I have shown so far that LMs pattern with CMs with respect to all the characterizing properties of middle constructions as given in (1), as well as with respect to the interpretation of the implicit agent. This legitimizes the discussion of LMs within the context of (dispositional) middle constructions (see Vater 1988; Ackema & Schoorlemmer 2005, for

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<sup>12</sup> See chapter 5 for a different way of how the human restriction in CMs can be accounted for.

the same conclusion). This observation is not trivial. I will show in the following that LMs and CMs differ in a number of ways, which ultimately will be traced back to structural differences between the two constructions. The existence of LMs alongside CMs (within one and the same language), then, has important consequences for the theory of middles, an issue I will address in some detail in chapter 6.

### 2.3 Differences Between Canonical and *Lassen*-Middles

The differences between LMs and CMs have already been observed in Höhle 1978 and Fagan 1992 (see also Kunze 1996; Ackema & Schoorlemmer 2005; Broekhuis & Corver (in prep.), for discussion). The following sections largely follow the discussion there.

#### 2.3.1 Complexity

The most obvious difference between CMs and LMs is the number of verbal elements involved. LMs contain a further predicate, *lassen* 'let', in addition to the one that denotes the dispositional property of the subject. While this additional verbal element canonically surfaces as an active finite verb form, the embedded predicate appears as a bare infinitive.

- (39) a. Dieses Auto fährt sich gut.  
       *this car drive.3SG REFL well*  
       b. Dieses Auto lässt sich gut fahren.  
       *this car let.3SG REFL well drive.INF*  
       ‘This car drives well.’

#### 2.3.2 By-Phrase

In most of the literature on CMs, the agent argument is claimed not to be syntactically active but rather to be present on some lexical-semantic/conceptual level (e.g. Abraham 1986, 1994; Fagan 1988, 1992; Ackema & Schoorlemmer 1994, 1995, 2006; Schäfer 2008; Troseth 2009; Kiparski 2013, a.o.; but see Stroik 1992, 1995; Hoekstra & Roberts 1993 for a different view). Evidence for this view comes from the incompatibility of CMs and *by*-phrases (40), which are generally taken to be indicative of a syntactically active implicit agent (e.g. Baker, Johnson & Roberts 1989; Alexiadou 2012; Alexiadou & Schäfer 2013, a.o.). LMs, by contrast, license a *by*-phrase (41) (Fagan 1992; Kunze 1996; Szatmári 2004; see Ackema & Schoorlemmer 2006; Broekhuis & Corver (in prep.) who show the same in Dutch).

- (40) a. Das Buch liest sich (\*von kleinen Kindern) gut.  
       *the book reads REFL by small children well*  
       ‘The book reads well (by small children).’

- b. Dieses Fahrradschloß knackt sich (\*von einem Profi) leicht.  
*this bike.lock picks REFL by a professional easily*  
 ‘This bike lock picks easily (by a professional).’
- (41) a. Das Buch lässt sich (von kleinen Kindern) gut lesen.  
*the book lets REFL by small children well read*  
 ‘The book can be read easily (by small children).’
- b. Dieses Fahrradschloß lässt sich (von einem Profi) leicht knacken.  
*this bike.lock lets REFL by a professional easily pick*  
 ‘This bike lock can be picked easily (by a professional).’

Some researchers have contested the claim that LMs productively allow *by*-phrases. Huber (1980), for example, has argued against this view based on the ungrammaticality of the examples in (42), and Höhle’s (1978) data in (43) are taken to prove the same point.

- (42) a.\*Das Buch lässt sich von mir beschaffen.  
*the book lets REFL by me organize*  
 ‘The book can be gotten by me.’
- b.\*Ihm lässt sich von mir helfen.  
*him lets REFL by me help*  
 ‘He can be helped by me.’
- (43) a.\*Hier lässt es sich von allen aushalten.  
 ‘One can live well in this place.’
- b.\*Der Stein ließ sich von mir nur mit Mühe hochheben.  
 ‘I was able to lift the stone only with much effort.’
- c.\*In dem Waldsee lässt es sich von geübten Schwimmern wunderbar schwimmen.  
 ‘Experienced swimmers can swim well in this lake.’
- d.\*Dort lässt es sich von niemandem gut tanzen.  
 ‘No one can dance well here.’

I would like to argue that none of the examples above convincingly refutes the claim that LMs allow *by*-phrases. Huber's examples in (42) are ungrammatical because the *by*-phrase introduces a specific referent, which, as shown in section 2.2.5, is incompatible with the dispositional semantics of middle constructions. As expected, the examples improve once this complication is taken care of.

- (44) a. Das Buch lässt sich leicht von einem Antiquar beschaffen.  
*the book lets REFL easily by an antiquarian obtain*  
 ‘The book can be obtained easily by an antiquarian.’
- b. Ihm lässt sich nur von einem Arzt helfen.  
*him lets REFL only by a doctor help*  
 ‘He can only be helped by a doctor.’



Turning to Höhle's examples, (43b) was accepted by my informants, as was (43c).<sup>13</sup> (43d) is indeed strange, but the acceptability of the following example suggests that this is due to independent reasons.

- (45) Auf Teppichboden lässt es sich von niemandem gut tanzen.  
*on carpeted.floor lets it REFL by noone well dance*  
'No one can dance well on carpeted floor.'

I can only speculate about the reason that makes (45) more acceptable than (43d). Note that, semantically, the dispositional property in (43d) is assigned to the modifier *dort* 'there'. This is a typical phenomenon in impersonal middles (see chapter 8 for discussion), where there is no (referential) subject that could function as the target of the disposition ascription. Recall further from section 2.2.4 that the target of the disposition ascription is also construed as the element in virtue of which the generic property holds. In other words, (43d) means that it is some inherent property of the place in question that is responsible for dancing to be impossible there. I assume that (45) is more acceptable than (43d) because, in terms of dispositionality, (45) makes more sense pragmatically. In (43d) it is unclear which property of a place might be responsible for the complete loss of 'danceability', while the effect of a carpeted floor on dancing is conceptually more straightforward. Independently of whether this is the correct explanation for the observed contrast, the acceptability of (45) shows that (43d) is not a counterexample to the claim that LMs do license *by*-PPs. The same holds for the example in (43a), as (46) seems acceptable.

- (46) ?In der Antarktis lässt es sich nur von denjenigen gut aushalten, die Kälte gewohnt sind.  
'Only those used to cold can live well in Antarctica.'

To conclude, the generalization that LMs, unlike CMs, (productively) allow *by*-phrases seems to hold once the particular semantics of dispositional sentences are taken into consideration.

### 2.3.3 Modification

It is a well-attested property of CMs that they (typically) require the presence of an adverbial modifier which specifies the way in which the eventuality denoted by the verbal predicate can be carried out. Acceptable adverbs thus are *easily*, *well*, *with difficulty*, etc.<sup>14</sup>

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<sup>13</sup> The grammaticality of (43b), despite the fact that the *by*-phrase introduces a specific referent, must be related to the tense properties of this example. Unlike Huber's examples in (42), (43b) involves past tense. The complicated interaction of middles and past tense has been discussed in section 2.2.3. I will not go any further into this issue.

<sup>14</sup> The actual quality of the adverb is still a matter of some debate. Condoravdi (1989) classifies the adverb in middles as a *rate* adverb, which measures out the event-time homomorphism. For Roberts (1987) or Broekhuis

- (47) a. Dieses Problem löst sich \*(leicht).  
*this problem solves REFL easily*  
 ‘This problem solves easily.’
- b. Das Buch verkauft sich \*(gut).  
*the book sells REFL well*  
 ‘The book sells well.’
- c. Feuchtes Holz verbrennt sich \*(schlecht).  
*damp wood burns REFL badly*  
 ‘Damp wood burns<sub>CAUSATIVE</sub> badly.’

LMs do not require such additional modification, as the data in (48) show.

- (48) a. Dieses Problem lässt sich (leicht) lösen.  
*this problem lets REFL easily solve*
- b. Das Buch lässt sich (gut) verkaufen.  
*the book lets REFL well sell*
- c. Feuchtes Holz lässt sich (schlecht) verbrennen.  
*damp wood lets REFL badly burn*

One might argue that CMs also render the adverb optional in well-defined contexts such as negation, with a co-occurring modal verb, or under verum focus (e.g. Roberts 1987; Cardinaletti 1990; Fagan 1992; Ackema & Schoorlemmer 1994, 2005; Marelj 2004; Lekakou 2005). Even though this is true, LMs do not need any such modification to ensure grammaticality, which means that the contrast with CMs is in fact valid.

### 2.3.4 Verb Class Restriction

The question of how to delimit the class of predicates that can occur in CMs has been a matter of much debate, and, in fact, has not yet been settled. Thus, the core observation to be presented in this section is that the class of predicates eligible in CMs, no matter how the restrictions are ultimately formulated, is a subclass of the ones that can occur in LMs. This entails that none of the potential restrictions that have been postulated for CMs plays a role in the context of LMs. I will show this by discussing three factors that have most frequently been proposed to be relevant for CMs: aspectual restrictions, affectedness, and agentivity (see Ackema & Schoorlemmer 2006 for a critical discussion of these and other potential restrictions).

Fagan (1992) proposes an aspectual delimitation of potential ‘CM-verbs’ in terms of Vendler’s verb classes. Accomplishments and activities are said to be acceptable in CMs, whereas achievements and states are not (49a; 50a) (see Roberts 1987 for a similar account,

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& Corver (in prep) it is an adverb that selects a (covert) experiencer (see also Abraham 1994 and Lekakou 2005). As this problem is orthogonal to the issue at hand, I will ignore it here. See chapter 5 for some discussion.

restricting the acceptable verb classes to accomplishments). Achievements, however, do form fine LMs as the data in (49b) and (50b) show.<sup>15</sup>

- (49) a. \*Diese Krankheit erkennt sich leicht.  
*this sickness recognizes REFL easily*  
 b. Diese Krankheit lässt sich leicht erkennen.  
*this sickness lets REFL easily recognize*  
 ‘This sickness can be recognized easily.’

- (50) a. \*Dieser Gipfel erreicht sich nur schwer.  
*this summit reaches REFL only heavily*  
 b. Dieser Gipfel lässt sich nur schwer erreichen.  
*this summit lets REFL only heavily reach*  
 ‘This summit can be reached only with difficulty.’

Alternatively, a number of approaches claim that the relevant factor determining the set of acceptable verbs for middle formation is *affectedness* (Jaeggli 1986; Roberts 1987), i.e. the logical object needs to be affected by the denoted event in order to be able to become the subject in a middle construction (see Ackema & Schoorlemmer 1994 for a derivation of this fact and an account of its exceptions). This accounts for certain predicates that are not captured by Fagan's generalization, such as the ones in (51).

- (51) a. Diese Vase zerbricht sich leicht.  
*this vase breaks REFL easily*  
 ‘This vase breaks<sub>CAUSATIVE</sub> easily.’  
 b. Feldhasen erlegen sich nur schlecht.  
*field.rabbitsshoot REFL only badly*  
 ‘It is difficult to shoot hares.’

Both predicates in (51) are achievements and are therefore expected to be unacceptable in middles under Fagan's account. Since both *break* and *shoot* imply a change of state, they combine with patient arguments which are, by definition, affected. Clearly, the notion of affectedness is irrelevant in the context of LMs. As the examples in (49) and (50) show, LMs can involve predicates that do not take patient arguments / affected objects.

Finally, a number of approaches suggest that the relevant notion determining the set of predicates that can occur in CMs is agentivity, e.g. the logical subject needs to be an agent (Abraham 1986, 1994; Roberts 1987; also Ackema & Schoorlemmer 1994, who, as a

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<sup>15</sup> Steinbach (2002) argues that CMs are compatible with any verb with at least one argument that is not an individual-level predicate - the aspectual properties of the predicate (the predicate-object complex) do not play a role. He provides the following example for the acceptability of CMs based on achievements:

(i) Von hier aus sieht sich das gegnerische Tor viel besser.  
*from here out sees REFL the opponent's goal much better*  
 ‘The opponent's goal can be seen much better from here.’ (Steinbach 2002: 24, (27d))

In my opinion and that of other native speaker I consulted, (i) is severely degraded, suggesting that Steinbach's restriction is too loose.

consequence of their assumptions concerning the representation of the lexical semantics of a verb, make use of the notion *Actor*). This restriction appears to be the most successful one in that it accounts for all the cases of ungrammatical CMs I have discussed so far.<sup>16,17</sup> Again, the contrast illustrated above with the examples in (49) and (50) shows that LMs are not thus restricted. Further evidence for this comes from the following examples involving the stative predicates *lieben* ‘love’ and *hassen* ‘hate’ (52), which, despite the fact that some speakers judge them as somewhat odd, are clearly not ungrammatical.

- (52) a. Gott läßt sich leicht lieben.<sup>18</sup>  
           ‘God can be loved easily.’  
       b. Hollywood läßt sich leicht hassen, leicht verachten, leicht beschimpfen.<sup>19</sup>  
           ‘Hollywood can be hated easily, can be despised easily, can be insulted easily.’

To summarize, none of the factors that were assumed to delimit the set of verbs acceptable in CMs appears to be relevant for LMs (see Ackema & Schoorlemmer 2006, who show that this holds true of the factors that have not been discussed here). This does not mean, however, that LMs are completely unrestricted, as they are incompatible with certain stative predicates (53a,b), or unaccusatives in general (53c).<sup>20</sup>

- (53) a.\*Ein kleines Auto lässt sich leicht besitzen.  
           *a small car lets REFL easily own*  
           Intended: ‘One can easily own a small car.’  
       b.\*100 Kilo lassen sich leicht wiegen.  
           *100 kilogram let REFL easily weigh*  
           Intended: ‘One can easily weigh 100 kilogram.’  
       c.\*Solche Blumen lassen sich leicht verwelken.  
           *such flowers let REFL easily wilt*  
           Intended: ‘Such flowers wilt easily.’

While (53c) can be ruled out as a consequence of the more narrowly defined dispositional semantics that make reference to an implicit agent, the ungrammaticality of the examples in (53a,b) cannot be likewise explained. In particular, these examples are not in conflict with the ‘in virtue of’-semantics of dispositional sentences, as one could easily imagine an inherent

<sup>16</sup> Depending on the language under investigation, this cannot be the only restriction, as it would falsely allow English middles to be based on unergative predicates.

<sup>17</sup> Clearly, under Condoravdi's broader definition of the *middle* (cf. the discussion at the beginning of section 2.2.5), this restriction is absolutely irrelevant.

<sup>18</sup> <http://www.freiburger-rundbrief.de/de/?item=1275>

<sup>19</sup> <http://www.kinematographie.de/HEFT47.HTM>

<sup>20</sup> Ackema & Schoorlemmer (2006) argue that LMs, in contrast to CMs, disallow effected objects (Zwart 1998, however, claims that they are not acceptable in CMs either). I cannot confirm this, as the following example is perfectly acceptable (a Google search turned up many more examples).

(i) Beide Flieger lassen sich leicht bauen und sind für Schwachwinde geeignet.

          ‘Both planes can be built easily and are apt for weak winds.’

(<http://www.rclineforum.de/forum/board19-fl-chenflugmodelle/nurfl-gler/36222-servoeinbau-bei-nuris/>)

property of small cars (e.g. that they are not very expensive) ‘in virtue of which’ it is easy to own them. Similarly, 100 kilos (in contrast to 2 tons) is a weight that a human being can easily and quickly acquire, such that (53b) should also be acceptable, contrary to fact. Furthermore, it is also not possible to account for the ungrammaticality of (53a,b) by making reference to the absence of an agent; I have shown above that the agentivity restriction of CMs does not extend to LMs. I will address the question of what determines which predicates can occur in LMs in chapter 5. For now, it is enough to note that LMs seem to have other verb class restrictions than CMs.

Before proceeding, let me briefly comment on one potential problem for my claim that LMs involve dispositional semantics. An often cited acceptability contrast that cannot be captured by any of the accounts discussed so far is illustrated in (54).

- (54) a. These books sell easily.  
b.\*These books buy easily.

Fagan (1992) accounts for the ungrammaticality of (54b) by making reference to the notion of *responsibility* (see Zwart 1998 for a syntax that crucially makes use of this concept). She argues that the structural subject in a middle must be construed as being responsible for the property denoted by the verbal predicate. While books can have a certain property that influences their potential of being sold, buying a book is something that is exclusively dependent on the buyer, rather than the thing being bought. It is clear that the notion of responsibility is inherent in Lekakou's (2004, 2005) semantic definition of dispositional sentences as subject-oriented ‘in virtue of’ generalizations. Lekakou's theory thus predicts that the structural subject must in some form be understandable as being responsible for the property ascription. One could thus argue that, as there are properties inherent in the subjects of (54) that can influence the selling, but none that could influence the buying process, the contrast in acceptability follows from the dispositional semantics of CMs.

Due to the assumption that the responsibility condition follows from the dispositional semantics combined with the claim made in section 2.2.4 that LMs qualify as dispositional sentences, the grammaticality of the LM in (55) seems surprising.

- (55) Ein Tier lässt sich leicht kaufen.  
*an animal lets REFL easily buy*  
‘An animal can be bought easily.’

Based on the preceding discussion, the acceptability of the example in (55) should mean that LMs are not dispositional.

Yet, it has been shown that CMs involving *buy* can be acceptable once they are put in a context that makes it clear that the subject has certain properties that potentially influence a buying process. This is illustrated with the following examples (the examples in (56) are from Steinbach 2002 (who attributes (56b) to Manfred Bierwisch); the data in (57) I found on the internet).

- (56) a. Bei fachlich geschultem Personal kauft sich die richtige Software letztlich  
*with qualified personnel buys REFL the right software in.the.end*  
 doch schneller als im Discounter.  
*yet faster than in.the discount store*  
 ‘In the end, the right software can be bought faster with qualified personnel than in the discount store.’
- b. Standardgrößen kaufen sich leichter als Sondergrößen.  
*standard-size buys REFL more.easily than extra-size*  
 ‘Standard-sized clothes can be bought more easily than extra-sized clothes.’
- (57) a. Modeschmuck kauft sich leicht.<sup>21</sup>  
 ‘It is easy to buy costume jewelry.’
- b. Eine Platte kauft sich leicht - man muss noch nicht mal seinen Bürostuhl dafür verlassen.<sup>22</sup>  
 ‘It is easy to buy a record - one does not even have to leave the office chair.’

In (56b), for example, it is the fact that standard sized clothes are more readily available, and, therefore, can be conceptualized as having a property ‘in virtue of which’ they are easy to buy. Similarly, the LM in (57) is used to express that, due to some inherent property, animals can be bought easily. As expected, the corresponding CM is acceptable as well.

- (58) Ein Tier kauft sich leicht.<sup>23</sup>  
 ‘An animal can be bought easily.’

Thus, the acceptability of LMs based on the predicate *kaufen* ‘buy’ is not an argument against the dispositional nature of LMs.

### 2.3.5 Impersonal Middles

Middles in German, both of the CM and the LM type, can be based on unergative predicates such as *tanzen* ‘dance’, resulting in impersonal CMs (59b) and LMs (59c).

- (59) a. Mark tanzt.  
 ‘Mark dances’
- b. Dort tanzt es sich gut.  
*there dances it REFL well*

<sup>21</sup> <http://einfach.weniger.blogspot.de/2012/07/modeschmuck.html>

<sup>22</sup> <http://www.metal-hammer.de/das-archiv/article283593/print/meister-der-kontroverse.html>

<sup>23</sup> <http://www.sittich-foren.de/viewtopic.php?f=1&t=19885>

- c. *Dort lässt es sich gut tanzen.*  
*there lets it REFL well dance*  
 ‘One can dance well there.’

The point of variation lies in the expletive pronoun *es* ‘it’. While the presence of the expletive is obligatory in CMs, it is rendered optional in LMs (Höhle 1978: 63; Kunze 1996: 649). The full empirical picture is thus (60):

- (60) a. *weil \*(es) sich hier gut tanzt.*  
*because it REFL here good dances*  
 b. *weil (es) sich hier gut tanzen lässt.*  
*because it REFL here good dance let*  
 ‘because one can dance well here’

## 2.4 Summary

In this chapter, I have shown that, despite a number of similarities between LMs and CMs which motivate a treatment of LMs as ‘true’ middles, there are also certain differences between the two constructions. I summarize the relevant aspects in the table in (61).

One task of this thesis will be to account for these similarities and differences.

### (61) Summary of Similarities and Differences Between CMs and LMs

	CMs	LMs
subject corresponds to internal argument	✓	✓
generic/dispositional interpretation	✓	✓
arbitrary agent	✓	✓
verb classes	restricted	less restricted
<i>by</i> -phrase	×	✓
manner modification	obligatory	optional
expletive in impersonal construction	obligatory	optional

## CHAPTER 3

### PERIPHRASTIC CAUSATIVES

#### 3.1 Introduction

In this chapter, I will be shifting attention away from LMs and towards the more canonical use of *lassen* ‘let’, namely its occurrence in the periphrastic causative construction (PCC). This detour is important for two reasons. First, I will argue in Chapter 4 that LM *lassen* and PCC *lassen* are related to such a degree that an understanding of the syntactico-semantic properties of the latter allows a better understanding of the former. Second, LMs will be argued to be derivationally related to periphrastic causatives. In order to see how this relationship is established, some knowledge about the syntax of PCCs in German is required. As the domain of PCCs is rather complex, I will only focus on those aspects of the construction that are of relevance for my analysis of LMs.

The chapter is structured as follows. After a brief introduction to PCCs (section 3.2), I will first introduce the different readings *lassen* can have (section 3.3). The syntax of PCC will be the topic of section 3.4. There I will argue that PCCs are not biclausal, but that *lassen* simply embeds a VoiceP. Section 3.5 provides a derivation of PCCs and includes a discussion of how the case properties can be accounted for in a post-syntactic approach to case. In section 3.6, I discuss the syntax of the so-called *lassen*-passive, a specific type of PCC in which the causee, i.e. the embedded external argument, is not overtly realized. I will argue that the infinitival complement of *lassen*-passives is neither a bare vP nor a nominalized infinitive, but rather involves the external argument introducing projection VoiceP. It is thus identical in size to the complement of *lassen* in canonical PCCs (for the sake of simplicity, I will refer to the latter type simply as PCC). The sole structural difference between the two constructions is that in PCCs, the embedded VoiceP introduces an overt argument in its specifier; this is not the case in *lassen*-passives. I also show how this structural difference accounts for the different binding properties of PCCs and *lassen*-passives.

#### 3.2 General Background

In addition to lexical causatives such as (1a), many languages have PCCs as in (1b,c).

- (1) a. Martin öffnet die Tür.  
*Martin opens the door*  
‘Martin opens the door.’



- b. Peter lässt Martin die Tür öffnen.  
*Peter lets Martin the door open.INF*  
 ‘Peter makes Martin open the door.’
- c. Er ließ ihn den Artikel lesen.  
*he.NOM let him.ACC the.ACC article read.INF*  
 ‘He made him read the article.’

Syntactically, PCCs differ from lexical causatives in that they involve another causative predicate (*lassen* ‘make’, which in (1b,c) embeds the lexical causative) in addition to a further external argument (*Peter/ihn* in the examples above), which is understood as the agent of an event that brings about the event denoted by the embedded predicate. Furthermore, the presence of *lassen* in (1b) has a morphological effect on the embedded predicate, which has to surface as a bare infinitive. Finally, the addition of *lassen* affects the case properties of the embedded subject, which surfaces with accusative case in German PCCs, as can be seen by the choice of pronoun in (1c).

Despite a certain surface similarity to object control constructions (comp. (1c) and (2b)), the embedded external argument in a PCC is not in a thematic relationship with the matrix predicate. This is indicated by the fact that while the quasi-argumental weather *it* is acceptable as the embedded subject in a PCC (2a), object-control constructions cannot embed weather verbs (2c). Thus, PCCs do not involve object-control, but qualify as an *Accusativus Cum Infinitivo* (AcI) construction (see Huber 1980; Felser 1999; Lundin 2003; Enzinger 2010, a.o. for further arguments against an object control and in favor of an AcI analysis of PCCs).

- (2) a. Er lässt es regnen.  
*he lets it rain*  
 ‘He makes it rain.’
- b. Er veranlasst ihn [den Artikel zu lesen].  
*he makes him the article to read*  
 ‘He makes him read the article.’
- c.\*Er veranlasst es zu regnen.  
*he makes it to rain*  
 ‘He makes it rain.’

Semantically, PCCs express a causal relationship between two events. To be more specific, the matrix predicate is associated with an event that is understood as the causing event *e* of the event *e'* denoted by the embedded predicate. As Suchsland 1987 and Gunkel 2003 point out, the actual nature of the causing event remains implicit or underspecified (e.g. (1b) does not name what Peter did to make Martin open the door).

Unlike lexical causatives, periphrastic causatives typically express indirect causation (Gunkel 2003; see Talmy 1976 for an overview of the different causation types that can be lexicalized in verbs). Therefore, the referents of the matrix and the embedded subject DP play a different

role in the overall proposition. Even though thematically both function as agents, the embedded agent in a PCC does not act ‘independently’, though its actions are under direct influence of the causing event and the matrix agent. In order to capture this difference, the higher external argument in PCCs is often referred to as *causer*, while the external argument of the embedded predicate is the *causee*.<sup>1</sup>

### 3.3 The Different Readings of *Lassen*

This section draws heavily on work by Huber (1980) and Enzinger (2010). These authors distinguish three different readings for the causative predicate *lassen*, illustrated in (3).<sup>2</sup>

- (3) a. Der Lehrer lässt die Kinder eine Prüfung schreiben.  
*the teacher lets the children an exam write*  
 ‘The teacher makes the children write an exam.’  
 b. Die Mutter lässt die Kinder länger aufbleiben.  
*the mother lets the children longer up.stay*  
 ‘The mother allows the children to stay up longer.’  
 c. Der Maler lässt das Bild hängen.  
*the painter lets the picture hang*  
 ‘The painter leaves the picture hanging.’

(3a) is taken to express *directive* or *coercive* causation, whereas (3b) expresses *permission*. The reading of *lassen* in (3c) is called the *non-interference* reading. Unlike in (3a) and (3b), the embedded event exists prior to the ‘causing’ event, and the matrix subject simply does not interrupt the eventuality denoted by the embedded predicate.

Addressing the question whether all three readings follow from one (underspecified) lexical item, Huber argues extensively that this is not the case. While no syntactic difference between the directive and the permissive use can be identified (Nedjalkov 1976; see Suchsland 1987 for a different view), non-interference *lassen* clearly behaves differently on a number of levels. I will briefly discuss two such differences here (see Huber 1980 for more evidence). First, in the context of a perfect auxiliary, directive and permissive *lassen* exhibit the so-called IPP-effect (*Infinitivus Pro Participio*; also known as *Ersatzinfinitiv*): instead of participial morphology, the infinitival form surfaces (4a,b). While this effect is obligatory with directive and permissive *lassen*, it is optional in the case of non-interference *lassen* (4c).

<sup>1</sup> The term *causer* as it is used here must not be confused with the thematic role *causer*, which is restricted to inanimate, or non-intentionally acting entities.

<sup>2</sup> Gunkel (2003) distinguishes five different uses of *lassen*. I follow the classification in Huber since I do not believe that the direct causation expressed by *lassen* in cases where it embeds an unaccusative predicate requires independent treatment. It rather results from the lack of an intervening embedded agent. See also Nedjalkov (1976), Höhle (1978) for a more elaborate discussion of the different readings of German *lassen*, including its uses as a main verb (e.g. where it combines with a nominal or a small clause complement). For the purposes of this thesis, the more restricted classification adopted here is sufficient.

- (4) a. Der Lehrer hat die Kinder eine Prüfung schreiben lassen / \*gelassen.  
*the teacher has the children an exam write let.INF let.PRT*  
 ‘The teacher has made the children write an exam.’
- b. Die Mutter hat die Kinder länger aufbleiben lassen / \*gelassen.  
*the mother has the children longer up.stay let.INF let.PRT*  
 ‘The mother has allowed the children to stay up longer.’
- c. Der Maler hat das Bild hängen lassen / gelassen.  
*the painter has the picture hang let.INF let.PRT*  
 ‘The painter has left the picture hanging.’

Second, non-interference *lassen* can be passivized (5c). This does not hold for directive or permissive *lassen* (5a,b), independently of whether the embedded predicate surfaces in its participial or infinitival form.<sup>3,4</sup>

- (5) a.\*Die Kinder wurden (von dem Lehrer) eine Klausur schreiben lassen / gelassen.  
*the children became by the teacher an exam write let.INF let.PRT*  
 ‘The children were made to write an exam by the teacher.’
- b.\*Die Kinder wurden (von der Mutter) ein Eis essen lassen / gelassen.  
*the children became by the mother an ice eat let.INF let.PRT*  
 ‘The children were allowed to eat an ice cream by the mother.’
- c. Das Bild wurde (von dem Maler) hängen \*lassen / gelassen.  
*the picture became by the painter hang let.INF let.PRT*  
 ‘The picture was left hanging by the painter.’

I follow Huber (1980) in assuming that non-interference *lassen* constitutes a separate lexical item (i.e. a different Root), grouping directive and permissive *lassen* together under the term causative *lassen* (see Enzinger 2010 for the same conclusion).

At this point, it has to be noted that the directive and the permissive interpretation of causative *lassen* are not fully co-extensive, a fact that lead Suchsland (1987) to postulate two separate lexical items. Consider the data in (6).<sup>5</sup>

- (6) a. Der Lehrer ließ die Schüler das Buch mitnehmen.  
*the teacher let the students the book take.away*  
 ‘The teacher made the students take away the book.’  
 ‘The teacher let the students take away the book.’

<sup>3</sup> The fact that (5c) is only acceptable if the participle is used suggests that the acceptability of passivization is related to the optionality of the IPP-effect. This makes sense under the assumption that participial morphology is required in passives, and only non-interference *lassen* can combine with it.

<sup>4</sup> There need to be additional restrictions on the passivizability of non-interference *lassen*, as the following data show. In the active, all sentences allow the non-interference reading, yet, it seems that if the embedded predicate involves a CAUS-component / change of state semantics, passivization is blocked.

- (i)\*Das Schiff wurde versinken gelassen.  
*the ship became sink let.PRT*
- (ii)\*Die Blume wurde verwelken gelassen.  
*the flower became wither let.PRT*
- (iii) Der Junge wurde schlafen gelassen.  
*the boy became sleep let.PRT*

<sup>5</sup> See section 3.6 for details on the construction in (6b).

- b. Der Lehrer ließ das Buch mitnehmen.  
*the teacher let the book take.away*  
 ‘The teacher made someone take away the book.’  
 \*‘The teacher led someone take away the book.’

(6a) allows for both a directive and a permissive reading of *lassen*. In contexts where the causee is suppressed as in (6b), however, the permissive interpretation is no longer available.<sup>6</sup> I believe that this contrast does not require one to lexically distinguish between directive and permissive *lassen*. Instead, I assume that the loss of the permissive interpretation follows from the semantics of the construction in (6b). It has been argued that the function of periphrastic causatives in which the causee is not overtly realized (i.e. cases like (6b)) is to stress the prominence of the caused event itself, thereby backgrounding the relevance of the causee (see e.g. Kayne 1975 for French). It could very well be that this fact is incompatible with permissive semantics. Loewenthal (2003), for example, points out that in the light of Talmy's Force Dynamics (1988), ‘it seems plausible that the force of the causee is a crucial force in the realization of the effected predicate in a permissive construction’ (Loewenthal: 99), such that it must not be omitted. Further support for the view that the loss of the permissive reading in (6b) does not require the postulation of two different lexical items comes from the observation that the configuration in (6b) does allow the permissive interpretation, but only if the embedded object is realized as a reflexive pronoun (7).

- (7) Der Lehrer ließ sich mitnehmen.  
*the teacher let REFL take.away*  
 ‘The teacher made someone take him away.’  
 ‘The teacher allowed someone to take him away.’

Confronted with (7), it seems rather stipulative to assume that a separate permissive *lassen* exists. This is because its syntactic distribution would have to make reference to the nature of the theme argument of the embedded predicate. If it is realized as a referential DP, permissive *lassen* cannot be used. If the embedded theme is realized as a reflexive pronoun, permissive *lassen* can occur. I therefore stick to the assumption that there is just one underspecified verbal element *lassen*, the interpretation of this element depending on certain contextual factors (see Lundin 2003, who reaches the same conclusion with respect to Swedish *låta* ‘let’, which exhibits the same behavior as German *lassen*).

Permission and directive causation do not exhaust the possible readings causative *lassen* can have. The matrix subject of a PCC in German does not have to be agentive, but it can be

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<sup>6</sup> This is true even if the causee is introduced as a *by*-phrase.

an inanimate causer.

- (8) a. Der Sturm lässt die Besucher frühzeitig nach Hause gehen.  
*the storm lets the visitors early to home go*  
‘The storm causes the visitors to return home early.’
- b. Der drohende Frost lässt die Bauern die Ernte früher einholen als geplant.  
*the threatening frost lets the farmer the crop earlier harvest than planned*  
‘The upcoming frost causes the farmers to harvest the crop earlier than planned.’
- c. Die Aussichtsplattform lässt die Besucher das ganze Areal überblicken.  
*the observation.deck lets the visitors the whole area overlook*  
‘The observation deck enables the visitors to overlook the whole area.’
- d. Die Brille lässt Peter besser sehen.  
*the glasses lets Peter better see*  
‘The glasses enable Peter to see better.’

As the paraphrases show, the semantic contribution of *lassen* in these cases is different from the one thus encountered in the PCCs. Since an inanimate causer cannot direct or permit someone to do something, *lassen* in (8) is simply interpreted as *cause* or *enable*. Apart from this semantic difference, *lassen* in (8) behaves identically to causative *lassen* in obligatorily triggering the IPP-effect (9) and blocking passivization (10).

- (9) a. Der Sturm hat die Besucher frühzeitig nach Hause gehen lassen / \*gelassen  
*the storm has the visitors early to home go let.INF / let.PRT*  
‘The storm caused the visitors to go home earlier than planned.’
- b. Die Brille hat Peter besser sehen lassen / \*gelassen.  
*the glasses have Peter better see let.INF let.PRT*  
‘The glasses enabled Peter to see better.’
- (10) a. \*Die Besucher wurden (vom Sturm) frühzeitig nach Hause gehen lassen/gelassen.  
*the visitors became by.the storm early to home go let.INF let.PRT*
- b. \*Peter wurde (von der Brille) besser sehen lassen/gelassen.  
*Peter became by the glasses better see let.inflet.prt*

Due to this parallelism, I assume that (8) involves causative *lassen* as well, and the semantic difference follows from the particular nature of the causer: if the causer is animate, *lassen* can express directive causation or permission. If it is inanimate, the PCC will be interpreted to denote simple causation or ‘enabling causation’. In other words, the data considered so far strongly suggests that causative *lassen* has a very reduced semantics that allow it to receive a deontic or a causer/facilitator interpretation, depending on context.<sup>7</sup> Further evidence for this claim comes from the fact that the animacy of the embedded subject also affects the interpretation of causative *lassen*.

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<sup>7</sup> In fact, across languages the causative predicate involved in PCCs has often been treated as a light verb, expressing simple causation; see Wood (2011, 2012) for Icelandic and Lundin (2003) and Rawoens (2013) for Swedish. I come back to the question of whether German *lassen* can be analyzed as a light verb in section 3.5.

- (11) a. Die Filmcrew lässt ein Erdbeben die Stadt zerstören.  
*the film.crew lets an earthquake the city destroy*  
 ‘The film crew causes an earthquake to destroy the city.’  
 b. Peter ließ das Programm den Computer durchsuchen.  
*Peter lets the program the computer through.search*  
 ‘Peter makes the program search the computer.’

If the causee is inanimate, as in the examples in (11), it does not make sense to speak of directive causation or permission, both of which are concepts that are dependent on the presence of a human subject. Again, *lassen* in (11) behaves like causative *lassen* in terms of the IPP-effect and passivization.

- (12) a. Die Filmcrew hat ein Erdbeben die Stadt zerstören lassen /\*gelassen.  
*the film.crew has an earthquake the city destroy let.INF let.PRT*  
 ‘The film crew has caused an earthquake to destroy the city.’  
 b. Peter hat das Programm den Computer durchsuchen lassen /\*gelassen.  
*Peter has the program the computer through.search let.INF let.PRT*  
 ‘Peter has made the program search the computer.’

- (13) a.\*Ein Erdbeben wurde die Stadt zerstören lassen / gelassen.  
*an earthquake became the city destroy let.INF let.PRT*  
 b.\*Das Programm wurde den Computer durchsuchen lassen / gelassen.  
*the program became the computer through.search let.INF let.PRT*

The data in (12) and (13) thus show that there is no evidence that despite the semantic difference *lassen* in the examples in (11) is any different from causative *lassen* as we identified it in other PCCs. This further supports the claim that causative *lassen* in German PCCs is semantically underspecified with respect to the type of causation expressed. I will therefore simply speak of causative *lassen* in the following.<sup>8</sup>

Having discussed the most important readings and occurrences of *lassen*, I will now turn to the syntax of PCCs, starting with the complement of causative *lassen*.

### 3.4 The Size of the Infinitival Complement

It has often been argued that PCCs pose conflicting requirements on the syntax, in particular with respect to the question whether the construction is mono- or biclausal (see Reis 1976; Grewendorf 1983, 1987, 1989, 1990; Haider 1986a,b, 1993, 2010; Suchsland 1987; Fanselow 1987, 1989, 1991; Gunkel 2003; Enzinger 2010; a.o. for discussion).

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<sup>8</sup> See Rawoens (2013) for a discussion of which reading, (permissive or causative) is basic. She concludes that the diachronic evidence suggests that it is not the permissive meaning that is the original one, but rather the causative meaning. Tracing a grammaticalization path from the main verb use to causative *lassen*, Rawoens notes that ‘it has shifted to a marker of a more abstract concept, i.e. as a marker of factive or permissive causation’ (121). Gunkel (2003), however, provides diachronic evidence that suggests that German *lassen* was originally permissive.

One of the main arguments for the bi-clausal status of PCCs is the following parallelism between PCCs (14) and clearly bi-clausal structures (15) with respect to binding (the data are based on Gunkel 2003, 177).

- (14) a. Karl<sub>i</sub> ließ Abdelkader ihn<sub>i</sub> / \*sich<sub>i</sub> rasieren.  
*Karl let Abdelkader him REFL shave*  
 ‘Karl<sub>i</sub> made Abdelkader shave him<sub>i</sub>.’  
 b. Abdelkader ließ Karl<sub>i</sub> \*ihn<sub>i</sub> / sich<sub>i</sub> rasieren.  
*Abdelkader let Karl him REFL shave*  
 ‘Abdelkader made Karl shave himself.’
- (15) a. Karl<sub>i</sub> veranlasste, dass Abdelkader ihn<sub>i</sub> / \*sich<sub>i</sub> rasiert.  
*Karl made that Abdelkader him REFL shaves*  
 ‘Karl<sub>i</sub> made that Abdelkader shaves him<sub>i</sub>.’  
 b. Karl veranlasste, dass Abdelkader<sub>i</sub> \*ihn<sub>i</sub> / sich<sub>i</sub> rasiert.  
*Karl made that Abdelkader him REFL shaves*  
 ‘Karl made that Abdelkader shaves himself.’

An embedded object in a PCC needs to be realized as a pronoun if it is co-referent with the matrix subject (14a) or as an anaphor if it is bound by the embedded subject (14b). With respect to these binding facts, PCCs are fully parallel to clearly bi-clausal constructions such as those in (15). The data indicate that the infinitival complement in PCCs constitutes a binding domain, which has traditionally been associated with the notion of subjecthood (see already Chomsky's 1973 *specified subject condition*), and, by extension, to full clausal properties. Clearly, in an unambiguously mono-clausal context, co-reference of an object with the subject requires reflexivization (16).

- (16) Peter<sub>i</sub> hatte dieser Frau \*ihn<sub>i</sub> / sich<sub>i</sub> vorgestellt.  
*Peter had this.dat woman him REFL presented*  
 ‘Peter introduced himself to this woman.’

With respect to binding, then, PCCs pattern with bi-clausal rather than monoclausal structures.

Yet, there is also evidence against the bi-clausal status of PCCs. Starting with Bech (1955), two types of infinitival complements have been identified, differing with respect to their sentential status. While so-called incoherent infinitives are sentential, coherent infinitives are not and exhibit transparency to otherwise clause-bounded phenomena. For PCCs, it has frequently been observed that their infinitival complement patterns with coherent infinitives (Haider 1986a,b, 1993, 2010; Fanselow 1989; Gunkel 2003; a.o.). This can be seen by comparing them to (accusative) object-control constructions, whose infinitival complement is generally considered to be incoherent (see e.g. Haider 1986a; Sabel 2002). To this end, consider the data in (17) taken from Fanselow (1989) and contrast it with the data in (18).

- (17) a. dass ein solch schlechtes Lied<sub>i</sub> niemand [eine ausgebildete Sängerin <sub>t<sub>i</sub></sub> singen]  
*that a such bad song nobody a skilled vocalist sing*  
lassen würde.  
*let would*  
‘that nobody would make a skilled vocalist sing such a bad song.’
- b. dass wir ihn das Lied nicht singen lassen (und der Moderator auch nicht).<sup>9</sup>  
*that we him the song not sing let and the showmaster also not*  
‘that we don't make him sing the song (and the showmaster doesn't either).’
- c.\*dass wir ihn nicht lassen [das Lied singen].  
*that we him not let the song sing*
- d.\*dass wir nicht lassen [ihn das Lied singen].  
*that we not let him the song sing*
- e.\*dass [ihn das Lied singen] wir nicht lassen.  
*that him the song sing we not let*
- f.\*dass er ihn mir helfen bestimmt ließ.  
*that he him me help certainly let*  
‘that he certainly made him help me.’
- g. helfen lassen hat er ihn mir nicht.  
*help let has he him me not*
- (18) a.\*dass ein solch schlechtes Lied<sub>i</sub> niemand [eine ausgebildete Sängerin <sub>t<sub>i</sub></sub> zu singen]  
*that a such bad song noone a educated vocalist to sing*  
veranlassen würde.  
*make would*  
‘that nobody would make a skilled vocalist sing such a bad song.’
- b. dass wir ihn das Lied nicht zu singen veranlassen (\*und der Moderator auch nicht).  
*that we him the song not to sing make and the showmaster also not*  
Intended: ‘That we don't make him sing the song, and the showmaster doesn't either.’
- c. dass wir ihn nicht veranlassen [das Lied zu singen].  
*that we him not make the song to sing*
- d. dass ihn [das Lied zu singen] wir veranlasst haben.  
*that him the song to sing we made have*
- e. dass er ihn mir zu helfen bestimmt veranlasste.  
*that he him me to help certainly made*  
‘that he certainly made him help me.’
- f.\*[zu helfen veranlasst] hat er ihn mir nicht.  
*to help made has he him me not*

(17a-g) illustrate the classical coherence tests. First, (17a) involves the scrambling of an embedded object into the matrix clause, which is impossible if the construction is bi-clausal (18a). Second, embedded negation in a coherent infinitive can take wide scope over the matrix predicate (17b), while this is not possible with an incoherent infinitive (18b). Third, extraposition of the infinitival complement requires the latter to have sentential status ((18c); see e.g. Haider 1993; ter Beek 2008). The fact that extraposition is impossible in the context of PCCs, independently of whether the extraposed phrase contains the embedded subject or

<sup>9</sup> The continuation in (17b) and (18b) is based on the modification of the negation test provided in Bayer, Schmid & Bader (2005) and is designed to force the wide scope interpretation of the negation.



not (17c,d), suggests that the infinitive lacks sentential status. Fourth, the contrast between (17e) and (18d) illustrates that scrambling of the whole infinitival clause, similar to extraposition, is only possible with an incoherent infinitive. Fifth, no material must intervene between the matrix predicate and the predicate of a coherent infinitive (17f) - a restriction that does not hold if the infinitive is sentential (18e). Finally, the topicalization of the matrix predicate together with the embedded verb is only possible in the context of coherent infinitives (e.g. Haider 1993, 2010; cf. the ungrammaticality of (18f)). The acceptability of (17g) thus indicates that PCCs involve a coherent infinitive. In sum, with respect to the canonical coherence tests, PCCs are monoclausal, which seems to be in conflict with the conclusion drawn from the binding data reviewed above.

To resolve this apparent paradox, Fanselow (1989) argues that coherence does not entail mono-clausality (see Haider 1986a,b for the same conclusion). He proposes that the tests employed in (17) are only sensitive to the presence/absence of a CP-layer. This means that incoherent infinitives are CPs, while coherent ones are IPs/TPs. In other words, sentences involving coherent infinitives would not be monoclausal in the strict sense, since they contain two designated subject positions. As a consequence of this analysis, the binding facts above would no longer be in contradiction with the coherence tests.

A new approach to the interrelation between coherence and mono-clausality has been provided in Wurmbrand (2001), who argues that the traditional division into coherent and incoherent infinitives is too coarse. Evidence for this position comes from the fact that coherence diagnostics often give contradictory results. For example, the acceptability of pronoun fronting in (19a) or long passivization in (20b) have generally been acknowledged to diagnose coherent infinitives (see Höhle 1978 for the first discussion of long passives, and Haider 1986a for long passives as a coherence test). This is illustrated by the ungrammaticality of the bi-clausal examples in (19b) and (20d) (see Wurmbrand 2001 for further evidence that *zugeben* ‘to admit’ combines with a coherent infinitive obligatorily).<sup>10</sup>

- (19) a. weil ihn<sub>i</sub> der Bauer [t<sub>i</sub> zu reparieren] versucht hat. (pronoun front.)  
*because him.ACC the.NOM farmer to repair tried has*  
 ‘because the farmer tried to repair it.’  
 b.\*weil ihn<sub>i</sub> der Junge [t<sub>i</sub> zu stehlen] zugegeben hat.  
*because it.ACC the.NOM boy to steal admitted has*  
 ‘because the boy admitted to steal it.’
- (20) a. weil der Bauer den Traktor zu reparieren versucht hat.  
*because the.NOM farmer the.ACC tractor to repair tried has*  
 ‘because the farmer tried to repair the tractor.’

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<sup>10</sup> I adjusted the bi-clausal examples to ensure that the ungrammaticality is not rooted in semantic incoherence.

- b. weil der Traktor zu reparieren versucht wurde. (long passive)  
*because the.NOM tractor to repair tried became*  
 ‘because it was tried to repair the tractor.’
- c. weil der Junge den Traktor zu stehlen zugegeben hat.  
*because the.NOM boy the.ACC tractor to repair admitted has*  
 ‘because the boy admitted to steal the tractor.’
- b.\*weil der Traktor zu stehlen zugegeben wurde.  
*because the.NOM tractor to steal admitted became*

Pronoun fronting is a variant of the scrambling test discussed above and involves movement of an embedded object pronoun across the matrix subject. In long passives, matrix passivization affects the argument realization of the embedded predicate (cf. the corresponding active example in (20a)). As shown in (20b), the embedded object surfaces as the matrix subject (indicated by the nominative form of the definite article).

Against the prediction made by a bi-partition of infinitival complements into coherent and incoherent ones, not every infinitival construction that allows pronoun fronting necessarily allows long passivization (21).

- (21) a. weil ihn<sub>i</sub> der Bauer [<sub>t<sub>i</sub></sub> zu reparieren] angefangen hat.  
*because him.ACC the.NOM farmer to repair began has*  
 ‘because the farmer began to repair it.’
- b.\*weil der Traktor zu reparieren angefangen wurde.  
*because the.NOM tractor to repair began became*  
 ‘because one began to repair the tractor.’

This failure of certain coherence tests is unexpected under the traditional account. Either an infinitive is coherent or not, and if it is, it should pass all coherence diagnostics. In order to capture the observation that in certain cases not all coherence diagnostics apply, Wurmbrand proposes a three-way distinction of infinitival constructions. Building on the terminology in Rizzi (1978), she distinguishes three types of infinitival complements depending on their actual size: restructuring, reduced non-restructuring and non-restructuring infinitives.<sup>11</sup> Similar to Fanselow (1989), Wurmbrand argues that the existent coherence/restructuring diagnostics are sensitive to different aspects of the syntactic structure, i.e. to the presence/absence of certain projections. (22) summarizes (some of) her conclusions.<sup>12,13</sup>

<sup>11</sup> The term *restructuring* in Rizzi was used to refer to a structure changing rule. Wurmbrand takes a configurational approach to restructuring, assuming that restructuring infinitives are base-generated infinitival complements that lack a certain number of projections. I will use the term *restructuring* in Wurmbrand's sense.

<sup>12</sup> Unlike Wurmbrand, I assume that the external argument is introduced in VoiceP, which is independent from vP. Wurmbrand's vP will thus be my VoiceP, and her VP will correspond to vP in my system.

<sup>13</sup> The table holds for lexical restructuring predicates, which Wurmbrand distinguishes from functional restructuring predicates such as modals or certain raising verbs. In contrast to lexical restructuring predicates, functional ones are associated with functional projections, which are canonically assumed to be located above the thematic part of the clause (see Cinque 2004 for the claim that all restructuring predicates are functional). This entails that functional restructuring predicates by definition occur in monoclausal contexts and exhibit

## (22) German Infinitival Constructions

type	structure	possible operations	impossible operations
non-restructuring	CP	- extraposition - relative clause pied piping	- long passive - scrambling - pronoun fronting
reduced non-restructuring	VoiceP or TP	- pronoun fronting - focus scrambling	- long passive - (non-focus) scrambling - relative clause pied piping
restructuring	vP	- long passive - scrambling - pronoun fronting	- extraposition - relative clause pied piping

The notion of *restructuring* in Wurmbrand's analysis is thus epiphenomenal of the size of the infinitive. A restructuring infinitive is simply an infinitival complement that lacks all projections that block operations such as scrambling, pronoun fronting, or long passivization, while a reduced non-restructuring infinitive is characterized by the presence of the projections that block scrambling and long passives (VoiceP/TP) and by the absence of the projection that blocks pronoun fronting and focus scrambling (CP).

Wurmbrand's approach of graded restructuring can thus account for the difference observed in (19), (20) and (21) above: *versuchen* 'try' (optionally) embeds a restructuring infinitive / a bare vP, whereas *anfangen* 'begin' combines with a reduced non-restructuring infinitive (e.g. a VoiceP or TP). As a consequence, pronoun fronting will be acceptable in both contexts, while long passivization is only possible with the matrix predicate *versuchen*. In the following, I adopt Wurmbrand's approach to restructuring and employ the phenomena discussed in her work to investigate the size of the infinitival complement in PCCs.

The unacceptability of extraposition (cf. 17c,d), as well as the failure of relative clause pied-piping (23a), suggests that the infinitival complement in PCCs lacks the CP-layer (see

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restructuring effects obligatorily, even though their complement is naturally bigger than a bare vP/VP. I will not discuss functional restructuring here.

(23b) for the acceptability of relative clause pied-piping with a matrix predicate that combines with a non-restructuring infinitive).

- (23) a. \*das Buch, das lesen ich ihn ließ.  
*the book that read I him let*  
'the book which I made him read.'  
b. das Mädchen, das zu lieben er zugab.  
*the girl that to love he admitted*  
'the girl which he admitted to love.'

Before I proceed, let me briefly comment on a potential wrinkle. If PCCs involve an infinitival complement that is smaller than CP, it is expected based on (22) that pronoun fronting should be possible in PCCs. This, however, has been contested in the literature. Grewendorf (1983, 1989), for example, observes that the scrambling of an embedded dative pronoun across the matrix subject is ungrammatical (24).

- (24) \*weil ihnen<sub>i</sub> Karl den Arzt t<sub>i</sub> helfen ließ.  
*because them Karl the doctor help let*  
'because Karl made the doctor help them.'

Does this mean that we have to reject the structure-diagnostic correlation in (22)? Although I agree with Grewendorf's judgement, I do not believe that the ungrammaticality of (24) is related to the syntactic status of the infinitival complement. Höhle (1978) and Gunkel (2003) point out that the embedded object pronoun cannot even be scrambled across the embedded external argument (25a,b). This is unexpected if the infinitival complement is sentential, since, in monoclausal structures, an object pronoun can precede the subject (25c).

- (25) a. \*weil Karl ihnen<sub>i</sub> den Arzt t<sub>i</sub> helfen ließ.  
*because Karl them the doctor help let*  
'because Karl made the doctor help them.'  
b. \*Karl ließ ihr<sub>i</sub> den Knaben t<sub>i</sub> ein Bild zeigen.  
*Karl let her.DAT the boy a picture show*  
'Karl made the boy show her a picture.' (Höhle 1978: 56)  
c. weil ihnen<sub>i</sub> der Lehrer t<sub>i</sub> eine Hausaufgabe gab.  
*because them.DAT the.NOM teacher a.ACC homework gave*  
'because the teacher gave them a homework assignment.'

How can this situation be explained? Höhle points out that apparently a dative DP cannot precede an accusative DP if the latter is agentive (see also Lenerz 1977 for the claim that agentivity potentially influences word order), which would explain the ungrammaticality of (24) and (25a,b) independently of the size of the infinitival complement.

A further argument against Grewendorf's claim that the infinitive in PCCs is sentential can be found in Gunkel (2003). He provides the examples in (26), which involve scrambling of an

object pronoun (26a) and a non-pronominal object DP (26b) across the matrix subject. Although the sentences are somewhat odd, they cannot be considered ungrammatical. If PCCs were bi-clausal, both scrambling operations should lead to ungrammaticality, as the examples in (27) show.

- (26) a. ?weil es<sub>i</sub> der Herr Pfarrer die Gemeinde t<sub>i</sub> singen lassen wollte.  
*because it the Mr priest the community sing let wanted*  
 ‘because the priest wanted to make the community sing it.’  
 b. ?weil ihn<sub>i</sub> dieses Buch<sub>j</sub> niemand t<sub>i</sub> t<sub>j</sub> lesen lassen wollte.  
*because him this book noone read let wanted*  
 ‘because noone wanted to make him read the book.’
- (27) a. \*weil es<sub>i</sub> der Herr Pfarrer die Gemeinde t<sub>i</sub> zu singen veranlassen wollte.  
*because it the Mr priest the community to sing make wanted*  
 ‘because the priest wanted to make the community sing it.’  
 b. \*weil ihn<sub>i</sub> dieses Buch<sub>j</sub> niemand t<sub>i</sub> t<sub>j</sub> zu lesen veranlassen wollte.  
*because him this book noone to read make wanted*  
 ‘because noone wanted to make him read the book.’

The contrast between (26) and (27), Gunkel argues, is unexpected if PCCs involved an embedded CP. Whatever the ultimate reason for the ungrammaticality of (24) is, I conclude that the alleged impossibility of scrambling an object pronoun across the matrix subject is no evidence for the presence of a CP-layer in PCCs.

Having excluded the possibility that PCCs embed a non-restructuring infinitive, I will proceed to the question of whether the infinitival complement involves a TP. Since Wurmbrand has not determined a test that is able to discriminate between a TP and a VoiceP-complement, the evidence with respect to the presence/absence of an embedded TP-layer will be indirect only, making no use of the traditional coherence/restructuring diagnostics. Wurmbrand observes that infinitival constructions differ with respect to whether they allow the embedded predicate to be temporally modified independently from the matrix predicate. Consider the following contrast.

- (28) a. Hans versuchte (\*morgen) zu verreisen.  
*Hans tried tomorrow to go-on-a-trip*  
 ‘Hans tried to go on a trip (tomorrow).’  
 b. Hans beabsichtigte (morgen) einen Brief zu schreiben.  
*Hans intended tomorrow a letter to write*  
 ‘John intended to write a letter (tomorrow).’ (Wurmbrand 2001: 81, (63d))

In (28b), the reference time of the matrix event can differ from that of the embedded event: the time that John intended to do something is in the past, but the intended event can be in the future. (28a) shows that with a predicate like *versuchen*, this is not possible - the embedded event is temporally dependent on the matrix event. Wurmbrand then shows that temporal

independence is a property of non-restructuring infinitives, while restructuring infinitives always exhibit temporal dependency. Taking a matrix predicate that in principle is compatible with a temporally independent embedded event (29a), it is impossible to modify the embedded predicate independently if the infinitival complement is clearly identified as a restructuring infinitive. This is done in (29b) via long passivization (the data are Wurmbrand's (63a) and (64a) respectively).

- (29) a. Hans erlaubte dem Kind (?morgen) einen Kuchen zu essen.  
*Hans allowed the child tomorrow a cake to eat*  
 'Hans allowed the child to eat a cake (tomorrow).'
- b. Dem Kind wurden nur Kekse (\*morgen) zu essen erlaubt.  
*the child became only cookies tomorrow to eat allowed*  
 'The child was only allowed to eat cookies tomorrow.'

Following her assumption that a semantically vacuous projection is absent from the structure altogether, i.e. that temporal dependency correlates with the absence of an embedded TP-layer, the fact that in PCCs the embedded event cannot be temporally modified independently from the matrix event suggests that the infinitival complement in PCCs is smaller than TP (see Enzinger 2010 for the same conclusion; also Lundin 2003 for Swedish PCCs).

- (30) \*Gestern ließ Peter den Mechaniker morgen den Traktor reparieren.  
*yesterday let Peter the mechanic tomorrow the tractor repair*  
 'Yesterday, Peter made the mechanic repair the tractor tomorrow.'

A second piece of evidence for the absence of an embedded TP in PCCs involves the observation that an embedded negation necessarily takes wide scope (17b) (see also Gunkel 2003). If sentential negation needs to be licensed by Tense (e.g. Zanuttini 1991, 1996), this fact indicates that no embedded tense layer is present in PCCs; otherwise, negation should be able to scope over the embedded event only.

A third argument against the presence of an embedded TP in PCCs is the following: it has been frequently observed that PCCs disallow embedded modals or auxiliaries (Huber 1980; Wurmbrand 2001; Enzinger 2010, a.o.).

- (31) a.\*Hans ließ den Mechaniker das Auto repariert haben.  
*Hans let the mechanic the car repair have*  
 b.\*Hans ließ den Mechaniker das Auto reparieren müssen.  
*Hans let the mechanic the car repair must*

Given that modals and auxiliaries are located either in T or some functional projection below, (31) can be taken as argument against the presence of an embedded TP, or any other (lower)

projection that potentially introduces auxiliaries and modals.<sup>14</sup>

Having excluded a TP-layer from the infinitival complement in PCCs, I will now turn to the question of whether the infinitival complement in PCCs qualifies as a restructuring infinitive in the sense of Wurmbrand, i.e. whether it is a bare vP. A first argument that speaks against this assumption is the presence of the embedded external argument. If restructuring infinitives are bare vPs, they should be incompatible with an overtly realized external argument, which requires the presence of Voice. As a consequence, PCCs should involve a reduced non-restructuring infinitive that projects up to VoiceP, but no higher.<sup>15</sup>

Let us see whether this conclusion is confirmed by the unacceptability of operations that are restricted to restructuring contexts. From the discussion in section 3.2, it is clear that long passivization cannot be used here, since causative *lassen* does not passivize.<sup>16</sup> This leaves scrambling as the only diagnostic for the presence of a restructuring infinitive in PCCs. Based on the argument in the preceding paragraph, the prediction is that scrambling should be unacceptable in PCCs. It is not at all clear, however, whether this prediction is borne out. (26b) already provides an instance of a PCC in which scrambling of the embedded object into the matrix clause has taken place. Yet, it could be that this is an instance of focus scrambling (which would be possible from a reduced non-restructuring infinitive as well; see (22)), as the example is only fully acceptable if the scrambled phrase is heavily stressed or preceded by a focus particle such as *nur* ‘only’. A further example that potentially involves scrambling has been provided in (17g) (repeated here as (32)).

- (32) Helfen lassen hat er ihn mir nicht.  
*help let has he him me not*

Earlier, I mentioned that this example involves topicalization of the matrix predicate together with the embedded infinitive. In fact, data such as (32) have been analyzed by Fanselow (1989) and Wurmbrand (2001) as involving remnant topicalization. This process is abstractly

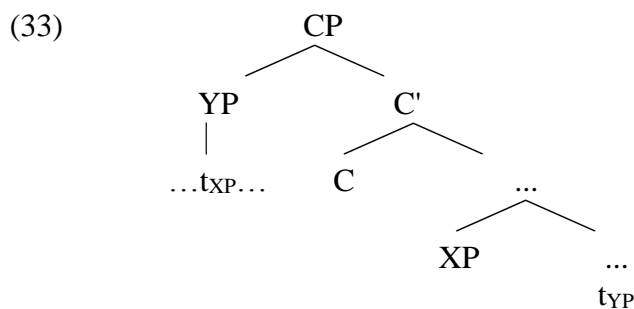
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<sup>14</sup> I would like to note that the absence of the infinitival marker *zu* ‘to’ from the embedded predicate in PCCs is no evidence for the absence of T (just as its presence is no evidence in favor of the presence of T). In other words, I take this infinitival marker not to represent (infinitival) tense. Wurmbrand (2001) has shown that in English, both tensed and tenseless infinitives show up with the infinitival marker *to*, rendering untenable an analysis that treats it as a spell-out of T. I will thus follow Bech (1955) and much subsequent work in assuming that *zu* in German is also not a realization of T, but its presence is tied to selectional properties of the embedding verb. It is thus part of the infinitival inflection (see Bech 1955 for the notion of *Statusreaktion* ‘status government’ and the distinction of infinitival forms into three different *Status*: bare infinitive, *to*-infinitive, and participle).

<sup>15</sup> Recall that Wurmbrand distinguishes functional from lexical restructuring predicates. The former are located in the functional spine of the clausal architecture, and therefore exhibit monoclausal properties despite the presence of an embedded VoiceP. Crucially, as Wurmbrand notes, functional restructuring predicates are by definition raising predicates, e.g. they do not have thematic structure. Since *lassen* in PCCs clearly combines with an external argument, PCCs cannot involve a functional restructuring predicate.

<sup>16</sup> See Bennis & Hoekstra (1989) for an account of why matrix passivization is unacceptable with ACI-predicates in general. Their account links the inability to passivize *lassen* to the absence of embedded Tense.

represented in (33) (adopted from Wurmbrand (2001)).<sup>17</sup>



A phrase YP that contains the trace of another phrase XP, which itself has been moved out of YP prior to topicalization, is moved to Spec,CP. In the concrete case of (32), the topicalized phrase is the matrix vP, which means that all arguments of the embedded predicate must have moved to a position higher than the matrix vP. Remnant topicalization is therefore contingent on the prior application of scrambling. Since scrambling is a clause-bounded process, remnant topicalization qualifies as a diagnostic for restructuring infinitives.

Does this mean that the acceptability of (32) is evidence that PCCs embed a restructuring infinitive? I assume that it is not. Note that in (32) the arguments that would have been scrambled into the matrix clause under the proposed analysis are all pronominal. Yet, according to (22), pronoun fronting is an operation that is also possible from reduced non-restructuring infinitives. As soon as the pronouns are replaced by full DPs, the sentence becomes considerably worse (34). PCCs differ in this regard from canonical cases of restructuring infinitives in which scrambling of non-pronominal DPs and subsequent remnant topicalization is fully grammatical (35).

(34)<sup>?\*</sup> *helfen lassen hat der Offizier seine Soldaten einem Verletzten noch nie.*  
*help let has the officer his soldiers an injured still never*  
 ‘So far, the officer has not made his soldiers help an injured person.’

(35) *Zu helfen versucht hat der Offizier einem Verletzten noch nie.*  
*to help tried has the officer an injured yet never*  
 ‘So far, the officer has not tried to help an injured person.’

It is reasonable to assume that the contrast between (34) and (35) is the consequence of the presence of the embedded Voice in (34).<sup>18</sup>

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<sup>17</sup> The same set of data has often been advanced as evidence for complex predicate formation. Haider (1986a,b), for example, argues that in restructuring configurations, the two predicates are merged as a complex head, which is topicalized in cases such as (32). The question whether restructuring involves complex predicate formation (combined with theta-structure merger; e.g. Alsina 1992), or whether the embedded predicate projects its own verbal domain has been a matter of some debate in the literature. See Wurmbrand (2001, 2004, 2007) and Bobaljik & Wurmbrand (2007) for a number of convincing arguments against treating restructuring as complex predicate formation. In this thesis, I will provide further crucial evidence against complex predicate approaches à la Haider.



I conclude that the infinitival complement in PCCs projects up to the external argument introducing projection VoiceP, but that it lacks all other higher functional projections such as TP or CP (see also Lee-Schoenfeld 2004. Lundin 2003 arrives at the same conclusion for Swedish PCCs). I will now show that this conclusion still allows me to capture the binding facts discussed at the beginning of this section.

Recall that in PCCs, the embedded object needs to be realized as a pronoun if it is coreferent with the causer, and as a reflexive pronoun if it is bound by the causee. The relevant data is repeated here as (36) for the sake of convenience.

- (36) a. Karl<sub>i</sub> lieb Abdelkader ihn<sub>i</sub> / \*sich<sub>i</sub> rasieren.  
*Karl let Abdelkader him REFL shave*  
 ‘Karl<sub>i</sub> made Abdelkader shave him<sub>i</sub>.’  
 b. Abdelkader lieb Karl<sub>i</sub> \*ihn<sub>i</sub> / sich<sub>i</sub> rasieren.  
*Abdelkader let Karl him REFL shave*  
 ‘Abdelkader made Karl shave himself.’

The data in (36) can be accounted for under the present analysis of PCCs if VoiceP is identified as a binding domain. To be more precise, the following binding conditions need to hold (Lee-Schoenfeld 2004).

- (37) a. A reflexive  $\gamma$  must be bound within the minimal VoiceP containing  $\gamma$ .  
 b. A pronominal  $\delta$  must be free within the minimal VoiceP containing  $\delta$ .

Against this background, consider the abstract representation of a PCC in (38) (as it is irrelevant to the point being made, I gloss over the precise structure of the complement of embedded Voice here).

- (38) [VoiceP DP<sub>CAUSER</sub> [vP [VoiceP DP<sub>CAUSEE</sub> [sich/ihn V-INF] Voice] lassen]Voice]

According to (37b), the pronoun *ihn* is only grammatical in (38) if it is free in the minimal VoiceP containing it. Since this minimal VoiceP is the embedded VoiceP, the pronoun must not be bound by the causee. It may, however, be bound by the causer since this DP is located outside the embedded VoiceP. This correctly predicts the distribution of the pronoun in (36).

The binding condition in (37a) forces a reflexive pronoun to be bound within the minimal VoiceP containing it, which in the structure in (38) is the embedded VoiceP. As a consequence, the reflexive pronoun in (38) is only acceptable if it is bound by the causee. If it was bound by the causer, it would be free within its binding domain, and the result would be ungrammatical. Thus, (37a) combined with the proposed structure of PCCs accounts for the

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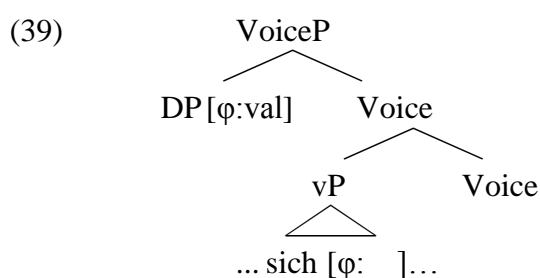
<sup>18</sup> In chapter 7, I put forth the claim that all restructuring infinitives involve VoiceP, albeit one which lacks a specifier. As a consequence, the VoiceP involved in PCCs would still be different in that it introduces an argumental DP in Spec, VoiceP.

distribution of the reflexive pronoun in (36).

Before I proceed to the actual derivation of a PCC, I will show that, under a treatment of binding in terms of the operation Agree (see e.g. Reuland 2001; Fischer 2004, 2006; Hicks 2005; Schäfer 2008; Rooryck & vanden Wyngaerd 2011) combined with the assumption adopted here that a derivation proceeds in cycles (see chapter 1), the binding conditions in (37) are not stipulative, but can be derived.

Assume that reflexive pronouns enter the derivation as a (locally bound) variable with a set of unvalued  $\phi$ -features (e.g. Fischer 2004; Schäfer 2008), the latter being a formal way of expressing its referential defectiveness (Everaert 1986; Burzio 1991 among many others). As unvalued features are not interpretable at the interfaces, the variable will thus require an antecedent that values its features via Agree, otherwise the derivation crashes.<sup>19</sup> At PF, the variable will be associated with a phonological matrix (an *exponent*) via Vocabulary Insertion. Its ultimate morpho-phonological form will thereby depend on the  $\phi$ -features of the antecedent, as well as independent properties of the language. In German, for example, if the variable agrees with a third person antecedent, it will be spelled out as the reflexive pronoun *sich*; if the antecedent is first or second person, German shows a syncretism with the corresponding personal pronouns (*mich/dich* in the singular, *uns/euch* in the plural). At LF, the Agree relation between the antecedent and the variable will be interpreted as semantic binding, which means that the antecedent and the variable are associated with the same referent (cf. the process of co-indexation at earlier stages of the theory).

If binding is syntactically encoded via an Agree-relation, and Agree is a local process restricted by the PIC, the locality condition of Principle A (and thus (37a)) can be derived. In order to see this, consider the following structure.



In (39), the DP in Spec,VoiceP agrees with the variable (represented here and below by its morpho-phonological form as a reflexive pronoun) and values its  $\phi$ -features.<sup>20</sup> Since Voice is

<sup>19</sup> See Hicks (2005) for the claim that the Agree-relation must not be based on  $\phi$ -features. Since my assumptions concerning argument licensing and case assignment are different from his, his arguments do not extend to the approach taken here, and I can rely on  $\phi$ -feature valuation to implement binding.

<sup>20</sup> This requires phrases to act as probes. See Fischer (2004) and Schäfer (2008) for discussion.

a phase-head, the completion of VoiceP triggers Transfer of the phase-domain vP, which contains the variable. Clearly, the variable cannot be bound by a DP external to the immediate phase containing it; otherwise it would be sent to the interfaces with unvalued  $\phi$ -features, leading the derivation to crash. This illustrates that the binding conditions provided in (37) follow from Phase Theory. They can therefore be rephrased as follows (see also Lee-Schoenfeld 2004: 147, (51)).

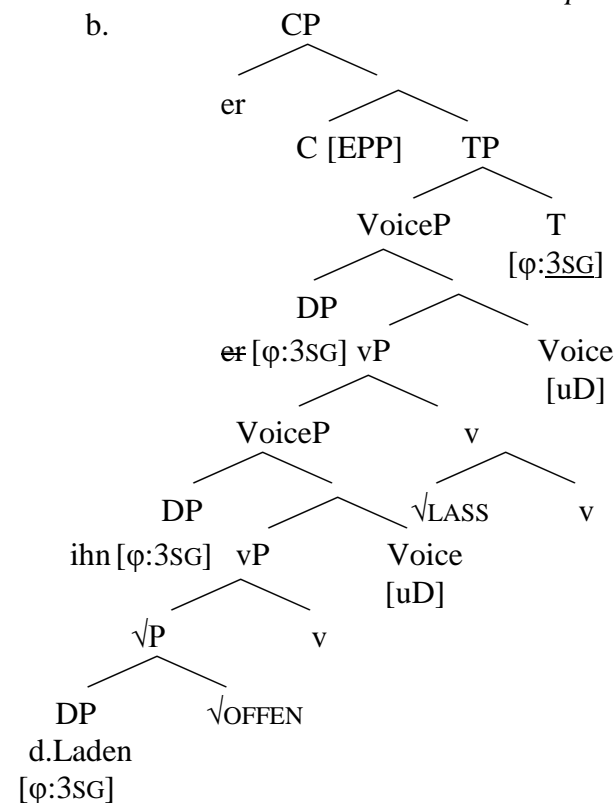
- (40) a. A reflexive  $\gamma$  must be bound within the minimal *phase* containing  $\gamma$ .  
 b. A pronominal  $\delta$  must be free within the minimal *phase* containing  $\delta$ .

Thus, the fact that, although the infinitival complement in PCCs lacks CP and TP, a reflexive pronoun in the embedded object position cannot be bound by the matrix subject (if an intervening embedded external argument is present; see also Höhle 1978; Gunkel 2003) is a consequence of the locality restrictions imposed by the cyclic nature of syntactic derivations.

### 3.5 Deriving PCCs

In this section, I provide a sample derivation of a PCC, based on the example in (41a). For the reader's convenience, the ultimate structure is shown in (41b).

- (41) a. Er lässt ihn den Laden öffnen.  
*he.NOM lets him.ACC the.ACC shop open*



The Root  $\sqrt{\text{OFFEN}}$  combines with a DP to denote a (resultant) state. This  $\sqrt{\text{P}}$  combines with the category defining head  $v$ , which identifies  $\sqrt{\text{OFFEN}}$  as verbal. The combination of  $v$  and  $\sqrt{\text{P}}$  is interpreted as causation at the CI-interface.

Next, the embedded VoiceP is merged. The embedded VoiceP is active, which means that it introduces an (overt) agent DP in its specifier. This selectional property is represented in the tree above by an EPP-like [uD]-feature on Voice, which is checked by a [D]-feature on the DP in Spec,VoiceP (see e.g. Schäfer 2008, Wood 2012). Furthermore, since active Voice is a phase head, the completion of VoiceP triggers Transfer of its domain vP, rendering everything within the embedded vP inaccessible for further computation.<sup>21</sup> The syntactic object that is thus transferred to the interfaces contains a DP which has not been assigned lexical case syntactically; its case properties will be calculated at PF. Because it has not entered into an Agree relation with T, it will surface with dependent accusative.<sup>22</sup>

The next step of the derivation involves the matrix predicate *lassen*. Some discussion is necessary here, since many researchers have treated the causative predicate that surfaces in periphrastic causatives as a light verb (see e.g. Wood 2011, 2012 for Icelandic, Lundin 2003 and Rawoens 2013 for Swedish). As pointed out in Wood (2011), in a DM-type system such as the one adopted here, the light verb nature of the causative predicate can be captured by treating it as a contextual allomorph of the (functional) head  $v$ . This amounts to saying that  $v$  can be realized as  $\sqrt{\text{LASS}}$  in a certain context, for example if the complement of  $v$  is a VoiceP. The relevant Vocabulary Item is given in (42).

(42)  $v \rightarrow \sqrt{\text{LASS}} / \{\text{VoiceP}\} \text{ \_\_\_}$

This approach entails that the Root  $\sqrt{\text{LASS}}$  does not contribute any semantics of its own, but simply realizes the little  $v$ -head post-syntactically. Since I will argue that *lassen* in analytic causatives and LMs has essentially the same status (see chapter 4), this account predicts that all of the different readings of *lassen* (e.g. directive coercive, permissive, modal, etc.) follow from the semantics of little  $v$ . I do not believe that this is plausible. For this reason, I will assume that the Root  $\sqrt{\text{LASS}}$  is present in the syntactic structure and is head-adjoined to little  $v$ . In this way,  $\sqrt{\text{LASS}}$  contributes its own semantics that interact with those of little  $v$  to derive

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<sup>21</sup> Embick & Marantz (2008) and Embick (2010) argue that any categorizing head functions as a phase head, see chapter 3 for discussion. In this case, the Root and the theme DP would have to move to Voice and Spec,VoiceP respectively.

<sup>22</sup> In Campanini & Pitteroff (2013) and Pitteroff & Campanini (2013), it is argued that Romance periphrastic causatives differ from German PCCs in embedding a (high) Applicative Phrase instead of a VoiceP, and that the formal differences between the two constructions regarding word order and case assignment follow from this.

the different readings.<sup>23</sup>

The matrix vP merges with an active Voice-head, which introduces another agent DP in its specifier. This DP functions as the causer, being the agent of the causing event introduced by v-√LASS. Since active Voice is a phase head, the completion of matrix VoiceP triggers Transfer of its complement vP. Since v-√LASS has to stay active for further computation (such as movement to C in line with the V-2 requirement of German), v-√LASS head-moves to the phase-edge Voice.<sup>24</sup> Independently of whether the embedded external argument has stayed in situ or moved to Spec,vP (see Runner 2006 for discussion), it will be contained in the syntactic object that is sent to the interfaces upon the completion of the matrix VoiceP. The embedded agent DP has not been lexically case-marked and is therefore eligible for structural case. Since, like the embedded object, it has not agreed with T, the embedded agent DP is correctly predicted to surface with (dependent) accusative case.

After matrix VoiceP has been completed, matrix T is merged, which comes with a set of unvalued  $\phi$ -features. It probes the tree for a goal and finds the DP in Spec,VoiceP. This DP agrees with T and values its  $\phi$ -features (indicated by underlining the valued features in the tree structure above). As pointed out in chapter 1, there is no evidence in German that this agree-relation will be followed by movement into Spec,TP, which is indicated by the lack of an EPP-type feature on T.

Finally, matrix C is merged. Since no auxiliary or modal is involved in (41), v-√LASS head-moves to C. Furthermore, in order to satisfy the V-2 requirement, the argument in Spec,VoiceP moves to Spec,CP, possibly attracted by a very general EPP-feature on C (simply labelled EPP in the tree above).<sup>25</sup> C is a phase-head, which means that the completion of the phase triggers Transfer. I assume that, with the completion of CP, the derivation terminates and so it is not only the phase domain, but the whole phase that is transferred. This chunk of structure contains the matrix agent. As this DP has not been lexically case-marked

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<sup>23</sup> This opens up a question concerning the interpretation of √LASS, as v-adjoined Roots are canonically interpreted as manner Roots. I am not sure this is the right way of treating *lassen*. Yet, merging it directly to the complement VoiceP potentially identifies the constituent as a resultant state, which is certainly wrong, too. I will have to leave this issue for future research (nothing in the thesis depends on this), but would like to mention the following: Recall that I assumed that the semantics of causation are not contributed by a (functional) head, but are read off from the syntactic structure whenever an activity little v combines with a resultant state. In PCCs, however, the complement of matrix v is not stative but eventive. The combination of two events, however, is not necessarily interpreted as causation (cf. *John saw Maggie read the book*). It could then be the case that √LASS modifies v in such a way that it contributes causation in contexts where the syntactic structure alone does not encode it. For this reason, I will treat √LASS in this thesis as being head-adjoined to matrix v.

<sup>24</sup> In order not to overburden the syntactic tree structure, I refrained from indicating this type of head movement (as well as subsequent movement to C (via T)). The reader should keep in mind, however, that it does take place.

<sup>25</sup> This feature must allow attraction of all kinds of phrases, not just DPs, whence its underspecified label in the tree structure.

and has valued the  $\phi$ -features on T, it will surface with unmarked nominative case.

I have shown in this and the preceding section that many of the properties of German PCCs, e.g. its binding properties, the transparency for certain clause-bounded operations and the case distribution follow straightforwardly from the claim that the infinitival complement in these cases is the phase VoiceP (i.e. PCCs are phase-embedding in the terminology of Pytkäinen 2008). I will now turn to a variant of the PCC – the so-called *lassen*-passive.<sup>26</sup>

### 3.6 *Lassen*-Passives

In this section, I address questions concerning the syntax of the *lassen*-passive, as in (43).

- (43) Der Mann lässt die Tür öffnen.  
*the man lets the door open*  
‘The man makes someone open the door.’

The core difference between (43) and the PCC discussed in the preceding sections is that the causee / the embedded external argument is suppressed in *lassen*-passives. As in verbal passives, however, the suppressed argument can be optionally realized as a *by*-phrase (e.g. Reis 1976; Huber 1980; Suchsland 1987; Gunkel 2003; Enzinger 2010; Campanini & Pitteroff 2013; Pitteroff & Campanini 2013) – a fact to which I will return below.

- (44) Der Mann lässt von dem Handwerker die Türe öffnen.  
*the man lets by the craftsman the door open*  
‘The man makes the craftsman open the door.’

The possibility of either leaving the causee unrealized or introducing it in some oblique way is cross-linguistically well attested: consider, for example, the so-called Romance *Faire Par* causative in (45b) (see Kayne 1975; Burzio 1986; Guasti 1993, 1996, 2006; Folli & Harley 2007, Tubino Blanco 2011, a.o.).

- (45) a. J’ai fait lire ce livre à Paul. (Faire Infinitive)  
*I have made read this book to Paul*  
b. J’ai fait lire ce livre (par Paul). (Faire Par)  
*I have made read this book by Paul*  
‘I made Paul read this book.’

Due to the general scope of this thesis, I will focus on the syntax of German *lassen*-passives.

For PCCs, recall that the question of whether they are bi- or monoclausal has been controversially discussed. In comparison, the monoclausal status of *lassen*-passives has mainly been

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<sup>26</sup> Even though *lassen*-passives are, of course, an instance of the periphrastic causative construction, I will use the abbreviation PCC only for periphrastic causatives that involve an overtly realized embedded external argument. Cases where this argument is suppressed, or realized within a *by*-phrase, are referred to as *lassen*-passives.

accepted (Reis 1976; Grewendorf 1983; Gunkel 2003; Enzinger 2010; but see Suchsland 1987; Grewendorf 1990 for a different view). With respect to the binding data, for example, which have been advanced as an argument in favor of the biclausal nature of PCCs, *lassen*-passives behave like monoclausal structures in requiring reflexivization of an embedded object if it is co-referent with the matrix subject (Reis 1976; Höhle 1978; Grewendorf 1989). A bound pronoun in object position leads to ungrammaticality.

- (46) a. Der Lehrer<sub>i</sub> lässt die Schüler<sub>j</sub> sich<sub>\*i/j</sub> / ihn<sub>i/\*j</sub> malen. PCC  
 ‘The teacher makes the students draw him.’  
 b. Der Lehrer<sub>i</sub> lässt sich<sub>i</sub> / ihn<sub>\*i</sub> von den Schülern malen. *lassen*-passive  
 ‘The teacher has himself be painted.’

If the facts in (46a) are a consequence of *lassen* embedding a phase, as has been suggested in section 3.4, it must be that there is no phase separating the matrix from the embedded clause in (46b). I return to this issue immediately after discussing the size of the infinitival complement.

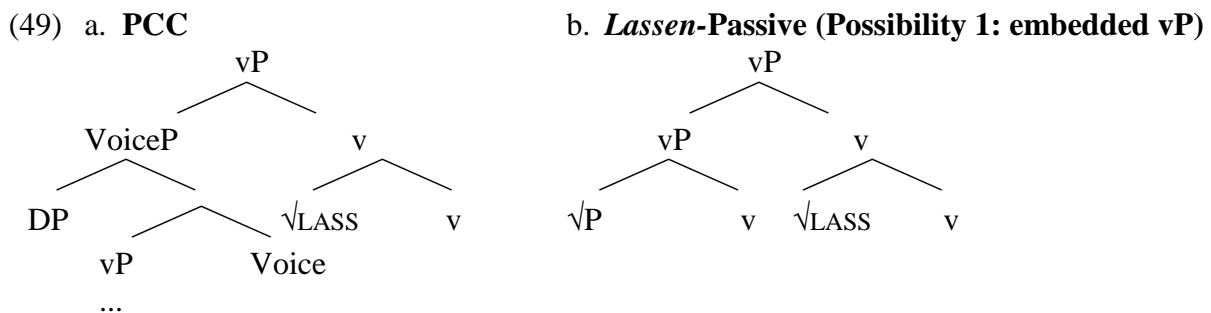
To this end, note first that *lassen*-passives pass all of the traditional coherence diagnostics (the examples in (47) are based on the PCC data in (17)).

- (47) a. dass ein solch schlechtes Lied<sub>i</sub> niemand [ t<sub>i</sub> singen] lassen würde.  
*that a such bad song nobody sing let would*  
 ‘that nobody would make anyone sing such a bad song.’  
 b. dass wir das Lied nicht singen lassen (und der Moderator auch nicht).  
*that we the song not sing let and the showmaster also not*  
 ‘that we don’t make anybody sing the song (and the showmaster doesn’t either).’  
 c.\*dass wir nicht lassen [das Lied singen].  
*that we not let the song sing*  
 d.\*dass [das Lied singen] wir nicht lassen.  
*that the song sing we not let*  
 f.\*dass er mir helfen bestimmt ließ.  
*that he me help certainly let*  
 ‘that he certainly made him help me.’  
 g. helfen lassen hat er mir nicht.  
*help let has he me not*

*Lassen*-passives allow scrambling of an embedded object DP (47a) across the matrix subject, but they block extraposition (47c) or scrambling of the infinitival clause itself (47d). Furthermore, embedded negation has wide scope in *lassen*-passives (47b), and the *lassen* - infinitive sequence can be topicalized (47g), but not separated (47f). In other words, the infinitival complement in *lassen*-passives clearly qualifies as a coherent infinitive, but does it qualify as a restructuring infinitive? The scrambling data suggest that the answer is in the affirmative. Unlike in PCCs, non-focus scrambling of the embedded object into the matrix clause is perfectly acceptable:

- (48) a. <sup>7\*</sup>helfen lassen hat der Offizier seine Soldaten einem Verletzten noch nie.  
*help let has the officer his soldiers an injured yet never*  
 ‘So far, the officer has not made his soldiers help an injured person.’  
 b. helfen lassen hat der Offizier einem Verletzten noch nie.  
*help let has the officer an injured yet never*  
 ‘So far, the officer has not made anyone help an injured person.’

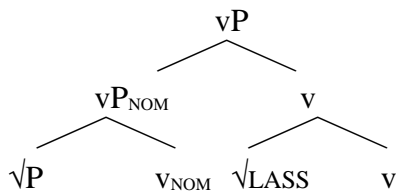
If one follows Wurmbrand (2001) in defining restructuring infinitives as bare vPs, it has to be concluded that the infinitival complement in *lassen*-passives differs from the one in PCCs in lacking the Voice-layer (cf. (49)).



The claim that the infinitival complement in *lassen*-passives lacks the external argument introducing projection altogether constitutes the dominant view in the literature (see Grewendorf 1983; Gunkel 2003; Enzinger 2010 for German; Burzio 1986 for Italian; Lundin 2003 for Swedish; Taraldsen 1983 for Norwegian; Vikner 1987; Engels & Vikner 2013 for Danish; Wood 2011 for Icelandic).

Two alternatives to (49b) come to mind, and I will discuss each one in turn. First, Guasti (1993, 1996, 2006) and Folli & Harley (2007) have argued that the infinitival complement in *Faire Par*-type causatives is nominal rather than verbal. Extending their analysis to German *lassen*-passives would entail that *lassen*-passives involve the structure in (50).<sup>27</sup>

(50) ***Lassen*-Passive (Possibility 2: embedded nominalized infinitive)**



<sup>27</sup> I am glossing over any additional structure internal to the nominalized infinitive and follow Folli & Harley in representing it as vP<sub>NOM</sub>. I am also ignoring the difference between 'verbal' and 'nominal' nominalizations here. While, for example, the theme argument in the latter is marked with genitive case (i), the one in the former surfaces with accusative (ii) (see Alexiadou, Iordăchioaia & Schäfer 2011 for details).

- (i) das Beobachten der Sterne 'nominal' nominalization  
*the observe.INF the.GEN stars*  
 (ii) das die Sterne Beobachten 'verbal' nominalization  
*the the.ACC stars observe*

In this sense, then, the infinitive involved in *lassen*-passives would be of the type in (ii).



In fact, nominalized infinitives in German are formally identical to the infinitive in *lassen*-passives, as is illustrated in (51).

- (51) a. Der Mann lässt die Tür **öffnen**.  
*the man lets the door open.INF*  
 ‘The man makes someone open the door.’  
 b. das ständige die Türe **öffnen**  
*the constant the.ACC door open.INF*  
 ‘the constant opening of the door.’

Furthermore, that *lassen* can combine with a nominalized infinitive is clearly shown by the acceptability of (52).

- (52) Mark lässt das Rauchen.  
*Mark lets the smoke.INF*  
 ‘Mark quits smoking.’

Nevertheless, it is unlikely for a number of reasons that *lassen*-passives involve a nominalized infinitive. First, the interpretation of *lassen* in (52) is fundamentally different from the one it receives in *lassen*-passives: (52) expresses that the matrix agent stops the action denoted by the nominalized infinitive and does not bring it about, as is the case in *lassen*-passives.

Second, the suppressed agent in nominalized infinitives cannot be overtly realized as a *by*-phrase (53a), while, as pointed out above, a *by*-phrase is acceptable in *lassen*-passives (53b).<sup>28</sup>

- (53) a. das den Wagen (\*von dem Mechaniker) reparieren (\*von dem Mechaniker)  
*the the.ACC car by the mechanic.INF repair by the mechanic*  
 Intended: ‘the repairing the car by the mechanic’  
 b. Er lässt den Wagen (von dem Mechaniker) reparieren.  
*he lets the.ACC car by the mechanic repair*  
 ‘He makes the mechanic repair the car.’

Due to these contrasts, I reject the possibility that *lassen*-passives involve an embedded nominalized infinitive.<sup>29</sup>

<sup>28</sup> For a discussion of the acceptability of *durch*-phrases in different types of nominalizations, see Alexiadou, Iordăchioaia, Cano, Martin & Schäfer (2013).

<sup>29</sup> It can also be shown that there is no nominalized infinitive in Italian *Faire Par* causatives. Nominalized infinitives in Italian can be passivized (i), just like any other DP in the complement of lexical *fare* (ii).

(i) [Mangiare carne di cavallo] è stato proibito (dal ministero).  
*to-eat meat.FEM.SG of horse is been.MASC.SG prohibited.MASC.SG by.the ministry*  
 ‘Eating horse meat has been prohibited by the ministry’

(ii) [I compiti] sono stati fatti (da tutti gli alunni).  
*the homework are been made by all the pupils*  
 ‘Homework was done by all the pupils’

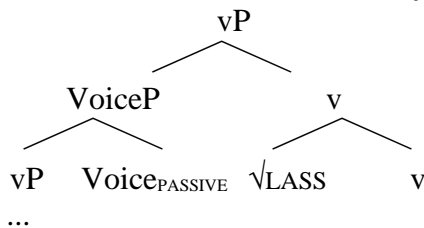
Note in (i) that the nominalized infinitive has the  $\phi$ -feature specification [masculine, singular] (as shown by the agreement morphology on the past participle of the verb *prohibit* and the perfect auxiliary *be*) independently of the number and gender of the logical object.

Turning to the behavior of *Faire Par* causatives with respect to passivization, it is predicted that if the infinitival complement was a nominalized infinitive, one would expect passivization to be possible in this case as well. However, this is completely ungrammatical.

Turning to the second alternative, it has frequently been pointed out that, with respect to argument realization, the infinitival complement of *lassen*-passives is similar to verbal passives, in which the external argument is also suppressed (but may be introduced obliquely via a *by*-phrase; Reis 1976; Höhle 1978; Huber 1980; Grewendorf 1983; Fanselow 1989; Frey 1993; Gunkel 2003; Enzinger 2010, a.o.). It could thus be that *lassen*-passives involve an embedded passive.

Different accounts have been provided for the syntax of verbal passives (see a.o. Roberts 1987; Baker, Johnson & Roberts 1989; Embick 2004; Collins 2005; Bruening 2012; Kiparski 2013). For expository reasons, I will assume with Embick (2004) that there is a dedicated passive VoiceP which contains agentive semantics (i.e. in his terminology, an [Ag]-feature which corresponds to the implicit argument) but lacks a specifier (see also Harley 2013). Under this possibility, *lassen*-passives would have the structure in (54).<sup>30</sup>

(54) **Lassen-Passive (Possibility 3: embedded VoiceP)**



One direct advantage of this possibility is that causative *lassen* can be assumed to uniformly embed a VoiceP: PCCs and *lassen*-passives differ only in terms of the presence / absence of an embedded Spec, VoiceP.

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(iii) \*[Mangiare carne di cavallo] è stato fatto.  
*to-eat meat of horse is been made*

One could now argue that (iii) is possible if the infinitival complement [mangiare carne di cavallo] stays in post-verbal position (i.e. its merge site). This is grammatical (as shown in (iv)) and seems to be compatible with a well-known property of Italian: in passive and accusative constructions, the derived subject can either move to the standard sentential subject position - thus being realized preverbally - or stay in its post-verbal base position.

(iv) È stata fatta [mangiare carne di cavallo].  
*(pro)-is been.FEM.SG made.FEM.SG to-eat meat.FEM.SG of horse*  
 ‘(Someone) made (someone) eat horse meat’

However, (iv) is clearly a passivization of the embedded object, the DP [carne di cavallo], and not of the potential nominalized infinitive. This can be seen by the presence of feminine singular agreement on the past participle of the causative verb and the perfect auxiliary. As mentioned above, nominalized infinitives always trigger masculine singular agreement, but this is - again - an impossible constellation.

(v) \*È stato fatto [mangiare carne di cavallo].  
*(pro)-is been.MASC.SG made.MASC.SG to-eat meat.FEM.SG of horse*

There is thus no empirical support for the idea that *Faire Par* causatives involve an embedded nominalized infinitive: the embedded [V + object + (by-phrase)] complex in *Faire Par* causatives cannot be passivized (cf. (iii) and (v)), unlike *bona fide* nominalized infinitives (i) or the direct object of lexical *fare* (ii).

<sup>30</sup> I use the subscript PASSIVE on the embedded Voice head in (54) to distinguish it from an active Voice head which introduces an overt DP in its specifier. I return to a more detailed discussion of the syntax of verbal passives in chapter 7.

In the following sections, I will argue that the passive approach to *lassen*-passives in (54) is essentially correct. In doing so, I will first review some similarities between *lassen*-passives and verbal passives that are difficult to explain under a bare-vP approach, as in (49b). Second, I will show that the arguments that have been advanced in the literature against an embedded passive (and thus, an embedded VoiceP) do not hold up upon closer scrutiny. And finally, I will present an argument in favor of the presence of an embedded VoiceP in *lassen*-passives based on the interpretation of the implicit argument.

### 3.6.1 Similarities Between *Lassen*-Passives and Verbal Passives

First, as mentioned in section 3.6, *lassen*-passives and verbal passives are similar in so far as the suppressed argument can optionally be introduced as a *by*-phrase (55).<sup>31</sup>

- (55) a. Peter ließ die Tür (von einem Fachmann) öffnen. (lassen-passive)  
*Peter let the door by an expert open*  
 ‘Peter had the door opened by an expert.’  
 b. Die Tür wurde (von einem Fachmann) geöffnet. (verbal passive)  
*the door became by an expert opened*  
 ‘The door was opened by an expert.’

Second, the causee can be the inalienable possessor of the embedded object in PCCs (56a). This is not the case in *lassen*-passives (56b), which pattern with verbal passives in this regard (56c).

- (56) a. Der Lehrer lässt den Schüler die Hand heben. (PCC)  
*the teacher lets the student the hand lift*  
 ‘The teacher made the student raise his hand.’  
 b.\*Der Lehrer lässt von dem Schüler die Hand heben. (lassen-passive)  
*the teacher lets by the student the hand lift*  
 ‘The teacher made the student raise his hand.’  
 c.\*Die Hand wurde von dem Schüler gehoben. (verbal passive)  
*the hand became by the student lifted*  
 ‘The hand was raised by the student.’

Third, it has been argued that only verbs that can passivize appear in *lassen*-passives (Grewendorf 1983; Gunkel 2003; but see below for exceptions to this generalization), providing a further argument for the passive approach to *lassen*-passives.

- (57) a. Mark lässt seinen Chauffeur nach Leipzig fahren. (PCC)  
*Mark lets his chauffeur to Leipzig drive*  
 ‘Mark makes his chauffeur drive to Leipzig.’

<sup>31</sup> Harley (2013) discusses so-called *indirect causatives* in Hiaki, which pattern with *lassen*-passives in suppressing the causee. Harley notes that *indirect causatives* disallow the addition of a *by*-phrase. Crucially, as Harley also mentions, verbal passives in Hiaki also disallow the *by*-phrase. Under the bare vP-approach to indirect causatives that Harley defends, this parallelism remains unexplained.

- b. Mark fährt jedoch nicht selbst, er lässt fahren. (lassen-passive)  
*Mark drives however not self he lets drive*  
 ‘Mark however does not drive himself, he causes someone to drive him.’
- c. Jetzt wird nach Leipzig gefahren. (verbal passive)  
*now becomes to Leipzig driven*  
 ‘People will be driving to Leipzig now.’

- (58) a. Der Chirurg ließ die Frau David Hasselhoff ähneln. (PCC)  
*the surgeon let the woman David Hasselhoff look.like*  
 ‘The surgeon made the woman look like David Hasselhoff.’
- b.\*Der Chirurg ließ (von der Frau) David Hasselhoff ähneln. (lassen-passive)  
*the surgeon let (by the woman) David Hasselhoff look.like*  
 ‘The surgeon made the woman look like David Hasselhoff.’
- c.\*David Hasselhoff wurde von der Frau geähnelt. (verbal passive)  
*David Hasselhoff became by the woman looked.like*  
 ‘David Hasselhoff was looked like by the woman.’

It is unclear under a bare vP-approach how the contrast in acceptability in the (b.)-examples could be accounted for, since, in principle, such an approach should allow every verb to occur in a *lassen*-passive (modulo certain semantic restrictions, see below).

Fourth, it has been noted that non-passivizable idioms cannot be used in *lassen*-passives (Grewendorf 1983; Enzinger 2010; (59) is taken from Grewendorf 1983: 146).

- (59) a. Die Kirche ließ viele Leute die Katze im Sack kaufen.  
 ‘The church made many people buy a pig in a poke.’
- b.\*Die Kirche ließ die Katze im Sack kaufen.  
 Intended: ‘The church made someone buy a pig in a poke.’
- c.\*Die Katze wurde im Sack gekauft.  
 Intended: ‘Someone bought a pig in a poke.’

Note that the ungrammaticality of (59b) cannot be explained by the fact (illustrated in (60)) that *lassen*-passives are generally incompatible with an inanimate matrix subject.

- (60) a. Der Offizier / der Regen ließ Hans die Wäsche ins Haus bringen.  
 ‘The officer / the rain caused Hans to take the laundry into the house.’
- b. Der Offizier / \*der Regen ließ die Wäsche ins Haus bringen.  
 ‘The officer / the rain made someone take the laundry into the house.’

In (59a), however, *the church* seems not to be interpreted as an inanimate causer, but rather as an institution comprising human individuals. It thus does not fall under the above restriction. This claim is supported by the acceptability of the following *lassen*-passives.

- (61) a. Die Kirche ließ das Geld einsammeln.  
 ‘The church made someone collect the money.’
- b. Die Finanzbehörde ließ die Steuer zurückzahlen.  
 ‘The tax authorities made someone pay back the taxes.’
- c. Die Regierung ließ ihn inhaftieren.  
 ‘The government had him arrested.’

To conclude, there are a number of similarities between *lassen*-passives and verbal passives that are readily expected if *lassen*-passives in fact involved an embedded passive.

### 3.6.2 Differences Between *Lassen*-Passives and Verbal Passives

I will now turn to the arguments that have been advanced against the passive analysis and show that for every single one it cannot be upheld.

First, it has frequently been argued that *lassen*-passives must not involve a passive because of the difference in morphological marking (e.g. Höhle 1978; Grewendorf 1983, 1987, 1989, 1990; Gunkel 2003). While verbal passives are typically marked in some form (Haspelmath 1990), the embedded predicate in *lassen*-passives surfaces with infinitival morphology. Passive morphology in *lassen*-passives leads to ungrammaticality (62).

- (62) a. Der Lehrer ließ das Buch lesen / \*gelesen werden.  
*the teacher let the book read.INF read.PRT become*  
 ‘The teacher made someone read the book.’  
 b. Das Buch ist \*lesen / gelesen worden.  
*the book is read.INF read.PRT become*  
 ‘The book has been read.’

In chapter 7, I will argue that there is an independent reason for the absence of passive morphology in certain constructions involving the causative predicate *lassen*. The difference illustrated in (62) is therefore not an argument against a passive analysis.

Second, if verbal passives involve an implicit agent, one would like to see signs of an implicit argument in *lassen*-passives, too. It has been shown, however, that the typical tests for the presence of an implicit argument fail in *lassen*-passives: for example, unlike the implicit agent in verbal passives, the unexpressed causee cannot control (cf. (63); examples and judgements are taken from Enzinger 2010).

- (63) a. Der Dirigent<sub>i</sub> ließ Raimondi<sub>j</sub> die gesamte Arie wiederholen [ohne PRO<sub>i/j</sub>  
*the conductor let Raimondi the whole aria repeat without PRO*  
 eine Pause zu machen].  
*a pause to make*  
 ‘The conductor made Raimondi repeat the whole aria without making a pause.’  
 b. Der Dirigent<sub>i</sub> ließ die gesamte Arie von Raimondi<sub>j</sub> wiederholen [ohne PRO<sub>i/\*j</sub>  
*the conductor let the whole aria by Raimondi repeat without PRO*  
 eine Pause zu machen].  
*a pause to make*  
 ‘The conductor had the whole aria repeated by Raimondi without making a pause.’  
 c. Die gesamte Arie wurde von Raimondi<sub>i</sub> wiederholt [ohne PRO<sub>i</sub> eine Pause  
*the whole aria became by Raimondi repeated without PRO a pause*  
 zu machen].  
*to make*  
 ‘The whole aria was repeated by Raimondi without making a pause.’

The inability of the implicit causee to control is not an argument against the passive analysis, as there is an independent reason for this behavior of the suppressed argument. It appears that speakers have a very strong tendency to construe the matrix subject as controller even in the PCC in (63a). (64) presents the judgments of a number of native speakers I consulted. No speaker saw the clear cut difference between PCC and *lassen*-passives suggested by Enzinger's judgments above. In other words, the lack of control by the implicit causee could be a blocking effect due to the prominence of the matrix subject.

- (64) a. Der Dozent<sub>i</sub> lässt die Studenten<sub>j</sub> den Text übersetzen [ohne PRO<sub>i/??j</sub> ein Wörterbuch zu benutzen].  
*the prof lets the students the text translate without PRO a dictionary to use*
- b. Der Dozent<sub>i</sub> lässt den Text von den Studenten<sub>j</sub> übersetzen [ohne PRO<sub>i/??j</sub> ein Wörterbuch zu benutzen].  
*the prof lets the text by the students write without PRO a dictionary to use*  
 'The prof made the students translate the text without using a dictionary.'

The claim that the inability to control in (64a) is indeed a blocking effect is supported by the fact that embedded-subject control in PCCs is possible once the matrix subject is inanimate. Thus, it can not serve as a potential controller (65) (although my informants still commented that they get only the acceptable readings with a little effort).

- (65) a. Die weiblichen Zuschauer<sub>i</sub> schrien laut auf, [ohne PRO<sub>i</sub> auf die männlichen Ohren Rücksicht zu nehmen].  
*the female spectators screamed loud out without PRO on the male ears regard to take*  
 'The female audience screamed out, without being considerate of the men's ears.'
- b. Diese Szene<sub>i</sub> ließ die weiblichen Zuschauer<sub>j</sub> laut aufschreien, [ohne PRO<sub>#i/j</sub> auf die männlichen Ohren Rücksicht zu nehmen].  
*this scene let the female spectators loud out.scream without PRO on the male ears regard to take*  
 'This scene made the female audience scream out loud, without being considerate of the men's ears.'

Unfortunately, there is no comparable way to force control by the implicit agent in *lassen*-passives, which are incompatible with inanimate matrix subjects (60) (the same holds for the Romance *Faire Par* construction, invalidating the argument against an embedded passive provided in Guasti 2006).<sup>32</sup> The fact that control by the embedded agent is not possible,

<sup>32</sup> I also tried a context in which the animate matrix subject cannot possibly be the controller. The native speakers I consulted, however, rejected both the PCC and the *lassen*-passive variant as being semantically ill-formed.

(i) #Der taube König ließ das Volk tanzen ohne auf die Musik zu hören.  
*the deaf king let the people dance without to the music to listen*

(ii) #Der taube König ließ tanzen ohne auf die Musik zu hören.  
*the deaf king let dance without to the music to listen*

independently of whether this argument is realized overtly or not, indicates that control into purpose/rationale clauses cannot be used as an argument in favor or against the presence of an implicit argument in *lassen*-passives and, by extension, against the presence of an embedded passive VoiceP.

Before I turn to the next argument that has been advanced against a passive approach, I would like to briefly mention that the prominence argument just given can be extended to the argumentation against the passive approach advanced in Grewendorf (1989, 1990). He defends the view that *lassen*-passives involve an embedded expletive subject *pro*, and that the embedded object receives case from the embedded verb. In other words, he argues that, unlike in verbal passives, no object promotion takes place in *lassen*-passives (see also Gunkel 2003, as well as Everaert 1986 for Dutch *lassen*-passives). Based on Höhle (1978), he provides the following contrast to support his hypothesis.

- (66) a. \*Der General ließ den Diktator<sub>i</sub> auspeitschen, ohne PRO<sub>i</sub> eine Miene zu  
*the general let the dictator whip without PRO a hair to*  
*verziehen.*  
*turn.*  
 ‘The general had the dictator whipped without him turning a hair.’  
 b. Hans ließ den Knaben<sub>i</sub> aufstehen, [ohne PRO<sub>i</sub> ein Hilfsmittel zu benutzen]  
*Hans let the boy get up without PRO an aid to use*  
 ‘Hans made the boy get up without him using any aid.’

(Grewendorf 1989: 150)

Following the observation made in Höhle (1978) that an '*ohne zu*'-infinitival clause needs to be controlled by the matrix subject, Grewendorf addresses the question why the embedded patient of an unaccusative predicate can be interpreted as a controller (66b), especially as this is not possible for the embedded patient of a *lassen*-passive (66a). Grewendorf concludes that in (66a), the embedded object does not move into the embedded subject position, because it receives case in situ from the embedded predicate. The embedded subject position, in turn, is occupied by the covert expletive *pro*, which by definition cannot control, thus rendering the intended interpretation in (66a) unavailable.

Grewendorf's argumentation suffers from the same problem as Enzinger's. All my informants have judged the PCC variant of (66a) equally unacceptable (67). This is surprising under Grewendorf's account, since the causee in (67) should occupy the embedded subject position and thus license control.

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This could mean that a matrix *agent* attracts control because of its humanness. This would explain the unacceptability of (i) and (ii), since control by the matrix agent leads to a tautological reading.

- (67) \*Der Diktator ließ den General<sub>i</sub> den Häftling auspeitschen, ohne PRO<sub>i</sub> eine Miene  
*the dictator let the general the prisoner whip without PRO a hair*  
 zu verziehen.  
*to turn*  
 ‘The dictator made the general whip the prisoner without him turning a hair.’

Furthermore, all my informants showed difficulties in replicating Grewendorf’s judgments. In general, speakers claimed that this sentence is ‘somehow strange’. It is thus reasonable to link the difference to verbal passives (where the embedded theme can control into the adjunct clause) to the syntactic complexity of *lassen*-passives. In particular, as shown in footnote 32, it seems as if the more prominent agent in PCCs and *lassen*-passives attracts control, thereby accounting for (66a), (67), as well as my informants’ evaluation of (66b).

A third argument against the passive analysis involves the observation that certain verbs are legitimate in passives but illegitimate in *lassen*-passives (see Petter 1998; Guasti 2006; Enzinger 2010; a.o.). If the latter embeds a passive, the argument goes, such gaps are unexpected. (68) illustrates this contrast for verbs of perception.<sup>33</sup>

- (68) a. Der Polizist ließ den Verbrecher die Beweisfotos sehen.  
*the policeman let the criminal the evidence.pictures see*  
 ‘The policeman let the criminal see the pictures of evidence.’  
 b.\*Der Polizist ließ (von dem Verbrecher) die Beweisfotos sehen.  
*the policeman let by the criminal the evidence.pictures see*  
 ‘The policeman let someone see the pictures of evidence.’  
 c. Die Beweisfotos wurden (von dem Verbrecher) gesehen.  
*the evidence.pictures became by the criminal seen*  
 ‘The pictures of evidence were seen (by the criminal).’

Again, (68) does not provide a convincing argument against the passive-analysis. Note that an embedded verb of perception disambiguates the interpretation of *lassen* in favor of the permissive/enable reading, i.e. (68a) can only express permission, but not directive causation. Recall from the discussion in section 3.3 that the permissive reading of *lassen* is not available in *lassen*-passives with non-reflexivized embedded objects. Thus, if *lassen* in the context of an embedded verb of perception can only express permission, but the relevant *lassen*-passives cannot express permission, the ungrammaticality of (68b) is independently accounted for.<sup>34</sup>

<sup>33</sup> Loewenthal (2003) shows for Dutch that, in fact, *lassen*-passives involving verbs of perception are very frequent. She also points out, however, that these constructions have developed some idiosyncratic meaning to make them compatible with the general semantics of this construction.

<sup>34</sup> The same argumentation accounts for the contrast in (i) from Gunkel (2003).

- (i) a. Mark lässt Peter das Buch behalten.  
*Mark lets Peter the book keep*  
 ‘Mark \*makes/lets Peter keep the book.’  
 b.\*Mark lässt (von Peter) das Buch behalten.  
*Mark lets by Peter the book keep*



As expected under this explanation, the causee can remain covert in the context of an embedded verb of perception if the theme argument is co-referent with the matrix subject:

- (69) a. Er ließ sich nicht sehen oder hören.  
*he let REFL not see or hear*  
 ‘He did not let himself be seen or heard.’  
 b. Sogar die Queen ließ sich sehen.<sup>35</sup>  
*even the Queen let REFL see*  
 ‘Even the Queen made an appearance.’

The second class of verbs that is unacceptable in *lassen*-passives, but acceptable in verbal passives, are subject-experiencer verbs.

- (70) a.\*Stephen King/der Roman *ES* lässt Clowns von vielen Erwachsenen fürchten.  
*Stephen King/the novel IT lets clowns by many adults fear*  
 ‘Stephen King / the novel *IT* makes many adults fear clowns.’  
 b. Clowns werden von vielen Erwachsenen gefürchtet.  
*clowns become by many adults feared*  
 ‘Clowns are feared by many adults.’

- (71) a.\*Die Mutter/Ihr gutes Aussehen lässt Maria von vielen Männern lieben.  
*the mother/her good looks lets Maria by many men love*  
 ‘The mother/her good looks make Mary be loved by many men.’  
 b. Maria wurde von vielen Männern geliebt.  
*Maria became by many men loved*  
 ‘Maria was loved by many men.’

I claim that the contrast between the (a.) and the (b.)-examples is not evidence against the passive approach to *lassen*-passives. Note that, in general, subject-experiencer verbs in PCCs seem to be incompatible with a matrix agent.<sup>36</sup>

- (72) a. Stephen Kings Roman *ES* lässt heute noch viele Erwachsene Clowns fürchten.  
*Stephen Kings novel IT lets today still many adults clowns fear*  
 ‘Stephen Kings novel *IT* makes many adults still fear clowns today.’  
 b.\*Stephen King lässt seine Geschwister Clowns fürchten.  
*Stephen King lets his siblings clowns fear*  
 ‘Stephen King makes his siblings fear clowns.’
- (73) a. Nur ihr gutes Aussehen lässt Peter Maria lieben.  
*only her good appearance lets Peter Mary love*  
 ‘Only her good looks make Peter love Mary.’

- 
- c. Das Buch wurde behalten (obwohl es ganz zerfleddert war).  
*the book became kept even.though it fully tattered was*  
 ‘The book was kept even though it was fully tattered.’

<sup>35</sup> [http://www.verlagfaste.de/sites/default/files/kulturmagazin/K\\_182\\_Leseprobe\\_2.pdf](http://www.verlagfaste.de/sites/default/files/kulturmagazin/K_182_Leseprobe_2.pdf)

<sup>36</sup> This does not hold for the authorship-reading of *lassen*, which, however, has fundamentally different properties. See Höhle (1978:172) for some discussion.

- b.\*Ihre Mutter lässt Peter Maria lieben.  
*her mother lets Peter Mary love*  
 ‘Her mother makes Peter love Mary.’

Recall that *lassen*-passives are incompatible with inanimate matrix subjects (60). Thus, if embedded subject-experiencer verbs require the matrix subject to be inanimate, but *lassen*-passives are incompatible with inanimate matrix subjects, the ungrammaticality of (70a) and (71a) finds an independent explanation.<sup>37</sup> Note, in passing, that when faced with the above data, a bare vP approach to *lassen*-passives would also have to resort to explanations of the type provided above. This is because under this account, there is no conceivable restriction on the class of predicates that can occur in *lassen*-passives.

In sum, except for the argument involving the absence of passive morphology (to which I will return in chapter 7), I have shown that none of the arguments that have been advanced against the passive approach to *lassen*-passives holds up upon closer scrutiny.

### 3.6.3 An Embedded VoiceP for *Lassen*-Passives

In this section, I provide a novel argument in favor of the presence of an embedded VoiceP in *lassen*-passives. The fact that this VoiceP must not introduce an argument in its specifier is further support for the adequacy of (54), i.e. the passive approach to *lassen*-passives.

Following the discussion in Baker, Johnson & Roberts (1989) concerning the possible interpretations of the implied agent in verbal passives, Kratzer (1996, 2000) observes that there is a fundamental difference between verbal and adjectival passives in this regard:

- (74) a. Die Kinder wurden gekämmt.  
*the children became combed*  
 (i) Someone other than the children combed the children.  
 (ii)\*The children combed the children.

---

<sup>37</sup> Höhle (1978) provides one example of a *lassen*-passive which, as he argues, involves an embedded predicate that does not passivize. The example is provided in (i).

(i) Karl ließ sich von dem Reichtum beeindrucken.

‘Karl allowed himself to be impressed by the wealth.’

It seems, however, that verbal passives with this predicate are not altogether ungrammatical. A Google search turned up the following examples, among many others.

(ii) Sie unternahm mehrere Europa-Reisen, wo sie von der Esskultur Frankreichs nachhaltig beeindruckt wurde.

‘She travelled a lot through Europe, where she was strongly impressed by the eating culture in France.’

(<http://www.gast.at/essen-ist-ein-politischer-akt-36774.html>)

(iii) Er [Ernst Wilm] wechselte für zwei Semester nach Tübingen, wo er von Adolf Schlatter und Karl Heim stark beeindruckt wurde.

‘For two semesters, he enrolled in Tübingen, where he was strongly impressed by A.S. and K.H.’

([http://de.wikipedia.org/wiki/Ernst\\_Wilm](http://de.wikipedia.org/wiki/Ernst_Wilm))

The observation that the PCC corresponding to (i) is ungrammatical (as Höhle notes, for semantic reasons), is thus not an argument against a passive analysis.

- b. Die Kinder waren gekämmt.  
*the children were combed*  
 (i) Someone other than the children combed the children.  
 (ii) The children combed the children .

- (75) a. Die Gäste wurden angemeldet.  
*the guests became registered*  
 (i) Someone other than the guests registered the guests.  
 (ii)\*The guests registered themselves.  
 b. Die Gäste sind angemeldet.  
*the guests are registered*  
 (i) Someone other than the guests registered the guests.  
 (ii) The guests registered themselves.

While the adjectival passives in (74b) and (75b) allow the implicit agent to be co-referent with the theme argument, this reading is unavailable in the verbal passive (Disjoint Reference Effect (DRE); cf. Baker, Johnson & Roberts 1989). Kratzer concludes that the DRE does not arise in contexts where VoiceP is absent, as e.g. in adjectival passives.<sup>38</sup>

If there was no embedded VoiceP in *lassen*-passives, no DRE should arise. In other words, it is expected that the implicit causee and the embedded patient be construed as co-referential. This interpretation, however, is not available, as the examples in (76) show.

- (76) a. Die Mutter ließ die Kinder kämmen.  
*the mother let the children comb*  
 (i) The mother made someone comb the children.  
 (ii)\*The mother made the children comb themselves.

---

<sup>38</sup> The DRE is not only absent in the class of resultant state passives (as in (74b)), but also in target state passives as in (i).

- (i) Die Kinder sind immer noch versteckt.  
*the children are always still hidden*  
 (i) Someone other than the children hid the children.  
 (ii)The children hid the children.

It has been argued, however, that not all adjectival passives lack Voice (Alexiadou, Gehrke & Schäfer (to appear); Bruening 2012). Alexiadou, Gehrke & Schäfer, for example, provide the adjectival passive in (ii), which disallows a self-action reading:

- (ii) Das Kind ist getötet.  
*the child is killed*  
 (i) Someone other than the child killed the child.  
 (ii)\*The child killed the child.

The absence of the reflexive reading in (ii) suggests that a VoiceP may be present in adjectival passives.

I would like to contribute the following example to this discussion:

- (iii) Die Kinder sind im See versenkt.  
*the children are in.the lake sunk*  
 (i) Someone other than the children drowned the children in the lake.  
 (ii)\*The children drowned themselves in the lake.

If the morphological form of the participle (causative *versenkt* vs. inchoative *versunken*) is indicative of the presence of Voice (see chapter 4 for discussion), the adjectival participle in (iii) involves Voice. This correctly predicts that the DRE should arise. This discussion raises the question of what determines whether Voice is present in adjectival passives, if this projection is present in some, but not all stative passives. Obviously, this question is well beyond the limits of this thesis.

- b. Der Hoteldirektor ließ die Gäste anmelden.  
*the hotel.manager let the guests register*  
 (i) The hotel manager made someone register the guests.  
 (ii)\*The hotel manager made the guests register themselves.

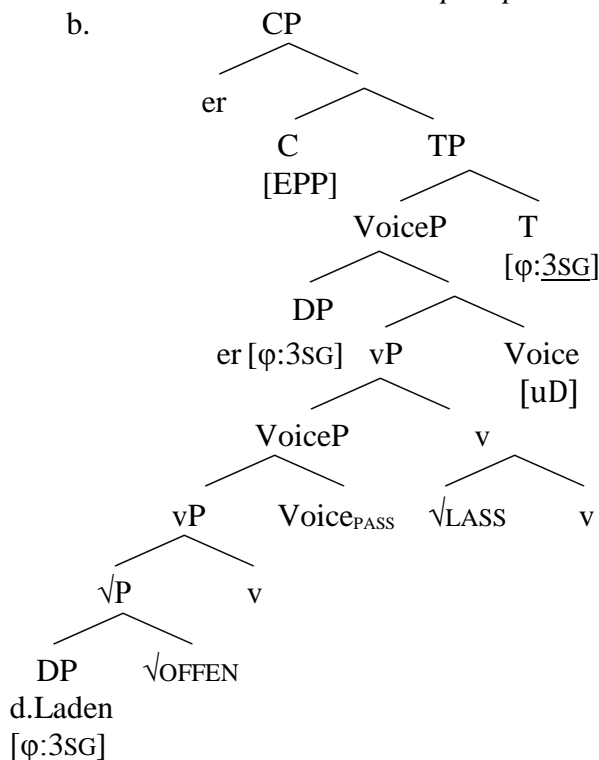
The absence of the self-action reading in *lassen*-passives cannot be explained away by claiming that this interpretation is in conflict with the semantics of periphrastic causatives. The relevant reading can be easily expressed with a PCC (77).

- (77) a. Die Mutter ließ die Kinder sich kämmen.  
*the mother let the children REFL comb*  
 ‘The mother made the children comb themselves.’  
 b. Der Hoteldirektor ließ die Gäste sich anmelden.  
*the hotel.manager let the guests REFL register*  
 ‘The hotel manager made the guests register themselves.’

The fact that *lassen*-passives exhibit the DRE is an argument in favor of the presence of an embedded VoiceP. Crucially, unlike in PCCs, this VoiceP must not introduce an argument in its specifier, indicating that the embedded VoiceP in *lassen*-passives has to be passive.

I take the acceptability of a *by*-phrase, the fact that only passivizable verbs can occur in *lassen*-passives, and the presence of the DRE as evidence that *lassen*-passives involve an embedded (passive) VoiceP. The structure of the *lassen*-passive in (78a) is thus as in (78b).

- (78) a. Er lässt den Laden öffnen.  
*he.NOM lets the.ACC shop open*



Recall that I follow Chomsky (2000, 2001, 2008) in assuming that passive Voice does not constitute a phase (contra Legate 2003). Let me briefly illustrate how this difference between PCCs, which involve an embedded phase, and *lassen*-passives, which do not, affect the case distribution and the binding properties.

With respect to case, the difference between PCCs and *lassen*-passives in terms of the projection of embedded Spec,VoiceP does not have too big of an effect. Although the embedded theme in a *lassen*-passive is not part of an embedded phase (as in PCCs), it is in the phase domain of the matrix Voice, and undergoes Transfer before matrix T is merged. It can therefore not establish an Agree relation with T and, as a consequence, will be marked with dependent accusative post-syntactically. The matrix agent, in turn, values the  $\phi$ -features on T and receives unmarked nominative, just as in PCCs.

With respect to binding, the claim that passive Voice does not constitute a phase accounts for the facts, repeated here as (79). To see how this works, recall also the binding conditions formulated in section 3.4, repeated as (80).

(79) Der Lehrer<sub>i</sub> lässt sich<sub>i</sub> / ihn\*<sub>i</sub> malen.  
'The teacher lets himself be painted.'

(80) a. A reflexive  $\gamma$  must be bound within the minimal *phase* containing  $\gamma$ .  
b. A pronominal  $\delta$  must be free within the minimal *phase* containing  $\delta$ .

Under the assumption that the embedded VoiceP in *lassen*-passives does not constitute a phase, the minimal phase containing the embedded reflexive object is the matrix VoiceP. As this phase contains a DP that can value the  $\phi$ -features of the reflexive, namely the matrix agent, the reflexive will be bound within the minimal phase containing it, in accordance with (80a). That the pronominal form is unacceptable follows from (80b), since the antecedent and the pronoun would be contained in the same phase. In other words, the difference vis-à-vis PCCs, in which an embedded object must surface as a pronoun if it is co-referent with the matrix subject, follows from the non-phasal status of the infinitival complement in *lassen*-passives.

Having outlined my proposal concerning the syntax of PCCs and *lassen*-passives, I will return to LMs in the next chapter. The guiding question will be what the syntax of an LM looks like, and in which way LMs are related to the PCCs and *lassen*-passives discussed in this chapter.

## CHAPTER 4

### THE SYNTAX OF *LASSEN*-MIDDLES

#### 4.1 Introduction

In this chapter, I return to LMs and will have a closer look at their syntax and argument structure. The general conclusions of this chapter will be as follows: (i) *lassen* in LMs is neither an auxiliary (in a sense I will make clear later) nor a modal; it is syntactically identical to the occurrence of *lassen* in PCCs and *lassen*-passives (what I call the *Identity Hypothesis*). (ii) The structural subject in LMs is base-generated as the internal argument of the embedded predicate, while the reflexive pronoun is associated with *lassen*. (iii) LMs involve the reflexively marked anticausative *sich lassen* and an embedded (passive) VoiceP.

I provide three general arguments for the similarities between *lassen* in LMs (henceforth middle *lassen* for the sake of concreteness) and causative *lassen*. First, the two occurrences of *lassen* behave syntactically alike in a number of ways (section 4.2). Second, the two occurrences of *lassen* embed the same type of infinitival complement: a VoiceP (section 4.3). The third and strongest argument against the claim that middle *lassen* is an auxiliary or a modal is interrelated with the argument structure of LMs, which will be the topic of sections 4.4 – 4.7.

In view of the parallelism between *lassen*-passives and LMs observed in section 4.3, I introduce in section 4.4 an analysis of LMs that effectively treats this type of construction syntactically as a *lassen*-passive. In particular, the reflexive pronoun is merged as the embedded object and is bound by the external argument of *lassen*, i.e. the nominative DP (the *reflexive analysis* of LM). Even though this analysis has a number of advantages, I will argue in section 4.5 that it has to be rejected. The arguments advanced in this section strongly support an approach to LMs in which the nominative DP is merged as the internal argument of the embedded predicate (the *unaccusative analysis*).

Furthermore, by reviewing different possibilities with respect to the merge position of the reflexive pronoun, I will show that there is no reasonable way in which it can be treated as part of the infinitival complement; instead, it has to be associated with *lassen* (section 4.6). This fact then constitutes the third and final argument against treating *lassen* as an auxiliary or a modal, as it would be rather unexpected for such an element to require the presence of a reflexive pronoun. By discussing different ways in which the reflexive can be associated with

*lassen*, I conclude that *sich lassen* is the (reflexively marked) anticausative variant of causative *lassen* (section 4.7).

I end this chapter with a sample derivation of an LM. It will become clear that, under the proposed analysis, LMs logically fit the larger picture of periphrastic *lassen*-constructions, i.e. LMs straightforwardly relate to PCCs and *lassen*-passives (section 4.8).

## 4.2 Similarities Between Middle and Causative *Lassen*

Höhle (1978) and Fagan (1992) suggest that *lassen* in LMs has to be treated as an auxiliary. For our purposes here, I will define an auxiliary as an element that is associated with a functional head outside the verbal domain (e.g. Tense/Aux). Alternatively, it has been argued that, due to the modality involved in LMs, *lassen* in this construction qualifies as a modal verb (Reis 1976; Huber 1980). In the following subsections, I provide a first argument against these claims and in favor of the Identity Hypothesis, i.e. the hypothesis that middle and causative *lassen* are the same element, and thus, *lassen* in LMs is associated with its own verbal domain. This argument is based on the observation that the two occurrences of *lassen* behave identically with respect to certain ordering restrictions, the IPP-effect, and event modification.

### 4.2.1 Ordering Restrictions

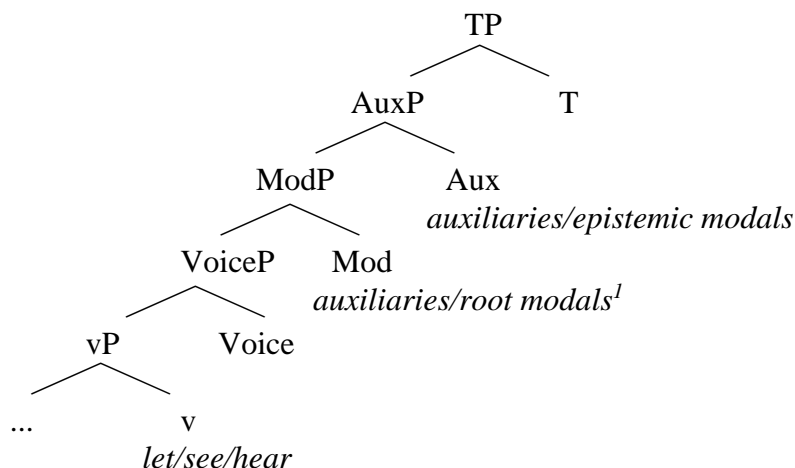
It has been frequently observed that causative *lassen* can be embedded under the perfect auxiliary *have*, as well as under epistemic and root modals. It cannot, however, embed auxiliaries or modals itself (e.g. Reis 1976; Huber 1980; Wurmbrand 2001; Enzinger 2010). This is illustrated in (1) and (2) below.

- (1) a. Der Lehrer hat die Schüler das Buch lesen lassen.      have<sub>PERF</sub> < let<sub>CAUS</sub> < V  
       *the teacher has the students the book read let*  
       ‘The teacher has made the students read the book.’  
       b. Der Lehrer muss die Schüler das Buch lesen lassen.      must<sub>EPIST/DEONT</sub> < let<sub>CAUS</sub> < V  
       *the teacher must the students the book read let*  
       ‘It must be the case that the teacher makes the students read the book.’  
       ‘The teacher has to make the students read the book.’
- (2) a.\*Der Lehrer ließ die Schüler das Buch gelesen haben.      \*let<sub>CAUS</sub> < have<sub>PERF</sub> < V  
       *the teacher let the students the book read have*  
       b.\*Der Lehrer ließ die Schüler das Buch lesen müssen.      \*let<sub>CAUS</sub> < must<sub>EPIST/DEONT</sub> < V  
       *the teacher lets the students the book read must*

Following Wurmbrand (2001), I assume the structural distribution of auxiliaries and modals illustrated in (3); thus, the data in (1) are expected since causative *lassen* is head-adjoined to

little *v* and should therefore be compatible with the whole range of higher modals and auxiliaries (modulo certain semantic restrictions). The incompatibility with embedded auxiliaries or modals in (2) is captured by the restructuring status of the infinitival complement, which lacks all projections on top of VoiceP (see chapter 3).

(3) **Distribution of Auxiliaries and Modals in German** (based on Wurmbrand 2001: 183)



Middle *lassen* shows the same ordering restrictions as causative *lassen*.

- (4) a. Das Buch hat sich gut lesen lassen.                    have<sub>PERF</sub> < let<sub>MIDDLE</sub> < V  
       *the book has REFL well read let*  
       ‘The book has read well.’
- b. Das Buch muss sich gut lesen lassen.                  must<sub>EPIST/DEONT</sub> < let<sub>MIDDLE</sub> < V  
       *the book must REFL well read let*  
       ‘It must be the case that the book reads well.’  
       ‘The book has to read well.’
- (5) a.\*Das Buch lässt sich gelesen haben.                    \*let<sub>MIDDLE</sub> < have<sub>PERF</sub> < V  
       *the book lets REFL read have*
- b.\*Das Buch lässt sich gut lesen müssen.                \*let<sub>MIDDLE</sub> < must<sub>EPIST/DEONT</sub> < V  
       *the book lets REFL well read must*

The data in (4) suggest that middle *lassen* also needs to be merged low, e.g. below the base position of root modals. (5) indicates that *lassen* in LMs combines with a complement that lacks the functional projections hosting auxiliaries and modals (an issue I will return to in section 4.3).

With respect to (3), then, the ordering restrictions illustrated in (4) provide initial support for the claim that middle *lassen* is not an auxiliary or a modal but rather that it projects its

<sup>1</sup> I will take the root modals in *Mod* to be deontic and circumstantial modals. Dynamic modals, such as ability *can*, are generally considered to be located even lower than these types of modals. Since it is my purpose to show that LM *lassen* is located somewhere in the verbal domain (as are dynamic modals), I will not take the latter into consideration here. That middle *lassen* cannot be treated as a dynamic modal follows from the second half of this chapter, where it is shown that the reflexive pronoun in LMs belongs to *lassen*.



own vP. It would thus be syntactically identical to causative *lassen*. This is evidence in favor of the Identity Hypothesis.

Apart from stressing the similarity to causative *lassen*, the data above also provide concrete evidence against the assumption that *lassen* in LMs functions as an epistemic modal verb (as suggested in Reis 1976 and Huber 1980). It has been observed that modals embedded under perfect *have* lose their epistemic interpretation (e.g. Abraham 2001; Wurmbrand 2001).

- (6) a. Mark muss viel Geld verdient haben. must<sub>EPIST/DEONT</sub> < have<sub>PERF</sub>  
*Mark must a.lot money earned have*  
 (i) **Epistemic:** ‘It must be the case that Mark has earned a lot of money (...otherwise he would not be able to drive such an expensive car).’  
 (ii) **Deontic:** ‘(In order to be accepted into to our club...) Mark has to have earned a lot of money.’  
 b. Mark hat viel Geld verdienen müssen. have<sub>PERF</sub> < must<sub>EPIST</sub>  
*Mark has a.lot money earn must*  
 (i) **Epistemic:** unavailable  
 (ii) **Deontic:** ‘(In order to suit his extravagant girlfriend in the 80s...) Mark had to earn a lot of money.’

If middle *lassen* was an epistemic modal, one would expect that it would be unacceptable under perfect *have*. This is not the case (see (4a)).

#### 4.2.2 IPP-Effect

A further parallelism between causative and middle *lassen* supporting the argument of syntactic identity relates to their morphological form. Both uses are subject to the IPP-effect (see chapter 3 for a discussion of this effect in the context of causative *lassen*): embedded below a perfect auxiliary, middle *lassen* and causative *lassen* need to surface with infinitival, rather than participial, morphology. In contrast to other verb classes, the effect is obligatory for both occurrences of *lassen* (7).

- (7) a. weil Martin die Kuh melken \*gelassen/lassen hat.  
*because Martin the cow milk let.PRT/INF has*  
 ‘because Martin made his brother milk the cow.’  
 b. weil sich die Kuh nicht so leicht melken \*gelassen/lassen hat.  
*because REFL the cow not so easily milk let.PRT/INF has*  
 ‘because the cow did not milk that easily.’

While the source of this effect is still ill-understood (see e.g. Schmid 2002, 2005; Wurmbrand 2010 for different accounts), the fact that both uses of *lassen* are subject to it is further support for the Identity Hypothesis.

### 4.2.3 Event Modification

Middle and causative *lassen* are also similar in terms of their effect on the event complexity of their respective constructions. Evidence for this comes from the different readings *again* can receive in LMs and periphrastic causatives.

Von Stechow (1995) shows that modification by *wieder* ‘again’ is sensitive to the event complexity of a predicate (e.g. whether the event denoted by the predicate is mono- or bi-eventive). In particular, adding *again* to a monoeventive predicate such as the activity verb *tanzen* ‘to dance’ results in a *repetitive reading*, where the action of dancing is repeated (8).

- (8) weil Martin wieder tanzt.  
*because Martin again dances*  
**Repetitive:** ‘Martin danced before, and dances again.’

By contrast, change-of-state verbs such as *öffnen* ‘to open’ are typically taken to have a complex event structure (cf. (9a)), involving both a causing event and a resultant state. *Öffnen* thus differs in the total number of subevents from *tanzen*, whose event structure is abstractly represented in (9b).

- (9) a. [X CAUSE [BECOME [Y <STATE>]]]  
b. [X ACT]

*Again*-modification is sensitive to this difference in event-complexity: *again* gives rise to a second interpretation in the context of change-of-state predicates. Consider (10). The sentence can either have the repetitive reading in which Martin opens the door and it is presupposed that he has done this before. Alternatively, the sentence can mean that the door was in an open state, was closed, and Martin returns it to its previous state, i.e. only the resultant state and not the event leading to this state is repeated. This is the so-called *restitutive reading* of *again*.

- (10) weil Martin die Tür wieder öffnet.  
*because Martin the door again opens*  
**Repetitive:** ‘Martin opened the door before and opens it again.’  
**Restitutive:** ‘Martin returned the door to its open state.’

The two readings arise from *wieder* modifying different subevents. The repetitive reading is the result of *wieder* modifying the causing event (11a), while the restitutive reading follows from *wieder* scoping over the resultant state (11b).

- (11) a. (*again* [X CAUSE [BECOME [Y <STATE>]]])  
b. [X CAUSE [BECOME (*again* [Y <STATE>])]]

It is clear from the above that the ambiguity is not tied to the transitivity of the predicate. When the predicate is monoeventive, only one reading is possible. This is illustrated with the

transitive predicate *lesen* 'to read' in (12), which is monoeventive and consequently, gives rise to a repetitive reading only.

- (12) weil Martin das Buch wieder liest.  
*because Martin the book again reads*  
**Repetitive:** 'Martin read the book before and reads it again.'  
**Restitutive:** unavailable

Von Stechow further observes that word order has an effect on the available readings. If, for example, *wieder* precedes the internal argument *die Tür* in (13), the restitutive reading is lost.

- (13) weil Martin wieder die Tür öffnet.  
*because Martin again the door opens*  
**Repetitive:** 'Martin opened the door before and opens it again.'  
**Restitutive:** unavailable

Without going into the details of his analysis, von Stechow takes the contrast between (10) and (13) as evidence that the event decomposition of a predicate needs to be reflected in the syntax. In other words, *again*-modification and its sensitivity to word order support a syntactic decomposition of complex events. Recall my assumptions about the decomposition of the verbal domain (see chapter 1).

- (14) **Decomposition of the Verbal Domain**  
a. VoiceP < vP <  $\sqrt{P}$   
b. [<sub>VoiceP</sub> Martin [<sub>vP</sub> [ <sub>$\sqrt{P}$</sub>  the door  $\sqrt{\text{OPEN}}$ ] v] Voice]

The  $\sqrt{P}$  corresponds to the state component in (9), such that adjunction of *again* to this projection leads to the restitutive reading (cf. (11b)). Adjunction of *again* to VoiceP corresponds to the repetitive reading abstractly represented in (11a).<sup>2</sup> The event-sensitivity of *again* is thus reflected in the syntax by the different adjunction sites: if *again* adjoins below the event-introducing head *v*, it modifies a state and gives rise to the restitutive reading. If it attaches to the VoiceP, it scopes over the eventuality introduced by *v*, which leads to the repetitive reading.

Note now that, since auxiliaries are not associated with their own event-introducing head, modification by *again* does not affect them. This is shown in (15), which is identical to (12) with respect to the number of readings *again* can get.

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<sup>2</sup> In Alexiadou, Anagnostopoulou & Schäfer (2014) it is argued that a third reading exists for (10), which corresponds to *wieder* scoping below the external argument introducing projection VoiceP, but above the event introducing projection vP. This reading would involve the repetition of just the opening event to the exclusion of an agent. If such a reading really exists, this is a further argument in favor of the need to split VoiceP and vP, rather than reduce it to one single projection v\*P. Since the existence of this reading is orthogonal to the issue at hand, I will ignore this complication.

- (15) weil Martin das Buch wieder gelesen hat.  
*because Martin the book again read has*  
**Repetitive:** ‘Martin had read the book before and had read it again.’  
**Restitutive:** unavailable

In PCCs, by contrast, *again*-modification should lead to an additional reading, because *lassen* is associated with its own verbal domain (e.g. event introducing little *v* and argument introducing Voice), which provides an additional adjunction site for *again*. This prediction is borne out, as is illustrated by (16): in addition to the independently available repetitive reading (cf. (12)), *again* can scope over the causing event (the *high-repetitive* reading in (16)).

- (16) weil der Lehrer Martin das Buch wieder lesen lässt.  
*because the teacher Martine the book again read lets*  
**Low-repetitive:** ‘The teacher makes him read the book a second time.’  
**High-repetitive:** ‘For a second time, the teacher makes him read the book.’

Based on the analysis of periphrastic causatives in chapter 3, this additional reading results from *wieder* adjoining to the matrix VoiceP and thus scoping over the event variable introduced by matrix little *v*.

Turning to LMs, the prediction follows that if *lassen* was an auxiliary, as suggested in Höhle (1978) or Fagan (1992), LMs should pattern like (15) in not giving rise to an additional reading. If it was identical to causative *lassen*, however, an additional reading should exist.

Crucially, middle *lassen* patterns like causative *lassen* and unlike auxiliaries in triggering an additional reading for *again*. Consider first the expected low repetitive reading in (17) (the contexts is to disambiguate the LM in favor of this interpretation).

- (17) **Context:** At the end of the novel, the author introduced an unexpected turn of events, as a consequence of which one sees everything that happened before in a different light. It is this twist that makes people want to read the book again.

weil sich das Buch wieder lesen lässt.  
*because REFL the book again read lets*  
**Low repetitive:** ‘The book has the property that one can read it for a second time.’

(17) arises from *wieder* modifying the monoeventive predicate *lesen* (cf. (12)).

The relevant second reading is illustrated in (18) (note that the chosen context excludes the low-repetitive reading as it makes clear that the book has not been read before).

- (18) **Context:** John bought Mary a new book, which he accidentally drops into a muddy puddle on his way home. Because of this, the book is unreadable. At home, he cleans and blow-dries the pages, and the book is readable again.

weil sich das Buch wieder lesen lässt.  
*because REFL the book again read lets*  
**High-restitutive:** ‘The book is again in a state such that one can read it.’

Based on the preceding discussion, the existence of this additional reading in (18) strongly indicates that *lassen* cannot be an auxiliary. It is rather the case that middle *lassen* patterns with causative *lassen*, whose presence also invariably leads to an additional reading for *again*. There is, however, a clear difference between the additional reading of the periphrastic causative in (16) and that of the LM in (18): while the former is repetitive, the latter is restitutive. How can this difference be explained under the hypothesis that periphrastic causatives and LMs involve the same element *lassen*? In the following, I will argue that this difference does not undermine the Identity Hypothesis.

Given the fact that a restitutive reading is triggered by *again* modifying a state, the question in the preceding paragraph can be rephrased as follows: where does the stativity come from in LMs? The answer seems clear: it must be the modality of LMs that is responsible for the restitutive nature of the additional reading. Support for this conclusion comes from the fact that *again* in the context of CMs can also get the same additional restitutive reading. This is illustrated in (19).

- (19) **Context:** John bought Mary a new book, which he accidentally drops into a muddy puddle on his way home. Because of this, the book is unreadable. At home, he cleans and blow-dries the pages, and the book is perfectly readable again.

weil sich das Buch jetzt wieder gut liest.  
*because REFL the book now again well reads*

**High-restitutive:** ‘The book is again in a state such that it reads well.’

In CMs, the source of the modality is typically taken to be the generic operator; there is, however, some reason to believe that the modality in LMs comes from the verbal predicate *lassen* itself. Evidence for this view comes from the observation that even causative *lassen* in PCCs can get a modal interpretation. Consider the PCCs in (20) where the matrix causer semantically functions as an instrument.

- (20) a. Die Brücke lässt die Spaziergänger das andere Ufer nun schneller erreichen.  
 ‘The bridge enables the pedestrians to reach the other bank faster.’  
 b. Der Schlüssel lässt die Hausbewohner die Kellertür öffnen.  
 ‘The key enables the residents to open the door to the cellar.’

In both examples, it is because of the causer that the event denoted by the embedded predicate is realizable (in a certain way), pointing to the presence of modality. The modal, if not to say generic, nature of the examples in (20) is further supported by the fact that, unlike PCCs with human subjects, the examples in (20) do not trigger an actuality entailment (21).

- (21) a. Der Lehrer lässt die Schüler eine Arbeit schreiben, (<sup>#</sup>aber niemand hat die Arbeit geschrieben.)  
 ‘The teacher makes the students write an exam, (but no one has written the exam).’
- b. Die Brücke lässt die Spaziergänger das andere Ufer nun schneller erreichen, (...doch noch niemand hat die Brücke bisher benutzt).  
 ‘The bridge enables the pedestrians to reach the other bank faster (but no one has used it so far).’
- c. Der Schlüssel lässt die Hausbewohner die Kellertür öffnen, (...doch noch niemand hat sich bisher getraut, ihn zu verwenden).  
 ‘The key enables the residents to open the door to the cellar (but no one has dared to use it yet).’

As the paraphrase of *lassen* as *enable* in (20) and (21b,c) suggests, the modality is located in the matrix predicate *lassen* itself. It is unlikely that it has some other source. If causative *lassen*, which is clearly not an auxiliary or a modal, can express modality in this way, it is reasonable to assume that the modality involved in LMs follows from *lassen* as well.

Returning to the repetitive-restitutive contrast between periphrastic causatives and LMs, note that the modality-involving PCCs in (20) give rise to a ‘*high*’ *restitutive*, rather than a ‘*high*’ *repetitive* reading (exemplified in (22) for the PCC in (20a)), exactly like LMs.

- (22) **Context:** In the war, the bridge was destroyed and it took the community 50 years to rebuild it. During that time, pedestrians were not able at all to reach the other side of the river. Yesterday, the bridge was re-inaugurated and the pedestrians are happy.

dass die Brücke nun wieder die Spaziergänger das andere Ufer erreichen lässt.  
*that the bridge now again the pedestrians the other bank reach lets*  
 ‘that the bridge is again in a state that enables pedestrians to cross to the other side.’

In other words, the restitutive-repetitive contrast between the PCC in (16) and the LM in (18) is not an argument against the claim that both constructions involve the same element *lassen*. Instead, the fact that causative *lassen* can get a modal reading in PCCs, in which case this contrast disappears, is further support for the Identity Hypothesis.<sup>3</sup>

### 4.3 The Size of the Infinitival Complement

In this section, I address the question of the size of the infinitival complement in LMs. Where testable, I will show that the infinitival complement exhibits all the properties that are attributed to restructuring infinitives in Wurmbrand (2001, 2004). Unlike Wurmbrand’s restructuring infinitives, however, the infinitival complement in LMs must involve the

<sup>3</sup> The question arises as to what this entails for CMs. I have shown that they pattern exactly like LMs with respect to the number of available readings. Although suggestions have been made that CMs involve a special type of vP (see e.g. Zwart 1998, who proposes the existence of a special permissive v-head), this does not necessarily have to be the case. Lekakou (2005) argues that middle constructions involve a VP-level generic operator which turns its complement into a modalized property. It could then be assumed that the two readings arise from *wieder* taking scope below or above this generic operator.

external argument introducing projection VoiceP, exactly like the infinitival complement in PCCs and *lassen*-passives.<sup>4</sup> This parallelism between LMs and periphrastic causatives, in particular *lassen*-passives, further supports the claim that middle *lassen* and causative *lassen* are essentially the same element (in order to stress the parallelism between LMs and *lassen*-passives, I will apply Wurmbrand's restructuring diagnostics not only to LMs, but to *lassen*-passives as well. For a discussion of these tests in the context of PCCs, see chapter 3).

### 4.3.1 Absence of CP

First, relative clause pied piping is sensitive to the presence of a CP-layer. While non-restructuring infinitives allow this process (23a), LMs disallow it (23b), indicating that the infinitival complement in these constructions lacks CP.<sup>5</sup>

- (23) a. *der Mann [dem den Roman gegeben zu haben] der Peter bedauerte.*  
*the man whom.DAT the.ACC book gave to have the.NOM Peter regretted*  
 'the man, to whom Peter regretted having given the book'
- b. \**der Mann [dem sich leicht geben] der Roman lässt.*  
*the man whom.DAT REFL easily give the.NOM novel lets*  
 'the man, to whom one can easily give the novel'
- c. \**der Mann [dem den Roman geben] der Peter lässt.*  
*the man whom.DAT the.ACC novel give the.NOM Peter lets*  
 'the man, to whom Peter made someone give the novel'

Second, extraposition was argued to be sensitive to a CP-layer (e.g. ter Beek 2008) and is thus only possible with non-restructuring infinitives (24a).<sup>6</sup> Extraposition is impossible in the context of LMs (24b), suggesting that the infinitival complement lacks CP.

- (24) a. *weil Peter behauptet hat [das Fenster zu zerbrechen].*  
*because Peter claimed has the window to break*  
 'because Peter has claimed to break the window.'

<sup>4</sup> This has important implications for the theory of restructuring. See chapter 7 for discussion.

<sup>5</sup> Due to the argument structural properties of LMs, this test can only be applied if the embedded predicate is ditransitive and the relative clause modifies the goal-argument. This is so because, with an embedded transitive predicate, the relative clause would modify the nominative DP (i). This constellation, however, is also acceptable in restructuring contexts, as shown with the long passive in (ii). In this case, relative clause pied piping would not tell us anything about the size of the infinitival complement.

(i) *der Roman, [der sich gut lesen] lässt.*

*the novel that.NOM REFL well read lets*

(ii) *der Traktor, [der zu reparieren] versucht wurde.*

*the tractor that.NOM to repair tried became*

<sup>6</sup> See Wurmbrand (2001) for a different view. She argues that reduced non-restructuring infinitives can be extraposed, but the result is judged as degraded by native speakers. She assumes that the availability of extraposition, therefore, must not be seen as a hard syntactic constraint, but rather one of prosodic markedness. The hypothesis is that restructuring infinitives are reanalyzed as part of the prosodic phrase of the matrix predicate, and are therefore blocked from extraposition, which would involve a second prosodic phrase. The 'bigger' an infinitival complement is, the less likely it is to become part of the matrix prosodic phrase, potentially allowing extraposition to certain degrees. Independently of whether this is correct, I take the fact that the infinitival complement in LMs can never be extraposed as evidence against its non-restructuring status.

- b.\*weil sich das Fenster lässt [zerbrechen].<sup>7</sup>  
*because REFL the window lets break*  
 ‘because the window can be broken.’
- c.\*weil Peter lässt [das Fenster zerbrechen].  
*because Peter lets the window break*  
 ‘because Peter makes someone break the window.’

Third, pronoun fronting is blocked from non-restructuring infinitives (25a). The fact that embedded object pronouns can precede the matrix subject in LMs (25b) is further evidence for the absence of a CP-layer. Again, this test can only be applied to an LM with an embedded ditransitive verb.

- (25) a.\*weil ihm<sub>i</sub> der Peter [t<sub>i</sub> den Wagen zu verkaufen] behauptet hat.  
*because him.DAT the.NOM Peter the car to sell claimed has*
- b. weil sich ihm<sub>i</sub> der Wagen [gut t<sub>i</sub> verkaufen] lässt.  
*because REFL him.DAT the.NOM car well sell lets*
- c. weil ihm<sub>i</sub> der Peter [t<sub>i</sub> den Wagen verkaufen] lässt.  
*because him.DAT the.NOM Peter the car sell lets*

#### 4.3.2 Absence of TP

First, (26) illustrates that in an LM the infinitival predicate is temporally dependent on the matrix predicate; this is not the case in non-restructuring contexts (26a). Recall from the discussion in chapter 3 that Wurmbrand used temporal dependency to diagnose the presence of a Tense layer in the infinitival complement. Only where such a layer is present can the embedded event be temporally modified independently from the matrix event (see also ter Beek 2008, Enzinger 2010). The ungrammaticality of (26b) therefore indicates that the infinitival complement in LMs lacks TP.

- (26) a. weil der Bauer behauptete, [den Weizen morgen zu ernten].  
*because the farmer claimed the wheat tomorrow to harvest*  
 ‘because the farmer claimed to harvest the wheat tomorrow.’
- b.\*weil sich der Weizen [morgen besser ernten] ließ.  
*because REFL the wheat tomorrow better harvest let*  
 ‘because it was easier to harvest the wheat tomorrow.’
- c.\*weil der Bauer [den Weizen morgen ernten] ließ.  
*because the farmer the wheat tomorrow harvest let*  
 ‘because the farmer made someone harvest the wheat tomorrow.’

One could argue that, due to the generic nature of middles, the addition of a temporal adverb is impossible in LMs to begin with, such that (26b) would be ruled out independently (Jeroen van Craenenbroeck, p.c.). This, however, cannot be the case for two reasons: first, it would

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<sup>7</sup> It does not matter whether the nominative DP is inside or outside the extraposed phrase (as in (24b)). The result is ungrammatical either way.



not explain why the tense dependency holds in *lassen*-passives (26c), where clearly no genericity is involved. Second, the present tense version of (26b) readily allows for the addition of a future modifier (27).

- (27) Der Weizen lässt sich morgen besser ernten.  
*the wheat lets REFL tomorrow better harvest*  
‘Tomorrow, the wheat can be harvested more easily.’

(27) shows that the addition of temporal modifiers is not generally ruled out in LMs. Note that the acceptability of a future modifier in the context of matrix present tense, as in (27), is no argument for the temporal independence of the infinitival clause. As is shown in (28), present tense in German is compatible with a semantic future interpretation. As a consequence, the embedded tense in (27) is still dependent on the matrix tense.

- (28) Der Bauer erntet den Weizen erst morgen.  
*the farmer harvests the crop only tomorrow*  
‘The farmer will not harvest the crop before tomorrow.’

Second, negation in LMs obligatorily takes wide scope (29b), which is impossible for embedded negation in non-restructuring contexts (29a). Again, I use a modification of this test from Bayer, Schmid & Bader (2005) to force the wide-scope interpretation.

- (29) a. weil Peter keines dieser Bücher zu lesen behauptet (\*und Martin auch nicht).  
*because Peter none of.these books to read claims and Martin also not*  
‘because Peter claims not to read any one of these books, and Martin doesn't either.’  
b. weil sich keines dieser Bücher gut lesen lässt (und diese Zeitung auch nicht).  
*because REFL none of.these books well read lets and this newspaper also not*  
‘because none of these books reads well, and this newspaper doesn't either.’  
c. weil Peter keines dieser Bücher lesen lässt (und Martin auch nicht).  
*because Peter none of.these books read lets and Martin also not*  
‘because Peter does not allow anyone to drink beer, and Martin doesn't either.’

If the domain of sentence negation is the minimal sentence containing the negation (Haider 1993), the example in (29b) indicates that LMs are monoclausal. Adopting the view expressed in Zanuttini (1991, 1996), who argues that sentential negation is licensed by Tense, the lack of embedded negation is further evidence for the absence of an embedded TP in LMs.

### 4.3.3 A Restructuring Infinitive

In chapter 3 I discussed two tests that, according to Wurmbrand (2001), unambiguously identify a restructuring infinitive: (non-focus) scrambling and long object movement. Both tests require some discussion in the context of LMs. While long object movement/long passivization involves passivization of the matrix predicate, *lassen* in LMs does not

passivize (30), this test appears to be inapplicable.<sup>8</sup>

- (30) a. \*weil sich (von dem Roman) gut lesen (ge)lassen wurde.  
*because REFL by the novel well read let.PRT/INF became*  
 b. \*weil der Roman (von dem Lehrer) lesen (ge)lassen wurde.  
*because the novel by the teacher read let.PRT/INF became*

This leaves scrambling as the sole test for restructuring. Similar to pronoun fronting, this test is only conclusive if the embedded predicate is ditransitive. This is because the external argument of the infinitival predicate is suppressed, and in terms of the theme argument, I have not provided evidence that it is, in fact, base-generated in the infinitival complement. If the embedded predicate is ditransitive, however, the dative argument is clearly merged within the infinitive and its position can be used to diagnose scrambling. (31b) shows that LMs allow non-focus scrambling (as in chapter 3, I adopt remnant topicalization as a modification of this test); this process, however, is unacceptable in non-restructuring contexts (31a).<sup>9</sup>

- (31) a. \*[t<sub>i</sub> zu helfen behauptet] hat er dem Mann<sub>i</sub> schon häufiger.  
*to help claimed has he the.DAT man already often*  
 Intended: ‘He often claimed to have helped the man.’  
 b. [t<sub>i</sub> vorlesen lassen] dürfte sich dieser Schund nur einem Tauben<sub>i</sub>.  
*read let should REFL this.NOM trash only a.DAT deaf.person*  
 ‘This trash can only be read to a deaf person.’  
 c. [t<sub>i</sub> helfen lassen] hat er dem Mann<sub>i</sub> schon häufiger.  
*help let has he the.DAT man already often*  
 ‘He has often made someone help the man.’

Thus, LMs pattern with *lassen*-passives in involving a restructuring infinitive. As a consequence, the two *lassen*-constructions conform to the generalization in (32) (see Bech 1955; Reis 2001; Wurmbrand 2001; Bader, Schmid & Bayer 2005; a.o.).

- (32) Only *to*-infinitives are optionally restructuring, while bare infinitives are restructuring infinitives obligatorily.<sup>10</sup>

I showed in chapter 3 that the restructuring status of an infinitive does not automatically entail the absence of a Voice layer. Before moving on to the question of whether the

<sup>8</sup> I will ultimately propose a derivation of LMs that renders them similar to the combination of an unaccusative restructuring predicate and a restructuring infinitive. Such a configuration is illustrated in (i).

(i) weil ihm der Roman zu entziffern gelang.  
*because him the.NOM novel to decipher managed*  
 ‘because he managed to decipher the novel.’

The fact that the internal argument surfaces with nominative case in (i) makes these examples comparable to long passives. In other words, the argument configuration of LMs itself is comparable to a long passive, further supporting their status as restructuring constructions.

<sup>9</sup> In (31a) and (31c) I used an embedded transitive predicate, as otherwise one would have to scramble both the dative and the accusative marked argument out of the infinitival complement.

<sup>10</sup> It is unclear at the moment whether this generalization holds for PCCs. See the discussion of the restructuring status of the infinitival complement in PCCs in chapter 3.

infinitival complement in LMs patterns with the one of *lassen*-passives in involving a VoiceP, let me quickly show that the infinitive in LMs cannot be treated as a nominalized infinitive (see chapter 3 for a discussion of this possibility in the context of *lassen*-passives).

Recall that nominalized infinitives in German come in two types, depending on how many verbal properties they exhibit. While nominal infinitives take genitive (or PP-) objects and are modified by adjectives (33a), the more verbal nominalizations license accusative case and can be modified by adverbs (33b) (e.g. Alexiadou, Iordăchioaia & Schäfer 2011).

- (33) a. [Das laute Singen des Liedes] hat mich schon immer gestört.  
*the loud sing.INF the.GEN song.GEN has me already always bothered*  
 ‘The loud singing of the song has always bothered me.’  
 b. [laut das Lied Singen] macht Spaß.  
*loudly the.ACC song sing.INF makes fun*  
 ‘Singing the song loudly is fun.’

Since the infinitive in LMs can be modified by an adverb, it would have to be the more verbal nominalization in (33b) that is involved if *lassen* combined with a nominal complement.<sup>11</sup>

As in the case of *lassen*-passives, there is a strong argument against the assumption that the infinitive in LMs is nominal: the implicit agent can never be overtly realized as a *by*-phrase in nominalized infinitives (34a), while this is perfectly acceptable in LMs (34b).

- (34) a. Das ständige das Gelände Betreten (\*von Unbefugten) geht mir auf die Nerven.  
*the constant the area enter.INF by trespassers goes me on the nerves*  
 ‘The constant entering the area by trespassers annoys me.’  
 b. Das Gelände lässt sich einfach zu leicht (von Unbefugten) betreten.  
*the area lets REFL simply to easily by trespassers enter.INF*  
 ‘Nevertheless, the area can be entered easily by trespassers.’

I conclude that the infinitival complement in LMs, just like the one in *lassen*-passives, is verbal.

#### 4.3.4 Presence of VoiceP

In this section, I provide two arguments which show that, despite its restructuring status, the infinitival complement in LMs involves VoiceP. This conflicts with Wurmbrand’s (2001, 2004, 2007) contention that restructuring infinitives lack the external argument introducing projection.

<sup>11</sup> One advantage of this approach would be that it directly accounts for the fact that the embedded external argument in LMs is obligatorily suppressed: unlike English gerunds of the more verbal type, the respective German infinitives disallow the realization of an overt subject.

(i) (\*Martins) das Lied Singen  
*Martins the.ACC song sing.INF*  
 ‘Martin’s singing the song’

First, recall from the discussion of *lassen*-passives in chapter 3 that the disjoint reference effect (DRE) is dependent on the presence of a VoiceP.

Turning to LMs, the expectation is that, if the infinitival complement was a bare vP (as predicted under Wurmbrand's theory of restructuring), the DRE should not arise, and a self-action reading should be possible. This prediction is not borne out.

- (35) a. Dieses Kind lässt sich (leicht) kämmen.  
*this child lets REFL easily comb*  
(i) Someone other than the child can comb the child easily.  
(ii)\*It is easy for the child to comb itself.
- b. Hotelgäste lassen sich für dieses Abendessen leicht anmelden.  
*hotel.guests let REFL for this dinner easier register*  
(i) Someone other than the house guests can easily register the house guests for the dinner.  
(ii)\*The house guests can easily register themselves for the dinner.'

(35) shows that LMs behave like verbal passives and unlike (some) stative ones in disallowing a self-action reading. Following Kratzer (1996, 2000), Alexiadou, Anagnostopoulou & Schäfer (2014), Spathas, Alexiadou & Schäfer (to appear), Alexiadou, Gehrke & Schäfer (to appear) in adopting a syntactic approach to the DRE, I conclude that the data in (35) provide evidence for the presence of an embedded VoiceP in LMs.

The second argument in favor of the presence of an embedded VoiceP involves a class of predicates that undergo the causative alternation and mark the alternation via stem allomorphy, i.e. an allomorphic alternation that involves a non-affixal change (Embick 2010, 2012; cf. Haspelmath's 1993 class of *equipollent* alternations). Two such predicates, with their respective forms in the causative and the inchoative use, are given below.

- (36) a. Mark kann das Schiff versenken.  
*Mark can the ship sink<sub>CAUSATIVE</sub>*  
'Mark can sink the ship.'
- b. Das Schiff kann versinken.  
*the ship can sink<sub>INCHOATIVE</sub>*  
'The ship sinks.'
- (37) a. Niemand sollte einen Fisch ertränken.  
*no one should a fish drown<sub>CAUSATIVE</sub>*  
'No one should drown a fish.'
- b. Fische sollten nicht ertrinken.  
*fish should not drown<sub>INCHOATIVE</sub>*  
'Fish should not drown.'

Within the framework of Distributed Morphology, Embick (2010, 2012) discusses two theoretic accounts of stem alternations like those in the examples above: (i) A Root has two

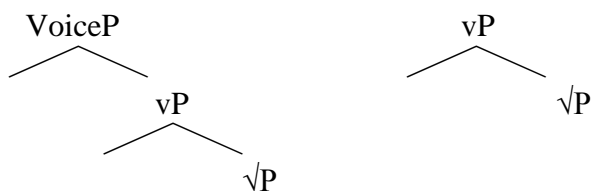
distinct stems, which are separate Vocabulary Items that come with specifications concerning the morpho-syntactic environment into which they are inserted (cf. (38)).

- (38)  $\sqrt{\text{ROOT}} \leftrightarrow \text{STEM}_1 / \langle \text{environment 1} \rangle$   
 $\sqrt{\text{ROOT}} \leftrightarrow \text{STEM}_2 / \langle \text{environment 2} \rangle$  (Embick 2012: 27)

(ii) There is one stem which is subject to a morpho-phonological readjustment rule, which is triggered by the presence of a particular syntactic head / morpho-syntactic feature. Although the two approaches are ultimately different in the status they assign to the two stem allomorphs, both approaches are identical in requiring some phonological or morpho-syntactic element that conditions the stem alternation. In other words, under either account, (36) and (37) are instances of contextual allomorphy. For expository reasons, I will adopt the first approach to stem allomorphy.<sup>12</sup>

With respect to the question of what can function as the contextual trigger for the particular alternation under consideration here, it is reasonable to assume that it is morpho-syntactic in nature. This entails that the stem alternation above needs to be connected to structural differences between causatives and anticausatives. The question of what could serve as contextual trigger, then, becomes a question of how causatives and anticausatives differ syntactically. Postponing the details to section 4.7.4, I will follow Alexiadou, Anagnostopoulou & Schäfer (2006, 2014) and Schäfer (2008) in assuming that causatives and anticausatives involve the same event structure (i.e. both involve a causing event introduced by little *v*, as well as a resultant state), but differ with respect to the presence of Voice. While causatives involve Voice, anticausatives do not (there are exceptions to this, see the discussion in section 4.7.4). This is abstractly represented in (39).

- (39) a. **Causative Syntax**                      b. **Anticausative Syntax**



It is thus a straight-forward move to identify Voice (or: a certain feature of Voice) as contextual trigger for the stem alternation in (36) and (37).

<sup>12</sup> One might think that the fact that the stem alternation in the context discussed above is restricted to certain Roots but not others would be an argument against a treatment in terms of a phonological rule. Embick (2012), however, shows that at least some alternations that are morpheme-specific in this way have to be treated as part of the phonology.

Before I turn to an implementation, let me briefly address the question whether Voice can even serve this function, since it has been shown in Embick (2010, 2012) that contextual allomorphy is subject to certain locality conditions (40).

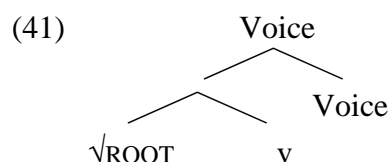
(40) **Locality Conditions for Contextual Allomorphy**

A1: Insertion proceeds from the inside out.

A2: Contextual allomorphy requires concatenation (linear adjacency)

A3: Two nodes can see each other for allomorphic purposes only when they are both active in the same cycle.

A1 implies that, in a theory in which Vocabulary Insertion starts with the lowest terminal node and works its way upwards, phonological properties of a higher node cannot serve as the trigger element for the insertion of a particular allomorph into a lower node, simply because the relevant information is not present at the point of insertion. This restriction does not hold for morpho-syntactic information which is present on the terminal nodes before Vocabulary Insertion takes place. In other words, while Vocabulary Insertion can be sensitive to the phonological and morphosyntactic properties of a lower node, it can only be sensitive to the morphosyntactic properties of a higher node. As I propose that the relevant trigger for the stem alternation above is (some feature on) Voice, and thus morphosyntactic, the conditions implied by A1 are (vacuously) met. Under the decomposition of the verbal domain I am assuming here, the conditioning node is also linearly adjacent to the insertion side. Consider the complex head in (41).



As the v-head is phonologically unrealized, it does not intervene between Voice and the Root, which results in the two nodes becoming linearly adjacent, thus satisfying locality condition A2 (see, e.g., Embick 2010 for the process of deleting unrealized nodes for the purpose of concatenation). Turning to A3, the account developed here seems to face a problem. In Embick and Marantz (2008) and Embick (2010) it is argued that category-defining heads (v, n, a, etc.) are phase-heads. Under the assumption adopted here that (active) Voice is a phase-head, too, this would entail that Voice and the Root are separated by a phase head and thus not active in the same cycle. As a consequence, Voice should not be able to play a role for Vocabulary Insertion targeting the Root, in contrast to what has been suggested above.

There are different ways of solving this issue.<sup>13</sup> Alexiadou, Anagnostopoulou & Schäfer 2014 suggest that, since the edge of a phase (e.g. the phase head and its specifier) is accessible to further computation, head movement of the Root to *v* would bring the Root into a position where it is active in the same cycle as the higher phase head Voice, which can then serve as the contextual trigger for the stem alternants. Alternatively, one could treat Roots in general as modifiers of categorizing heads (Marantz 2013) which would mean that the Root in the cases discussed here does not project its own  $\sqrt{P}$ , but rather is head-adjoined to little *v*. In line with the PIC, this would again mean that Voice is visible at the moment of Vocabulary Insertion, thereby becoming a possible trigger for contextual allomorphy. A final possibility would be to assume that only Voice, but not *v*, is a phase head, leading to a situation in which the Root and Voice are active in the same cycle. I will not decide among these different possibilities here; I simply point out that there is no locality violation involved in the claim that Voice functions as the contextual trigger for the stem allomorphy in (36) and (37).

Since all of the locality conditions for contextual allomorphy are met, the alternation exemplified above can be derived as follows: the syntax operates with just one (abstract) Root ( $\sqrt{\text{SINK}}$  and  $\sqrt{\text{TRINK}}$  respectively), which is associated with a phonological exponent via Vocabulary Insertion.<sup>14</sup> Two Vocabulary Items exist for the respective Roots, both of which have different specifications and therefore compete for insertion. The respective Vocabulary Items could be represented as follows.

- (42) a.  $\sqrt{\text{SINK}} \leftrightarrow \text{SENK} / \langle \_ \_ \text{Voice} \rangle$   
 b.  $\sqrt{\text{SINK}} \leftrightarrow \text{SINK} / \langle \_ \_ \rangle$

- (43) a.  $\sqrt{\text{TRINK}} \leftrightarrow \text{TRÄNK} / \langle \_ \_ \text{Voice} \rangle$   
 b.  $\sqrt{\text{TRINK}} \leftrightarrow \text{TRINK} / \langle \_ \_ \rangle$

The more specific Vocabulary Item wins the competition, which entails that the Roots  $\sqrt{\text{SINK}}$  and  $\sqrt{\text{TRINK}}$  will be realized by the exponents SENK and TRÄNK in the context of Voice, and by SINK and TRINK elsewhere. This correctly derives the fact that the stems SENK and TRÄNK occur in causatives, while SINK and TRINK surface in anticausatives.

In sum, the stem allomorphy discussed in this section serves as a Voice diagnostic: if the causative stem allomorph surfaces, Voice needs to be present. If Voice is absent from the

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<sup>13</sup> In fact, this problem doesn't even arise in Embick (2010), where VoiceP is not split from *v*P. In other words, the category-defining head *v* at the same time introduces the external argument. Under these assumptions, the contextual trigger (i.e. a certain value of the *v*-head present in causative but not inchoative contexts) and the Root would be active in the same cycle.

<sup>14</sup> I assume that the *ver-* and *er-* prefixes introduce the resultant state. As they do not play a role in the argument, I will not discuss them any further.

structure, the inchoative stem allomorph appears.

Based on this brief discussion of contextual allomorphy, let me apply this diagnostic to LMs.

To this end, consider the data in (44).

- (44) a. Dieses Schiff lässt sich leicht \*versinken / versenken.  
*this ship lets REFL easily sink<sub>INCHOATIVE</sub> / sink<sub>CAUSATIVE</sub>*  
\*‘This ship sinks easily.’  
‘This ship can be sunk easily.’
- b. Ein Fisch lässt sich leicht \*ertrinken / ertränken.  
*a fish lets REFL easily drown<sub>INCHOATIVE</sub> / drown<sub>CAUSATIVE</sub>*  
\*‘A fish drowns easily.’  
‘A fish can be drowned easily.’

(44) shows that the causative variant of the embedded verb is acceptable in LMs, while the inchoative one is not. Since the causative stem allomorph can only occur in the context of Voice according to the discussion above, the data in (44) have to be taken as evidence that the infinitival complement in LMs involves Voice. If the infinitival complement in LMs was a bare vP, it would not be clear at all how the ungrammaticality of LMs involving inchoatives in (44) could be explained. A related point (which does not involve contextual allomorphy) is that a bare vP approach would make one at least expect that pure unaccusatives are acceptable in LMs, contrary to fact (45).

- (45) a.\*Diese Blume lässt sich leicht verwelken.  
*this flower lets REFL easily wither*  
‘This flower withers easily.’
- b.\*Dort lässt sich leicht ankommen.  
*there lets REFL easily arrive*  
‘One can arrive easily there.’

If, by contrast, the infinitival complement involves a VoiceP, this restriction is not much of a surprise.<sup>15</sup> I thus conclude that *lassen* in LMs embeds a VoiceP.

Note, however, that this VoiceP must never introduce an argument in its specifier. Examples

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<sup>15</sup> The unacceptability of anticausatives and pure unaccusatives in LMs cannot be explained by arguing that *lassen* forces the embedded verb to have an external argument. If this was the case, the acceptability of the following data would be unexpected.

- (i) a. Martin lässt das Schiff versinken.  
*Martin lets the ship sink<sub>INCHOATIVE</sub>*  
‘Martin makes/lets the ship sink.’
- b. Martin lässt den Fisch ertrinken.  
*Martin lets the fish drown<sub>INCHOATIVE</sub>*  
‘Martin makes/lets the fish drown.’
- c. Die Sonne lässt die Blume verwelken.  
*the sun lets the flowers wilt*  
‘The sun causes the flowers to wilt.’
- d. Der Zug ließ ihn pünktlich ankommen.  
*the train lets him in.time arrive*  
‘The train made/let him arrive in time.’



where the structural subject in an LM corresponds to the external argument of the embedded predicate are completely ungrammatical (cf. (46) where subject status is indicated via plural agreement on the finite verb).

- (46) a.\*weil sich Piraten dieses Schiff leicht versenken lassen.  
*because REFL pirats.PL this.ACC ship easily sink<sub>CAUSATIVE</sub> let.PL*  
 Intended: ‘Pirats can easily sink this ship.’  
 b.\*weil sich Fischer leicht einen Fisch ertränken lassen.  
*because REFL fisher.PL easily a.ACC fish drown<sub>CAUSATIVE</sub> let.PL*  
 Intended: ‘Fisher can easily drown fish.’

In that regard, the embedded VoiceP in LMs is similar to the VoiceP involved in verbal passives and *lassen*-passives. As a consequence, I assume that LMs embed a passive VoiceP. This, of course, raises the important question concerning the morphological reflex of this configuration. I will address this question in chapter 7.<sup>16</sup>

To sum up, I showed in this section that LMs are identical to PCCs and *lassen*-passives with respect to the size of the infinitival complement: *lassen* in all three constructions embeds

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<sup>16</sup> Höhle (1978) argues that not all LMs have corresponding verbal passives, and provides the following examples.

- (i) Dort lässt es sich aushalten.  
 ‘This is a nice place to stay.’  
 (ii) Dem lässt sich abhelfen.  
 ‘It is possible to take care of this issue.’  
 (iii) Damit lässt sich leicht fertig werden.  
 ‘One can easily deal with this.’  
 (iv) Damit lässt sich schon etwas anfangen.  
 ‘This is a good start.’  
 (v) Das lässt sich leicht denken.  
 ‘One can think this easily.’

A Google search turned up examples of passives involving *aushalten*, *abhelfen*, *anfangen* and *denken*, which indicates that Höhle’s examples in (i), (ii), (iv) and (v) are no argument against an embedded passive in LMs.

- (vi) Wie konnte das ausgehalten werden, von allen Beteiligten und über die Jahre?  
 ‘How could all the people involved have endured this for years?’  
 (<http://www.welt.de/print-welt/article694543/Ah-wie-sicher-ist-Palermo.html>)  
 (vii) Aber auch diesem Übelstande wurde abgeholfen.  
 ‘This situation was taken care of.’  
 ([http://de.wikisource.org/wiki/Knopflochapparate\\_an\\_N%C3%A4hmaschinen](http://de.wikisource.org/wiki/Knopflochapparate_an_N%C3%A4hmaschinen))  
 (viii) Es wurde angefangen (eine) Geschichte zu schreiben.  
 ‘One began writing a story.’ (<http://www.ehs-international.de/index.php?id=96>)  
 (ix) Es wurde gedacht, dass mehr Markt in erster Linie weniger Regeln bedeutet.  
 ‘It was thought that more market first entails fewer rules.’  
 ([http://www.gruene-bundestag.de/parlament/bundestagsreden/2013/maerz/regulierung-im-eisenbahnbereich\\_ID\\_4387879.html](http://www.gruene-bundestag.de/parlament/bundestagsreden/2013/maerz/regulierung-im-eisenbahnbereich_ID_4387879.html))

This leaves example (iii). In fact, the combination of a copular and a predicative are not productive in LMs (cf. the examples in (x), which have been judged ungrammatical by my informants). As a consequence, this example does not bear on the question of whether LMs contain an embedded passive or not.

- (x) a.\*An dieser Uni lässt es sich leicht Lehrer werden.  
 ‘At this university, it is easy to become a teacher.’  
 b.\*Mit diesem Gerät lässt es sich schnell stark werden.  
 ‘With this machine, one can become strong very quickly.’  
 c.\*In einem Sonnenstudio lässt es sich leicht braun werden.  
 ‘In a tanning saloon, one can become tanned very quickly.’

a VoiceP. While in PCCs this VoiceP introduces an argument in its specifier, this is not the case in *lassen*-passives or LMs. In combination with the parallelism between causative and middle *lassen* discussed in section 4.2, I take the results of this section to further support the Identity Hypothesis, i.e. the claim that middle and causative *lassen* are, in fact, one and the same item. PCCs, *lassen*-passives, and LMs thus share the following abstract structural decomposition (irrelevant projections omitted).

(47)  $[_{VP} [_{VOICEP} [_{VP} DP + \sqrt{ROOT} + v] \text{Voice}]] v\text{-}\sqrt{LASS}$  <sup>17</sup>

Having determined the underlying structure of LMs, I will now turn to the question of how the arguments, i.e. the nominative DP and the reflexive pronoun, are distributed over the structure in (47).

#### 4.4 The Reflexive Analysis of *Lassen*-Middles

In this section, I discuss the question where the arguments that appear in personal LMs are base generated. In particular, I am interested in the merge position of the nominative DP (DP<sub>NOM</sub> henceforth). Two alternatives present themselves.

##### (48) Two Possibilities to Merge DP<sub>NOM</sub> in LMs

###### a. Reflexive Analysis

$[_{VOICEP} DP_{NOM} [_{VP} [_{VOICEP} [_{VP} REFL + \sqrt{ROOT} + v] \text{Voice}_{PASS}] v\text{-}\sqrt{LASS}] \text{Voice} ]$

###### b. Unaccusative Analysis

$[_{VP} [_{VOICEP} [_{VP} DP_{NOM} + \sqrt{ROOT} + v] \text{Voice}_{PASS}] v\text{-}\sqrt{LASS} ]$

Under the reflexive analysis of LMs in (48a), DP<sub>NOM</sub> is merged as an external argument of *lassen*, binding the reflexive pronoun in the embedded object position (see Fagan 1992; Steinbach 2002; Schäfer 2008 for evidence that the reflexive pronoun *sich* in German is not a clitic, but has the syntactic status of a full DP, and should therefore be merged in an argument position). Under the unaccusative analysis of LMs, DP<sub>NOM</sub> starts out as the internal argument of the embedded predicate. As there are different possibilities for the merge position of the reflexive pronoun in this analysis, I intentionally left its base position open in (48b). Although I will ultimately argue in favor of the analysis in (48b), it is still helpful to develop (48a) as a contrasting analysis. In this section, I therefore focus on (48a) and outline its advantages. I will return to the unaccusative analysis in section 4.5.

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<sup>17</sup> Here and elsewhere, I gloss over the internal structure of the most deeply embedded vP. This is to retain the flexibility to capture PCCs and LMs that involve a change of state predicate (in which case the embedded vP contains a  $\sqrt{P}$ ), and embedded activity verbs (where no  $\sqrt{P}$  is projected and the Root head-adjoins to v directly (with DP<sub>NOM</sub> in Spec, vP)).

The reflexive analysis of LMs is plausible for a number of reasons. Note, for example, that in terms of argument realization, LMs, CMs, (reflexively marked) anticausatives, and thematic reflexives appear to be very similar.

- (49) a. Der Schrank lässt sich leicht öffnen. (LM)  
*the.NOM cupboard lets REFL easily open*  
 ‘The cupboard opens easily.’
- b. Der Schrank öffnet sich leicht. (CM)  
*the.NOM cupboard opens REFL easily*  
 ‘The door opens easily.’
- c. Der Schrank öffnet sich. (anticausative)  
*the.NOM cupboard opens REFL*  
 ‘The door opens.’
- d. Der Hans rasiert sich. (thematic reflexive)  
*the.NOM Hans shaves REFL*  
 ‘Hans shaves himself.’

Descriptively, all four constructions involve a DP<sub>NOM</sub> and an (accusative marked) reflexive pronoun. The similarity between (49b-d) has led Steinbach (2002) to propose that, syntactically, there is no difference between these constructions. This is to say that CMs and reflexively marked anticausatives are structurally identical to thematic reflexives in projecting DP<sub>NOM</sub> as the external argument and *sich* as the internal one. The unified structure is represented in (50) (see Pitteroff & Schäfer (to appear), who argue that Koontz-Garboden's 2009 semantic analysis of anticausatives requires a similar syntax).

(50) [VoiceP DP<sub>NOM</sub> [vP REFL + √ROOT + v] Voice]

The reflexive analysis in (48a) aligns LMs with the other three constructions in (49) in terms of the distribution of arguments, with the slight difference that the reflexive pronoun and DP<sub>NOM</sub> are arguments of different predicates. In other words, if Steinbach was correct in assigning a unified structure to the constructions in (49b-d), the reflexive analysis of LMs would have the advantage that it treats LMs as falling into line with other reflexively marked argument alternations.

A further advantage of the reflexive analysis of LMs, independent of Steinbach's particular approach to the constructions in (49b-d), is the following: it circumvents the UTAH-violation that unergative analyses of CMs give rise to (see Fagan 1992; Ackema & Schoorlemmer 1994, 1995, 2006; Zwart 1998; Cabredo-Hofherr 2005, a.o. for such an approach). Such approaches merge DP<sub>NOM</sub>, which thematically functions as the theme argument, in the external argument position. Under a configurational theta-theory, where thematic roles are read off the syntactic structure at the Conceptual-Intentional interface and are thus tightly connected to

syntactic positions, the external argument position should be occupied by agents and/or causers, rendering the unergative analysis of CMs inherently problematic.

Under the reflexive analysis of LMs, by contrast, this issue does not arise, even though  $DP_{\text{NOM}}$  is also merged as an external argument. This is because the binding configuration between  $DP_{\text{NOM}}$  and the reflexive pronoun in object position allows an interpretation of the external argument (of the matrix predicate) as the theme of the embedded verb.

In addition to the theme-interpretation of  $DP_{\text{NOM}}$ , the reflexive analysis straight-forwardly derives a further property of the structural subject in middle constructions. Recall from chapter 2 that the dispositional semantics entail that  $DP_{\text{NOM}}$  is interpreted as being in some form responsible for the disposition ascription. In other words, the structural subject in middle constructions seems to function both as a causer/facilitator and the theme argument. This Janus-faced property is directly accounted for under the reflexive analysis of LMs. The causer/facilitator role follows from  $DP_{\text{NOM}}$  being merged as the external argument to the matrix causing event, while the theme interpretation can be accounted for due to the reflexive pronoun in the embedded object position, as discussed above.

Finally, a reflexive analysis of LMs exploits the parallelism between LMs and *lassen*-passives discussed in the previous sections by unifying the two constructions: (48a) is not only the representation of LMs, but also of reflexive *lassen*-passives (51), in which the matrix subject binds a reflexive pronoun in the internal argument position of the embedded predicate.

- (51) Mark lässt sich massieren.  
*Mark lets REFL massage*  
'Mark makes/lets someone give him a massage.'

LMs under the reflexive analysis are then simply one interpretation *lassen*-passives give rise to. In particular, the middle reading would arise under the following conditions.

- (52) **Conditions for the Middle Interpretation of *Lassen*-Passives**  
(i) the structural subject is inanimate, and  
(ii) the structural subject binds a reflexive pronoun in the embedded theme position.

With respect to the first condition, I have shown in section 4.2.3 that certain inanimate subjects trigger a modal interpretation even in PCCs ((20) repeated here as (53)).

- (53) a. Die Brücke lässt die Spaziergänger das andere Ufer nun schneller erreichen.  
'The bridge enables the pedestrians to reach the other bank faster.'  
b. Der Schlüssel lässt die Hausbewohner die Kellertür öffnen.  
'The key enables the residents to open the door to the cellar.'

Importantly, the use of *enable* in the glosses seems to indicate that it is the permissive use of *lassen* that underlies this interpretation. Recall, however, that the permissive interpretation of

*lassen* is generally blocked in the context of *lassen*-passives (e.g. Höhle 1978; Huber 1980; Suchsland 1987; Gunkel 2003; Enzinger 2010).

- (54) a. Der Lehrer lässt die Schüler einen Kollegen massieren.  
*the teacher lets the students a colleague massage*  
‘The teacher makes/lets the students give a massage to a colleague.’  
b. Der Lehrer lässt einen Kollegen massieren.<sup>18</sup>  
*the teacher lets a colleague massage*  
‘The teacher makes/\*lets someone give a massage to a colleague.’

Does this mean that the reflexive analysis has to be rejected? If it is the permissive use of *lassen* that is involved in (53), and this use of *lassen* is unavailable in *lassen*-passives, a *lassen*-passive should never receive a middle-like interpretation. The solution of this problem is tightly connected to the obligatory presence of the reflexive pronoun in LMs, and further supports the reflexive analysis. As mentioned in chapter 3, the permissive reading is available in *lassen*-passives if the matrix subject is co-referential with the embedded theme.

- (55) Mark lässt sich massieren.  
*Mark lets REFL massage*  
‘Mark makes/lets someone give him a massage.’

Thus, if the middle interpretation of LMs is dependent on the permissive/enablement reading of *lassen*, it is expected that *lassen*-passives only give rise to the middle interpretation if the inanimate matrix subject binds a reflexive pronoun in the embedded clause. This accounts for the second condition in (52).

In sum, a reflexive approach to LMs would be plausible for the following reasons: (i) it accounts for the special thematic properties of the structural subject, and (ii) it makes sense of the observed similarities between *lassen*-passives and LMs, since the two constructions are treated as being syntactically identical. The difference in interpretation, then, is related to the thematic properties of the matrix subject (e.g. whether it is animate or inanimate), as well as whether  $DP_{\text{NOM}}$  binds the embedded theme argument, or not.

#### 4.4.1 Two Problems for the Reflexive Analysis

Having shown that there is some plausibility to the reflexive analysis of LMs, I will now provide two arguments that seem to call into question the internal argument status of the reflexive pronoun.

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<sup>18</sup> The permissive reading of *lassen* is acceptable if *einen Kollegen* functions as the embedded external argument. Since, in this case, (54b) would be a PCC involving object drop (rather than a *lassen*-passive), the claim that *lassen*-passives are incompatible with a permissive reading of *lassen* is not invalidated.

The first argument involves an ambiguity that cannot be easily resolved under the reflexive analysis. The ambiguity arises in the context of an animate (human) subject. While in Dutch, LMs are incompatible with animate subjects (Gertjan Postma, p.c.; Marcel den Dikken, p.c.; see chapter 8 for discussion), this is not the case in German. Thus, (56) can be read in at least three ways, paraphrased as (i)-(iii).

- (56) Er lässt sich massieren.  
*he lets REFL massage*  
 (i) He makes someone give a massage to him.  
 (ii) He lets someone give a massage to him.  
 (iii) He can be given a massage.

While the first and the second reading instantiate the expected causative/permisive ambiguity that follows from the underspecified semantics of the Root  $\sqrt{\text{LASS}}$ , the same surface string triggers the middle reading (56iii). If LMs are structurally identical to *lassen*-passives and involve the same Root  $\sqrt{\text{LASS}}$ , as proposed in sections 4.2 and 4.3, it is not clear how the middle reading can even arise. In other words, since the first condition from (52) is not satisfied, (56) is expected to lack the middle interpretation.

A second issue facing the reflexive analysis has to do with a difference between *lassen*-passives and LMs with respect to the reflexive pronoun involved. In particular, the reflexive pronoun in LMs does not show properties of an internal argument, while an embedded reflexive in *lassen*-passives does. This can be seen in so-called case-copying constructions (*Kasuskongruenz*; Fanselow 1991), which involve a further argumental DP or adjunct PP in addition to the canonical theme argument of the verb. This additional phrase exhibits the same case-marking as the argument it is semantically related to. Consider the data in (57) and (58).

- (57) a. Mark nennt den Vorschlag [\*ein / einen Angriff auf die Privatsphäre].  
*Mark calls the.ACC proposal an.NOM / an.ACC attack on the privacy*  
 ‘Mark calls the proposal an attack on people’s privacy.’  
 b. Der Vorschlag wurde [ein / \*einen Angriff auf die Privatsphäre] genannt.  
*the.NOM proposal became an.NOM / an.ACC attack on the privacy called*  
 ‘The proposal was called an attack on people’s privacy.’
- (58) a. Mark beschreibt seinen Bruder [als \*ein Superheld / einen Superhelden].  
*Mark describes his.ACC brother as a.NOM superhero / a.ACC superhero.ACC*  
 ‘Mark describes his brother as a superhero.’  
 b. Sein Bruder wurde als [ein Superheld / \*einen Superhelden] beschrieben.  
*his.NOM brother became as a.NOM superhero / a.ACC superhero.ACC described.*  
 ‘His brother was described as a superhero.’

The data above illustrate the phenomenon of case copying / *Kasuskongruenz*. The bracketed DPs / PPs are semantically related to the theme arguments *the proposal* and *his brother* and

need to match their 'antecedents' in case. Thus, in the simple active sentences in the a.-examples, where the theme receives accusative case, the additional DP needs to surface with accusative as well. If, however, the theme argument surfaces as structural subject bearing nominative case as in the passive b.-examples, accusative case is ungrammatical on the bracketed DP, which has to surface with nominative instead in order to match its 'antecedent' in case.<sup>19</sup>

Consider now what happens in the contexts of a thematic reflexive.

- (59) a. Er nennt sich [<sup>\*?</sup>ein Held / einen Helden].  
*he.NOM calls REFL.ACC a.NOM hero a.ACC hero.ACC*  
 'He calls himself a hero.'  
 b. Er beschreibt sich [als <sup>\*?</sup>ein Superheld / einen Superhelden]  
*he.NOM describes REFL.ACC as a.NOM superhero a.ACC superhero.ACC*  
 'He describes himself as a superhero.'

Even though the DP<sub>NOM</sub> in (59) is also semantically related to the bracketed DP/PP, accusative case on the latter seems to be preferred. This suggests that the antecedent in (59) is the reflexive pronoun in object position. The data above therefore show two things: first, the case copying construction can serve as a diagnostic for internal arguments; and second, the reflexive pronoun in thematic reflexives can serve as the 'antecedent' in virtue of its status as theme argument.

Let us apply this diagnostic to *lassen*-passives. In (60), I use the predicates from the examples in (57) and (58) and embed them in a *lassen*-passive, with the former structural subject as external argument of *lassen* and the reflexive pronoun as embedded internal argument.<sup>20</sup> As expected, in the causative/permissive reading, the reflexive pronoun determines the case in the copying construction, and the additional DP surfaces with accusative case.

- (60) a. Er lässt sich [<sup>\*?</sup>ein Idiot / einen Idioten] nennen.  
*He.nom lets REFL.ACC an.NOM idiot an.ACC idiot.ACC call*  
 'He makes someone/allows someone to call him an idiot.'  
 b. Er lässt sich [als <sup>\*?</sup>ein Superheld / einen Superhelden] beschreiben.  
*he.NOM lets REFL as a.NOM superhero / a.ACC superhero.ACC describe*  
 'He makes someone / allows someone to describe him as a superhero.'

Turning to an unambiguous instance of an LM, there is a clear contrast to the *lassen*-passives in (60). The case 'copied' onto the DP in the examples in (61) is nominative, while accusative

<sup>19</sup> This shows that, in the a.-examples in (57) and (58), the accusative case on the additional DP can neither be considered a lexical case assigned by the verb nor be assumed to be assigned by the preposition. In either case, we would expect accusative case to be retained in the (b.-)examples.

<sup>20</sup> In an out-of-the-blue context, the examples in (60) receive a causative/permissive interpretation, even though the middle reading is in principle possible. In (61), I disambiguated the string by means of the manner adverb in favor of the middle interpretation (see Höhle 1978). In the following, I use such a split representation of *lassen*-passives and LMs to ensure the transparency of the argument.

is clearly marked (if possible at all).

- (61) a. Der Vorschlag lässt sich leicht [ein Angriff / \*?einen Angriff auf die  
*the.NOM proposal lets REFL.ACC easily an.NOM attack / an.ACC attack on the*  
Privatsphäre] nennen.  
*privacy call*  
‘This proposal can be easily called an attack on people's privacy.’
- b. Der Aufsatz lässt sich leicht [als ein / \*?einen Prozess der  
*the.NOM essay lets REFL.ACC easily as a.NOM / a.ACC process the*  
Wertschätzung] beschreiben.  
*appraisal describe*  
‘The essay can easily be described as a process of appraisal.’

(61) shows that LMs behave like verbal passives and unlike *lassen*-passives, meaning that the reflexive pronoun involved in LMs cannot be identical to that of thematic reflexives or reflexive *lassen*-passives. If it was, as is assumed under the reflexive analysis, accusative case should be the preferred option in (61), contrary to fact.

Note that the contrast between *lassen*-passives and LMs is not a consequence of the animacy/inanimacy of DP<sub>NOM</sub>. In the following cases of LMs with an animate subject, nominative case is also clearly preferred (the middle interpretation is again forced by the presence of the manner adverb).

- (62) a. Er lässt sich leicht [ein Idiot / \*?einen Idioten] nennen.  
*he.NOM lets REFL.ACC easily an.NOM idiot an.ACC idiot.ACC call*  
‘Mark can easily be called an idiot.’
- b. Der Junge lässt sich leicht [als ein Superheld / \*?einen Superhelden]  
*the.NOM boy lets REFL.ACC easily as a.NOM superhero/ a.ACC superhero.ACC*  
beschreiben.  
*describe*  
‘The boy can easily be described as a superhero.’

The contrast between (61)/(62) and (60) suggests that the reflexive pronoun in LMs does not behave like an internal argument, as is assumed under the reflexive analysis.

#### 4.4.2 The Revised Reflexive Analysis

In this section I will show that the two issues presented in the preceding section are not fatal to the reflexive analysis per se, but rather they can be accounted for if one assumes that the reflexive pronoun in LMs differs in some still to be specified way from the one that surfaces in *lassen*-passives. In fact, Haider (1985), Fagan (1992), Steinbach (2002), and Schäfer (2008) have all shown independently that in German not all reflexive pronouns behave identically. For example, whereas the reflexive pronoun that surfaces in thematic reflexives can be topicalized (63a), modified (63b), and coordinated (63c), reflexive pronouns in anticausatives



or CMs disallow these operations (cf. (64)-(65)).

- (63) a. *Sich hat Martin rasiert.* (thematic reflexive)  
*REFL has Martin shaved*  
'Martin shaved himself.'  
b. *Martin hat nur sich rasiert.*  
*Martin has only REFL shaved*  
'Martin shaved only himself.'  
c. *Martin hat sich und seinen Bruder rasiert.*  
*Martin has REFL and his brother shaved*  
'Martin shaved himself and his brother.'

- (64) a.\**Sich öffnete die Tür.* (anticausative)  
*REFL opened the door*  
b.\**Die Tür hat nur sich geöffnet.*  
*the door has only REFL opened*  
c.\**Die Tür hat sich und das Fenster geöffnet.*  
*the door has REFL and the window opened*

- (65) a.\**Sich liest das Buch gut.* (CM)  
*REFL reads the book well*  
b.\**Das Buch liest nur sich gut.*  
*the book reads only REFL well*  
c.\**Das Buch liest sich und den Roman gut.*  
*the book reads REFL and the novel well*

It can be seen that the reflexive pronoun in LMs patterns with that of CMs and reflexively marked anticausatives in rendering the above processes ungrammatical (66). By contrast, *sich* in *lassen*-passives behaves like the reflexive pronoun in thematic reflexives (67).

- (66) a.\**Sich lässt das Buch gut lesen.* (LM)  
*REFL lets the book well read*  
b.\**Das Buch lässt nur sich gut lesen.*  
*the book lets only REFL well read*  
c.\**Das Buch lässt sich und den Roman gut lesen.*  
*the book lets REFL and the novel well read*

- (67) a. *Sich lässt Martin rasieren (...nicht seinen Sohn).* (reflexive *lassen*-passive)  
*REFL lets Martin shave ... not his son*  
'Martin made someone shave him, not his son.'  
b. *Martin lässt nur sich rasieren.*  
*Martin lets only REFL shave*  
'Martin made/let someone shave only him.'  
c. *Martin lässt sich und seinen Bruder rasieren.*  
*Martin lets REFL and his brother shave*  
'Martin makes someone shave him and his brother.'

It is thus clear that the reflexive pronoun in LMs differs from that in reflexive *lassen*-passives. But how can this split in the behavior of reflexive pronouns be accounted for? Haider (1985)

argues that, even though all reflexive pronouns are theta-marked, only in thematic reflexives does a reflexive pronoun occupy an argument position. In anticausatives and CMs, by contrast, it is in an A'-position. He then accounts for the ungrammaticality of (64) and (65) by proposing that topicalization, modification, and coordination can only apply to A-elements. As Steinbach (2002) points out, this is obviously incorrect. Clear cases of adjuncts can be topicalized, modified, and coordinated (68).

- (68) a. In München hat Peter einige Freunde getroffen.  
*in Munich has Peter some friends met*  
 'In Munich, Peter met some freinds.'
- b. Peter hat nur in München einige Freunde getroffen.  
*Peter has only in Munich some friends met*  
 'Peter has met some friends only in Munich.'
- c. Peter hat in München und in Stuttgart Freunde getroffen.  
*Peter has in Munich and in Stuttgart friends met*  
 'Peter has met friends in Munich and in Stuttgart.'

The postulated difference in syntactic status, then, cannot explain the split in the behavior of reflexive pronouns. Furthermore, Haider's analysis would assign a rather exceptional status to reflexively marked anticausatives and CMs, since they would involve theta-assignment to an element in a non-argument position.

A different account of the split behavior of reflexive pronouns can be found in Steinbach (2002). He assumes that there is no syntactic difference between the reflexive pronouns in thematic reflexives and anticausatives / CMs, i.e. in his analysis of these constructions, the reflexive pronoun is uniformly merged in the complement position of the verb. The difference in behavior is explained by the assumption that a reflexive pronoun may be either *argumental* or *non-argumental*, in Steinbach's terminology (Fagan 1992 uses the terms *referential* and *non-referential*, respectively). In order to show how this distinction accounts for the data discussed in this and the preceding section, I will briefly review the relevant aspects of his analysis (even though the framework adopted in this thesis ultimately forces me to reject some of his assumptions).

As mentioned in the preceding paragraph, the core argument of Steinbach's proposal is that in German, thematic reflexives (69a), anticausatives (69b), inherent reflexives (69c), and CMs (69d) are syntactically uniform: DP<sub>NOM</sub> is base-generated as an external argument, and the accusative reflexive pronoun occupies the complement position of the verb(al Root) (70).<sup>21,22</sup>

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<sup>21</sup> In fact, Steinbach argues that a reflexive pronoun in the position of the accusative object is a middle marker in German. The different constructions in (69) are thus all instances of Middle Voice in the sense of Kemmer (1993). I will ignore this aspect of his theory at this point. See Alexiadou, Anagnostopoulou & Schäfer (2014) for a discussion of whether German has (syntactic) Middle Voice.

- (69) a. Mark verletzt sich.  
*Mark hurts REFL*  
 ‘Mark hurts himself.’  
 b. Die Tür öffnet sich.  
*the door opens REFL*  
 ‘The door opens.’  
 c. Max erkältet sich.  
*Max colds REFL*  
 ‘Max catches a cold.’  
 d. Die Tür öffnet sich leicht.  
*the door opens REFL easily*  
 ‘The door opens easily.’

(70) [<sub>VOICEP</sub> DP<sub>NOM</sub> [<sub>VP</sub> REFL + √ROOT + v] Voice]

The different readings, he argues, are resolved post-syntactically. Two factors play a role in this process: the quality of the reflexive pronoun (e.g. whether it is argumental or non-argumental in his terminology) and the fate of the predicate's ‘first’ semantic argument (e.g. whether it is suppressed or deleted).

Steinbach proposes the following Binding Theory:

(71) **Binding Theory - Steinbach 2002**

**1. General Condition on A-Chains (GCC)**

A maximal A-chain contains exactly one link -  $\alpha 1$  - that is both +R and case-marked  
 A maximal A-chain is any sequence of coindexation of syntactic arguments that satisfies antecedent government.

The syntactic arguments of P are the chains that are assigned structural case in the extended projections of P.

**2. Binding Principles**

Principle A: A locally o-commanded reflexive pronoun must be locally o-bound

Principle B: A personal pronoun must be locally o-free

Let Y and Z be different semantic arguments of the same predicate, Y referential.  
 Then Y locally o-commands Z just in case the syntactic constituent Y is linked to is not more oblique than the syntactic constituent Z is linked to.

Y locally o-binds Z just in case Y and Z are coindexed and Y locally o-commands Z. If Z is not locally o-bound, then it is said to be locally o-free.

**3. Obliqueness Hierarchy in German**

nominative (subject) > accusative (direct) object > dative (indirect) object > other oblique objects

(Steinbach 2002: 133)

Particularly relevant for my purposes here is the General Condition on A-Chains in 1. The GCC rules out A-chains that contain more than one element specified for the feature [+R].

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<sup>22</sup> I adjusted Steinbach's phrase structure to the one used elsewhere in this thesis.

This feature, standing for referential independency, is assigned to nominal elements that carry a full specification for  $\phi$ -features and structural Case (see also Reinhart & Reuland 1993). While pronouns are thus [+R] (and according to the GCC must not occur within a chain that contains another [+R]-element), Steinbach argues that reflexive pronouns in German are maximally underspecified for  $\phi$ -features and may therefore occur as [ $\pm$  R] (in this regard he differs from Reinhart and Reuland 1993, who propose that SE and SELF-anaphors are [-R]). If a reflexive pronoun comes specified as [+R], it heads its own A-chain and is linked to a semantic argument.<sup>23</sup> A [+R] reflexive pronoun in Steinbach's theory is an argumental reflexive and occurs in thematic reflexives such as (69a). Thematic reflexives thus involve two independent A-chains: one containing the external argument, the other the reflexive pronoun. Since  $DP_{\text{NOM}}$  and *sich*<sub>[+R]</sub> realize two different semantic arguments of the predicate, Principle A applies, which requires a locally o-commanded reflexive pronoun to be locally o-bound.<sup>24</sup> In (69a),  $DP_{\text{NOM}}$  locally o-commands and o-binds the reflexive pronoun and, thus, both arguments are coindexed. A translation mechanism for bound reflexive variables leads to a conversion of all arguments that are coindexed into variables bound by the same  $\lambda$ -operator, such that (69a) has the semantic representation in (72). [+R] reflexive pronouns are thus semantically bound.

(72)  $(\lambda x \text{ VERLETZEN } \langle x, x \rangle) (m)$

Non-argumental reflexive pronouns in his system are specified as [-R] and are forced by the GCC to form a chain with a nominal element that is [+R]. In the cases in (69b-d), the relevant [+R] element is  $DP_{\text{NOM}}$ . Steinbach argues that the complex A-chain containing  $DP_{\text{NOM}}$  and the [-R] reflexive pronoun entails that  $DP_{\text{NOM}}$  is interpreted in the chain's base-position, e.g. the theme position. This accounts for the fact that, even though  $DP_{\text{NOM}}$  is merged externally, it is interpreted as a theme. He further assumes that the complex A-chain in cases of a [-R]-element is responsible for the impossibility of linking the agent theta-role syntactically, because if it was, the chain would be theta-marked twice. The implicit agent argument can then either be deleted (leading to an anticausative/inherent reflexive interpretation as in (69b,c)), or saturated via binding by a generic operator (leading to CMs; (69d)).

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<sup>23</sup> Steinbach's theta-theory is different from the one adopted in this paper. He uses the following two linking rules to associate a syntactic with a semantic argument:

- (i) Spec,VP is linked to the first argument of the verb
- (ii) The complement of V is linked to the second argument of the verb

<sup>24</sup> Note that Principle B blocks a pronoun in object position in (69) even though personal pronouns and argumental reflexive pronouns share the feature [+R] in Steinbach's system.

To summarize, Steinbach proposes that a reflexive pronoun may either have an independent referential value [+R] or not [-R]. The different behavior of argumental and non-argumental reflexive pronouns with respect to processes such as topicalization, modification, and coordination are explained by Steinbach on purely semantic grounds. He argues extensively that these processes can only apply to elements that have some referential value (i.e. are specified as [+R] in his system), but not to elements that are specified as [-R].

If one adopts Steinbach's distinction between argumental [+R] and non-argumental [-R]-reflexives, an adjustment of the reflexive analysis of LMs in these terms would entail that the reflexive pronoun in LMs is [-R] (73). This would account for the ungrammaticality of topicalization, modification, and coordination (cf. (66)).<sup>25</sup>

(73) a. Die Tür lässt sich öffnen.

*the book lets REFL open*

b. [VoiceP Die Tür<sub>1</sub> [vP [VoiceP [vP [vP REFL<sub>[-R]1</sub> √OFFEN] v ] Voice<sub>PASS</sub>] v-√LASS] Voice]

How can this adjustment of the reflexive analysis of LMs explain the data in section 4.4.1? First, the ambiguity inherent in examples such as (56) (repeated here as (74)) can easily be resolved under the assumption that the reflexive pronoun may either be [+R], or [-R].

(74) Er lässt sich massieren.

*he lets REFL massage*

- (i) He makes someone give a massage to him.
- (ii) He lets someone give a massage to him.
- (iii) He can be given a massage.

While the readings in (i) and (ii) involve a [+R]-reflexive in the embedded object position, a [-R] reflexive pronoun in this position leads to the middle interpretation in (iii). Support for this way of resolving the ambiguity comes from the fact that topicalization, modification, and coordination, which were argued in Steinbach to be processes that are semantically incompatible with a [-R] reflexive, disambiguate (74) in favor of the directive/permissive readings.

(75) a. Sich lässt er massieren.

*REFL lets he massage*

‘He lets/makes someone massage HIM.’

\*‘One can massage HIM.’

<sup>25</sup> Under the configurational theta-theory adopted in this thesis, I cannot assume with Steinbach that the chain-formation between DP<sub>NOM</sub> and REFL<sub>[-R]</sub> blocks the syntactic realization the agent. Under a post-syntactic theta-theory, a non-thematic reflexive in the theme-position blocks the assignment of this theta-role to REFL, ultimately deriving an unergative structure. Under the reflexive analysis of LMs, this leads to the same question that arises under unergative analyses of CMs: how is the argument merged in the external argument position associated with the theme theta-role? Since I adopt Steinbach's theory only to adjust the reflexive analysis in a way to make it account for the data in section 4.4.1, I will ignore this problem here.

- b. Er lässt nur sich massieren.  
*he lets only REFL massage*  
 ‘He lets/makes someone massage only him.’  
 \*‘One can massage only him.’
- c. Er lässt sich und seinen Bruder massieren.  
*he lets REFL and his brother massage*  
 ‘He lets/makes someone massage him and his brother.’  
 \*‘One can massage him and his brother.’

With respect to the distinct behavior of *lassen*-passives and LMs in case-copying contexts, it is reasonable to assume that the difference is directly related to the status of the reflexive pronoun. If, for example, the 'antecedent' that determines the case on the additional DP needs to be referential (e.g. [+R]), a [-R] reflexive pronoun is expected not to be able to serve as an antecedent. The case is then determined by the only DP that can potentially fulfill the antecedent function, which is  $DP_{NOM}$ . This explains why the extra DP surfaces with nominative case in LMs, while in *lassen*-passives, in which the reflexive pronoun can serve as antecedent, accusative case is copied onto the DP.

In sum, the discussion in this section has shown that the reflexive analysis needs to be adjusted. In Steinbach's (2002) terminology, the reflexive pronoun in LMs needs to be non-referential, i.e. a [-R] reflexive. Since Steinbach claims that the reflexive pronoun is merged in the object position independently from its status as [ $\pm R$ ], it is possible to retain the underlying distribution of  $DP_{NOM}$  and REFL as occupying the matrix external and embedded internal argument position, respectively.

In the following section, I will provide evidence that, even with this adjustment, the reflexive analysis cannot be upheld:  $DP_{NOM}$  is base-generated as the internal argument of the embedded predicate. This means that this cannot be the position of the reflexive pronoun, as predicted by the reflexive analysis.

#### 4.5 Arguments for the Unaccusative Analysis of *Lassen*-Middles

In this section, I provide arguments that  $DP_{NOM}$  in LMs is **not** merged in the matrix Spec,VoiceP, but rather is base-generated as the internal argument of the embedded predicate. These arguments, then, make a reflexive analysis of LMs as developed in section 4.4 untenable, and strongly support the unaccusative analysis ((48b) repeated as (76)).

##### (76) Unaccusative Analysis

[ $\sqrt{VP}$  [VoiceP [ $\sqrt{VP}$   $DP_{NOM}$  +  $\sqrt{ROOT}$  + v ] Voice<sub>PASS</sub>] v- $\sqrt{LASS}$  ]

Furthermore, if the internal argument position is occupied by  $DP_{NOM}$ , the question arises where REFL is first merged. This issue will be addressed in section 4.6.

### 4.5.1 C-Selection

Part of the theory of subcategorization proposed in Chomsky (1965) involved the assumption that a predicate selects for the syntactic category of its complement (c-selection). For example, while a verb like *klauen* ‘to steal’ co-occurs with a nominal complement only (77a), *beweisen* ‘to prove’ may occur with a DP or CP-complement (77b,c). *Behaupten* ‘to claim’, by contrast, obligatorily combines with a propositional complement, blocking nominal ones (77d,e), and *klagen* ‘to sue’ requires a PP complement (77f). Independently from the categorial specification, all complements in (77) thematically qualify as (proto-) themes.

- (77) a. Mark klaut [DP die Vase]  
*Mark steals the vase*  
‘Mark steals the vase.’
- b. Mark beweist [DP seine Unschuld]  
*Mark proves his innocence*  
‘Mark proves his innocence.’
- c. Hans beweist, [CP dass Mark die Vase geklaut hat].  
*Hans proves that Mark the vase stolen has*  
‘Hans proves that Mark has stolen the vase.’
- d.\*Mark behauptet [DP seine Unschuld].  
*Mark claims his innocence*  
‘Mark claims his innocence.’
- e. Hans behauptet, [CP dass Mark die Vase geklaut hat].  
*Hans claims that Mark the vase stolen has*  
‘Hans claims that Mark has stolen the vase.’
- f. Mark klagt [PP gegen Verleumdung].  
*Mark sues against aspersion*  
‘Mark sues for aspersion.’

As already pointed out in Reis (1976), the form of the subject in an LM crucially depends on the c-selectional properties of the embedded predicate. For example, the subject of an LM involving the embedded predicate *klauen* has to be nominal (78a), while the subject can also be sentential if the embedded predicate is *beweisen* (78b,c). In other words, the category of the subject has to match the category of the complement of the embedded predicate (in non-LM contexts).<sup>26</sup>

- (78) a. [DP die Vase] lässt sich leicht klauen.  
‘The vase steals easily.’
- b. [DP seine Unschuld] lässt sich leicht beweisen  
‘His innocence can be proven easily.’

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<sup>26</sup> Note that all of the examples in (78) raise immediate problems for Steinbach’s theory of non-argumental *sich*. In all the above cases, the reflexive pronoun should form a chain that is headed by a [+R]-argument. If CPs lack a  $\phi$ -feature specification, they should be [-R], and the examples in (c) and (e) should be ungrammatical. But even if CPs can function as heads of A-chains in Steinbach’s sense, the grammaticality of the impersonal LM in (f) is unexpected, as there is no subject at all that could potentially serve as the head of the chain containing *sich*. I address impersonal LMs in chapter 8.

- c. [CP Dass Mark die Vase gestohlen hat] lässt sich leicht beweisen.  
'That Mark has stolen the vase can be proven easily.'
- d.\*[DP Seine Unschuld] lässt sich leicht behaupten.  
'One's innocence can be claimed easily.'
- e. [CP Dass Mark die Vase gestohlen hat] lässt sich leicht behaupten (...beweisen lässt es sich aber kaum).  
'That Mark has stolen the vase can be claimed easily (...but it can hardly be proven).'
- f. [PP Gegen Verleumdung] lässt sich gut klagen.  
'One can easily sue for aspersion.'

This correlation suggests that the subject in an LM is base-generated as the internal argument of the embedded predicate.

It has to be mentioned, however, that the correlation between the categorical status of the subject and the internal argument of the embedded predicate can also be captured under the reflexive analysis of LM. This requires making reference to semantic selection. In other words, if, for example, category selection and semantic selection (s-selection) are two autonomous subsystems of the Grammar as argued in Grimshaw (1979), the subject of an LM should show up as a CP if the embedded predicate requires a propositional argument, because otherwise the construction would be semantically ill-formed. The ungrammaticality of (78d) would then follow from the fact that the subject DP cannot be interpreted as the internal argument of *behaupten*, which s-selects for a proposition. To put it differently, the subject of an LM would have to be compatible with the s-selectional properties of the embedded predicate of which it is interpreted as an argument via the reflexive pronoun in object position.

Nevertheless, the reflexive analysis still fails to account for the facts. Since, under the reflexive analysis of LMs, the argument to which the dispositional property is assigned is base-generated as the external argument of *lassen*, one would expect that *lassen* can in fact combine with a DP, CP, or PP. Otherwise one would have to postulate special selectional properties of *lassen* in the context of LMs. This, however, undermines the idea that LMs are just one interpretation that *lassen*-passives may get. While *lassen* can indeed combine with a nominal or sentential external argument (79a,b), this does not hold for PPs (79c).

- (79) a. [DP Seine Schuldgefühle] lassen Mark nachts nicht schlafen.  
'His feelings of guilt don't let Mark sleep at night.'
- b. [CP Dass Mark die Vase gestohlen hat] lässt seine Mutter an ihrer Erziehung zweifeln.  
'That Mark has stolen the vase makes his mother doubt her upbringing.'
- c.\*[PP In Italien] lässt die Urlauber das gute Essen genießen.  
Intended: 'Tourists enjoy the good food because they are in Italy.'



Alternatively, one might propose that *lassen* in (78f) lacks an external argument, and the PP is just the prepositional object of the embedded predicate. This, however, raises two issues: first, it would require *lassen* to optionally combine with no argument at all, which would beg the question why *lassen* should allow for such optionality in LMs but not elsewhere. Second, it would be completely unclear under such an approach why the reflexive pronoun should be present. Recall that the main effect of the reflexive pronoun in the reflexive analysis of LMs was to link the external argument of *lassen* to the internal argument position of the infinitive. If in (78f) the PP is base-generated as the internal argument of the embedded predicate, the reflexive should be superfluous, which is not the case (80).

(80)\*Gegen Verleumdung lässt gut klagen.  
*against aspersion lets well sue*  
 ‘One can easily sue for aspersion.’

With the unaccusative analysis of LMs, by contrast, none of the issues mentioned above arises and all of the data in (78) can be readily explained: If the embedded internal argument is a DP / CP, this argument will become the (sentential) subject. If, by contrast, the embedded predicate combines with a prepositional object or no (internal) argument at all, this leads to a subjectless, impersonal LM.

#### 4.5.2 Passive *Se Faire* in French

The second argument against the reflexive and in favor of the unaccusative analysis of LMs, builds on observations made in Labelle (2002, 2013) with respect to the French passive *se faire* construction (PSF), illustrated in (81).

(81) Jean s' est fait écraser (par une voiture).  
*John SE is made run-over by a voiture*  
 ‘John was run over by a car.’

The PSF in (81) is similar to German LMs in a number of ways: (i) Both constructions involve a reflexive pronoun (which is realized as a full DP in German, but by a reflexive clitic in French – a SE-reflexive in the terms of Reinhart & Reuland 1993). (ii) LMs and PSFs employ a causative matrix predicate (*lassen/faire*). (iii) The structural subject in both constructions corresponds thematically to an internal argument of the embedded predicate.<sup>27</sup> It

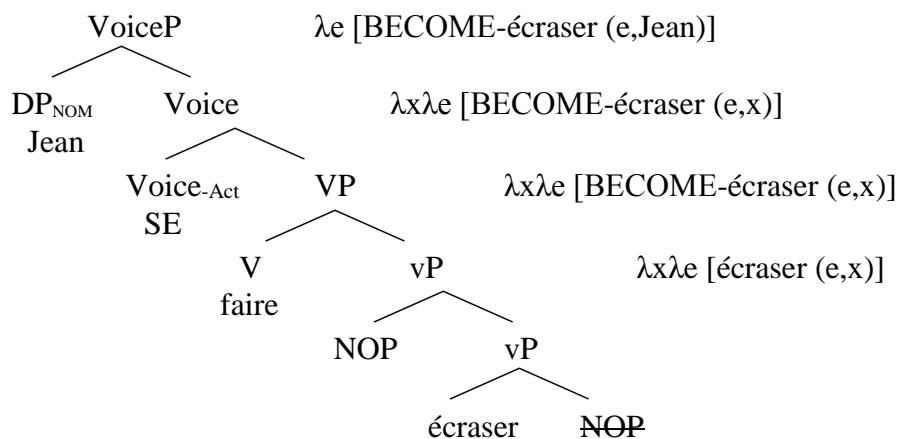
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<sup>27</sup> LMs and PSFs differ semantically. Whereas LMs receive a dispositional middle interpretation, PSFs have to be interpreted as a passive (comparable to the English 'get'-passive). I assume that this interpretatory difference is the consequence of the underspecification of the German causative predicate *lassen*, which, unlike French *faire*, can receive both a causative and a permissive interpretation. I have to leave it for future research how exactly the fact that French *faire* is only causative blocks the middle reading.

is (iii) in particular that plays a role in the present discussion, since the same question arises as in LMs: what is the base-position of  $DP_{\text{NOM}}$  in PSFs?

Labelle (2002, 2013) rejects the possibility that  $DP_{\text{NOM}}$  is merged as the internal argument of the embedded predicate, claiming instead that it needs to be merged in the specifier of the matrix VoiceP. It must be mentioned, however, that the base-position of  $DP_{\text{NOM}}$  is the only parallel between the reflexive analysis of LMs discussed in section 4.4 and Labelle’s analysis of PSFs. She assumes that the reflexive pronoun heads the matrix VoiceP, rendering it non-active, such that  $DP_{\text{NOM}}$  in its specifier does not receive a theta-role.<sup>28</sup> The function of the reflexive pronoun in the reflexive analysis is taken over in her approach by a null operator (NOP) base-generated in the internal argument position of the embedded predicate. Following Huang’s (1999) analysis of Chinese *bei*-passives, she assumes that NOP adjoins to the embedded vP and that this operator movement creates a property-denoting predicate interpreted as lambda-abstraction over a variable. The property is predicated over the matrix subject, which is thus interpreted as the embedded theme argument (i.e. (81) roughly means ‘Jean ended up with the property of being an x such that a car ran over x.’ The syntactic structure, accompanied by the semantic derivation of PSFs is illustrated in (82).<sup>29</sup>

(82) **The Syntax and Semantics of PSFs** (Labelle 2013)



Since a detailed comparison between German LMs and French PSFs is beyond the scope of this thesis, I will only focus on the point that is relevant to the general discussion in this section, i.e. why does Labelle reject the possibility of base-generating  $DP_{\text{NOM}}$  as an argument of the embedded predicate?

<sup>28</sup> Labelle argues that *se faire* in PSFs has to be treated as the marked anticausative of causative, transitive *faire*. This is exactly the analysis of *sich lassen* I propose in section 4.7.3.

<sup>29</sup> I refer the interested reader to Labelle (2013) for an answer to the question how a causative predicate can be changed into a BECOME operator, expressing that the subject ‘ends up’ with a certain property.

Labelle observes that  $DP_{\text{NOM}}$  in PSFs can correspond to a 'dative gap' in the embedded predicate. This is illustrated in (83).

- (83) a. L'oncle de Louise **lui** a offert un poste.  
*the.uncle of Louise him.DAT has offered a position*  
 'Louise's uncle has offered him a position.'
- b. **Pierre/Il** s' est fait [offrir un poste par l' oncle de Louise].  
*Pierre/he.NOM SE is made offer a position by the uncle of Louise*  
 'Pierre was offered a position by Louise's uncle.'
- (Labelle 2013: 235)

*Offrir* 'to offer' is a ditransitive verb that assigns dative case to the goal argument (see the use of the dative clitic *lui* in (83a)). In the corresponding PSF in (83b), the DP that is interpreted as the goal surfaces with nominative case. If the subject of a PSF was raised from an internal argument position, (83b) would be an instance of dative to nominative advancement. Crucially, dative arguments in French (apart from some exceptions, e.g. the dative arguments of the verbs *obéir* 'obey', *désobéir* 'disobey', *pardonner* 'pardon') do not rise to subject in passives, as is shown by the ungrammaticality of (84a).

- (84) a. \*Paul/Il a été offert un poste (par l' oncle de Louise).  
*Paul/he.NOM has been offered a position by the uncle of Louise*  
 'Pierre was offered a position (by Louise's uncle).' (Labelle 2013: 243)
- b. Un poste lui a été offert (par l' oncle de Louise).  
*a.NOM poste him.DAT has been offered by the uncle of Louise*  
 'A position was offered to Pierre (by Louise's uncle).'

(84a) seems to indicate that the dative case on the goal argument is not structural, thereby blocking dative to nominative advancement. Yet, if the dative case in the context of *offrir* is inherent, a movement analysis of the PSF in (83b) is untenable: if the subject in PSFs was base-generated as the internal argument of the embedded predicate, one would expect PSFs to behave like verbal passives in obligatorily retaining the dative case on goal arguments (cf. (84)), contrary to fact. If, by contrast,  $DP_{\text{NOM}}$  never occupies the embedded goal position but is base-generated as an external argument (as in Labelle's analysis), it will never be assigned inherent dative and is therefore eligible for structural nominative. As a consequence, the contrast between (83b) and (84a) is expected.

With this argument in mind, let us return to German LMs. First of all, it has to be noted that German, much like French, disallows dative to nominative advancement in passives of ditransitive verbs (85). This suggests that the dative on the goal argument is inherent, rather than structural.<sup>30</sup>

<sup>30</sup> A well-known exception to this is the German *bekommen/kriegen* 'get'-passive (*Rezipientenpassiv*).

- (85) a. Mark verkauft seinem Bruder einen Hasen.  
*Mark sells his.DAT brother a.ACC rabbit*  
 ‘Mark sells a rabbit to his brother.’
- b. \*Er wurde einen Hasen verkauft.  
*he.NOM became a.ACC rabbit sold*  
 ‘He was sold a rabbit.’
- c. Ihm wurde ein Hase verkauft.  
*him.DAT became a.NOM rabbit sold*  
 ‘A rabbit was sold to him.’

By embedding such a ditransitive predicate in an LM, it is clear that German LMs differ from French PSFs in exactly that point which led Labelle to argue against a raising analysis: unlike the structural subject in PSFs, DP<sub>NOM</sub> in LMs must never correspond to a dative gap (86a). Instead, dative case has to be retained on the goal argument while the embedded theme argument surfaces as the structural subject (86b). This latter point is expected since accusative to nominative advancement is possible in German (85c). In other words, with respect to case marking, LMs are fully parallel to verbal passives (cf. (85b,c) and (86a,b)).

- (86) a. \*Er lässt sich leicht einen Hasen verkaufen.<sup>31</sup>  
*he.NOM lets REFL easily a.ACC rabbit sell*
- b. Ihm lässt sich leicht ein Hase verkaufen.  
*him.DAT lets REFL easily a.NOM rabbit sell*  
 ‘A rabbit can be easily sold to him.’

In sum, LMs pattern exactly as one would expect if they involved a derived subject: DP<sub>NOM</sub> can only correspond to structurally case-marked internal arguments, but never to inherently case-marked ones. This is in stark contrast to what is possible in French PSFs. The contrast between (83b) and (86b), then, as well as the parallelism between (85b,c) and (86a,b), supports the unaccusative analysis of LMs, undermining the reflexive approach.

#### 4.5.3 Lexical Datives

A related argument against the reflexive analysis of LMs and in favor of the claim that DP<sub>NOM</sub> in LMs is base-generated as the internal argument of the embedded predicate involves

- 
- (i) Er kriegt/bekommt einen Hasen geschenkt.  
*he.NOM gets a.ACC rabbit given*  
 ‘He is given a rabbit as a present.’

There is a long-standing controversy as to whether (i) is a ‘real’ passive or not (Haider 1984a, Reis 1985) that is still not resolved. Wood & Sigurðsson (2012) discuss Icelandic *get*-passives and argue against dative to nominative advancement. Most recently, however, Alexiadou, Anagnostopoulou & Sevdali (2014) have argued that (i) is a real passive that involves advancement of the dative argument. They claim that dative case is ambiguous between inherent and structural case, and that in *get*-passives as in (i), it would be structural, while it is inherent in verbal passives.

<sup>31</sup> Without the manner adverb, the sentence is grammatical under a causative, non-middle reading. This is not surprising since in *lassen*-passives, the matrix subject functions as the external argument of *lassen* and is therefore not expected to be inherently case-marked.

lexically case-marked DPs. Recall that under the reflexive analysis, the sole referential DP is merged as the external argument in Spec,VoiceP. For verbs like *helfen* 'to help', for example, which assign lexical dative case to their internal theme argument (87a), this means that the dative marked DP should be merged in Spec,VoiceP in the corresponding LM in (87b).

- (87) a. Er hilft einem Obdachlosen.  
*he.NOM helps a.DAT homeless.person*  
 'He helps a homeless person.'
- b. Einem Obdachlosen lässt sich leicht helfen.  
*a.DAT homeless.person lets REFL easily help*  
 'A homeless person can be helped easily.'
- c.\*Ein Obdachloser lässt sich leicht helfen.  
*a.NOM homeless.person lets REFL easily help*  
 Intended: 'A homeless person can be helped easily.'

Yet, there is no independent evidence in German that non-nominative DPs can be merged in Spec,VoiceP - a fact that would entail a rather exceptional status for LMs.<sup>32</sup> If, by contrast, the theme argument is merged in Spec,VoiceP without lexical case, thus being eligible for structural nominative, the result is ungrammatical (87c). In other words, the data in (87) cannot be accounted for under the reflexive analysis.

Furthermore, as in the case of inherently case-marked arguments in the preceding section, there is a fundamental contrast between LMs and reflexive *lassen*-passives with respect to lexically case-marked DPs. While in an LM the DP that is interpreted as the internal argument of the embedded predicate has to surface with lexical dative (87b), in a reflexive *lassen*-passive, it has to surface with nominative (88).

- (88) a. Ein Obdachloser lässt sich helfen.  
*a.NOM homeless.person lets REFL help*  
 'A homeless person makes/lets someone help him.'  
 \*'A homeless person can be helped.'
- b. Einem Obdachlosen lässt sich helfen.  
*a.DAT homeless.person lets REFL help*  
 \*'A homeless person makes/lets someone help him.'  
 'A homeless person can be helped.'

The contrast in (88) cannot be explained by the reflexive analysis, as it essentially treats LMs as reflexive *lassen*-passives syntactically.

The data above follow straightforwardly under an unaccusative analysis of LMs, in which the sole referential DP *ein Obdachloser* is merged as an internal argument of the embedded

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<sup>32</sup> Note that the ban on lexically case marked DPs in Spec,VoiceP seems to hold even for languages like Icelandic, which allow quirky subjects. That is, while in Icelandic (but not in German), Spec,TP can be occupied by a lexically case-marked DP (e.g. Zaenen, Maling & Thráinsson 1985; Sigurðsson 1992, 2002), these quirky subjects are always base-generated below Voice and receive internal theta roles (see e.g. Jónsson 2000, Sigurðsson 2012, Wood 2012).

predicate. Since it is lexically case-marked in this position, and German lacks dative to nominative advancement (see the discussion in the preceding section), the embedded theme argument will retain dative case (cf. the grammatical (87b/88b) and the ungrammatical (87c)). In the *lassen*-passive in (88a), by contrast, the DP *ein Obdachloser* is merged as an external argument of causative *lassen*, binding the (dative) reflexive pronoun in the embedded object position. Since the sole referential DP will thus never be assigned lexical case, it is correctly predicted to surface with nominative case.<sup>33</sup>

#### 4.5.4 Information Structure

The arguments provided in this and the following two sections have been discussed in Pitteroff & Schäfer (to appear). Each argument involves an asymmetry between reflexive *lassen*-passives and LMs with respect to the linear distribution of dative marked DPs, which makes it impossible to maintain an analysis of LMs that treats them as an interpretation that reflexive *lassen*-passives give rise to (i.e. the reflexive analysis). Furthermore, the arguments show that DP<sub>NOM</sub> in LMs must be base-generated as the internal argument of the embedded predicate, therefore supporting the unaccusative analysis of LMs. The arguments build on two German-specific properties. First, as discussed in chapter 1, German DPs do not need to move to SpecTP in order to receive nominative case or trigger subject-verb agreement. DP<sub>NOM</sub> in unaccusative or passive contexts may stay in its vP-internal base-position. Second, LMs license either subcategorized (89a) or free (e.g. benefactive) datives (89b).

- (89) a. **Einem Sammler** lässt sich diese Briefmarke leicht verkaufen.  
*a.DAT collector lets REFL this stamp easily sell*  
 ‘This stamp can be easily sold to a collector.’  
 b. **Einem Blinden** lässt sich leicht die Wohnung aufräumen.  
*a.DAT blind.person lets REFL easily the apartment up.clean*  
 ‘It is easy to clean up the apartment for a blind person.’

With these properties in mind, I will now turn to the actual arguments.

German allows a relatively free linear order of arguments (and adverbials). I will assume that there is an underlying, unmarked order from which other word orders are derived via scrambling. Lenerz (1977, 2001) argues that these underlying orders can be identified by the absence of certain restrictions which hold in the derived orders. For example, consider the

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<sup>33</sup> Note that a defense of the reflexive analysis that makes reference to the fact that (87b) is an impersonal LM (with the dative marked DP base-generated in the embedded theme position) lacks explanatory force. It would be completely unclear what determines whether the matrix VoiceP in LMs introduces an external argument (giving rise to a personal LM), or not (leading to an impersonal LM). To put it differently, there is no way to explain why (87c) is not at least possible on a middle interpretation.

following acceptable and unacceptable orders of a direct and indirect object ( $DP_{ACC}$  and  $DP_{DAT}$  respectively; data are taken from Lenerz 2001).<sup>34</sup>

- (90) Wem hast du das Buch gegeben?  
 ‘Whom did you give the book?’
- a. Ich habe [dem StuDENTen]<sub>F</sub> das Buch gegeben. [ $DP_{DAT}$ ]<sub>F</sub> > [ $DP_{ACC}$ ]  
*I have the.DAT student the.ACC book given*
- b. Ich habe das Buch [dem StuDENTen]<sub>F</sub> gegeben. [ $DP_{ACC}$ ] > [ $DP_{DAT}$ ]<sub>F</sub>  
*I have the.ACC book the.DAT student given*  
 ‘I have given the book to the student.’

- (91) Was hast du dem Studenten gegeben?  
 ‘What have you given the student?’
- a. Ich habe dem Studenten [das BUCH]<sub>F</sub> gegeben. [ $DP_{DAT}$ ] > [ $DP_{ACC}$ ]<sub>F</sub>  
*I have the.DAT student the.ACC book given*
- b.\*Ich habe [das BUCH]<sub>F</sub> dem Studenten gegeben. \* [ $DP_{ACC}$ ]<sub>F</sub> > [ $DP_{DAT}$ ]  
*I have the.ACC book the.DAT student given*

The data above show that a focused  $DP_{DAT}$  can either precede or follow  $DP_{ACC}$  (90). By contrast, the position of a focused  $DP_{ACC}$  is restricted: it cannot precede, but has to follow  $DP_{DAT}$  (91).<sup>35</sup> In other words, the order  $DP_{DAT} > DP_{ACC}$  is unrestricted; the order  $DP_{ACC} > DP_{DAT}$  is restricted. Lenerz takes this fact as evidence that  $DP_{DAT} > DP_{ACC}$  is the unmarked base order, while  $DP_{ACC} > DP_{DAT}$  is derived by movement. The restriction blocking (91b) therefore has to be seen as a restriction on scrambling.<sup>36</sup> Lenerz formulates it as follows (see also Neeleman & van de Koot 2008):

- (92) **Restriction on Scrambling**  
 Don't scramble focus.

Restrictions on scrambling such as (92) can thus be used to determine the base position of arguments. For example, the data below show that the acceptable linear order of a focused  $DP_{DAT}$  and a  $DP_{NOM}$  differs in active and passive contexts: in the active, the  $DP_{NOM}$  obligatorily precedes  $DP_{DAT}$  (93), while in the passive,  $DP_{NOM}$  may precede or follow  $DP_{DAT}$  (94).

- (93) Wem hilft heutzutage noch die Bibel?  
 ‘Whom does the Bible help these days?’
- a. [ $DP_{NOM}$ ] > [ $DP_{DAT}$ ]<sub>F</sub>  
 Heute hilft die Bibel nur noch [dem GLÄUBigen]<sub>F</sub>.  
*today helps the.NOM Bible only yet the.DAT believer*

<sup>34</sup> Capital letters signal focus accent, while the [F]-feature indicates the focused phrase.

<sup>35</sup> For present purposes, it suffices to take focus in a question-answer pair to be the constituent in the answer that corresponds to the *wh*-operator in the question.

<sup>36</sup> It has to be mentioned that the restrictions on scrambling are not hard constraints. This means that a violation of (91) does not give rise to full ungrammaticality, but leads to a degraded result. As a consequence, the asterisk employed in the main text is in fact too strong. It is therefore useful to treat ungrammaticality as a relative notion, always comparing the deviant examples to the sentences in which the constraint has not been violated. This has to be kept in mind when considering the argumentation in this and the following two sections.

b.  $[\text{DP}_{\text{DAT}}]_{\text{F}} > [\text{DP}_{\text{NOM}}]$

\*Heute hilft nur noch [dem GLÄUBIGEN]<sub>F</sub> die Bibel.  
*today helps only yet the.DAT believer the.NOM bible*  
 ‘These days, the Bible only helps the believer.’

(94) Wem wird heutzutage noch das Leben gerettet?

‘Whose life is saved these days.’

a.  $[\text{DP}_{\text{NOM}}] > [\text{DP}_{\text{DAT}}]_{\text{F}}$

Heute wird das Leben nur noch [dem VerSICHERTEN]<sub>F</sub> gerettet.  
*today becomes the.NOM life only yet the.DAT insured saved*

b.  $[\text{DP}_{\text{DAT}}]_{\text{F}} > [\text{DP}_{\text{NOM}}]$

Heute wird nur noch [dem VerSICHERTEN]<sub>F</sub> das Leben gerettet.  
*today becomes only yet the.DAT insured the.NOM life saved*  
 ‘Nowadays, only the life of insured is saved.’

The contrast follows from the different base-orders of  $\text{DP}_{\text{NOM}}$  and  $\text{DP}_{\text{DAT}}$  in active and passive sentences. Focusing on the active cases in (93) first,  $\text{DP}_{\text{NOM}}$  functions as the external argument and is merged in Spec,VoiceP, from which it c-commands the lexically case-marked  $\text{DP}_{\text{DAT}}$ , which is arguably merged in some vP-internal position (e.g. Spec,vP). In other words,  $\text{DP}_{\text{NOM}} > \text{DP}_{\text{DAT}}$  is the base-order, while  $\text{DP}_{\text{DAT}} > \text{DP}_{\text{NOM}}$  is derived. This view is supported by the ungrammaticality of (93b), which can only be derived by scrambling  $\text{DP}_{\text{DAT}}$  across  $\text{DP}_{\text{NOM}}$ , which is in conflict with (92). The claim that  $\text{DP}_{\text{NOM}} > \text{DP}_{\text{DAT}}$  is the base-order in the active sentences is supported by the observation that if the focused phrase is  $\text{DP}_{\text{NOM}}$ , both orders are acceptable (95).

(95) Wer hilft heutzutage noch dem Gläubigen?

‘What helps the believer these days?’

a.  $[\text{DP}_{\text{NOM}}]_{\text{F}} > [\text{DP}_{\text{DAT}}]$

Heute hilft nur noch [die BIBEL]<sub>F</sub> dem Gläubigen  
*today helps only yet the.NOM Bible the.DAT believer*

b.  $[\text{DP}_{\text{DAT}}] > [\text{DP}_{\text{NOM}}]_{\text{F}}$

Heute hilft dem Gläubigen nur noch [die BIBEL]<sub>F</sub>.  
*today helps the.DAT believer only yet the.NOM Bible*  
 ‘These days, only the Bible helps the believer.’

Since  $\text{DP}_{\text{NOM}} > \text{DP}_{\text{DAT}}$  is the base order, (95b) is derived by scrambling the non-focused  $\text{DP}_{\text{DAT}}$  across  $\text{DP}_{\text{NOM}}$ , which does not violate (92). If, by contrast,  $\text{DP}_{\text{DAT}} > \text{DP}_{\text{NOM}}$  was the base-order, (95a) would involve scrambling of a focused phrase, and the result should be unacceptable according to (92), contrary to fact.

Unlike in the active, a focused  $\text{DP}_{\text{DAT}}$  can either precede or follow  $\text{DP}_{\text{NOM}}$  in the passive (94). This suggests that  $\text{DP}_{\text{DAT}} > \text{DP}_{\text{NOM}}$  is the unscrambled base-order and (94a) is derived by scrambling the non-focused  $\text{DP}_{\text{NOM}}$  across  $\text{DP}_{\text{DAT}}$  – an operation that is not in conflict with (92). The claim that  $\text{DP}_{\text{DAT}} > \text{DP}_{\text{NOM}}$  is the base-order in the passive examples is supported by



the fact that the order  $DP_{NOM} > DP_{DAT}$  is degraded if  $DP_{NOM}$  is focused (96), as this would involve scrambling of a focused phrase.

(96) Was wird heutzutage noch dem Versicherten gerettet?

‘What is saved for the insured person these days?’

a.  $[DP_{DAT}] > [DP_{NOM}]_F$

Heute wird dem Versicherten nur noch [das SPARschwein]<sub>F</sub> gerettet.  
*today becomes the.DAT insured only yet the.NOM piggy bank saved*

b.  $[DP_{NOM}]_F > [DP_{DAT}]$

\*Heute wird nur noch [das SPARschwein] dem Versicherten gerettet.  
*today becomes only yet the.NOM piggy bank the.DAT insured saved*  
 ‘These days, they only save the insured person's piggy bank.’

Unaccusative predicates that combine with an additional dative argument pattern with passives, suggesting that the base order in these cases is  $DP_{DAT} > DP_{NOM}$ , i.e. the structural subject of unaccusatives is base-generated as the internal argument (Burzio 1986; Grewendorf 1989 among many others). This is illustrated below using the psych-predicate *gefallen* ‘to please’ (see Fanselow 1991; Frey 1993; Bobaljik & Wurmbrand 2005 for the unaccusative nature of this predicate), which combines with a dative-marked experiencer.<sup>37</sup>

(97) Wem gefällt heutzutage noch der Klang des Vinyls?

‘Who is nowadays still pleased by the sound of vinyl?’

a.  $[DP_{NOM}] > [DP_{DAT}]_F$

Heute gefällt der Klang des Vinyls nur noch [dem NostALgiker.]<sub>F</sub>  
*today pleases the.NOM sound of.the vinyl only yet the.DAT nostalgic*

b.  $[DP_{DAT}]_F > [DP_{NOM}]$

Heute gefällt nur noch [dem NostALgiker.]<sub>F</sub> der Klang des Vinyls.  
*today pleases only yet the.DAT nostalgic the.NOM sound of.the vinyl*  
 ‘Nowadays, the sound of vinyl only pleases the nostalgic.’

(98) Was gefällt heutzutage noch dem Nostalgiker?

‘What pleases the nostalgic these days?’

a.  $[DP_{NOM}]_F > [DP_{DAT}]$

\*Heute gefällt nur noch [der Klang des ViNYLS]<sub>F</sub> dem Nostalgiker.  
*today pleases only yet the.NOM sound of.the vinyl the.DAT nostalgic*  
 ‘Nowadays, the sound of vinyl only pleases the nostalgic.’

b.  $[DP_{DAT}] > [DP_{NOM}]_F$

Heute gefällt dem Nostalgiker nur noch [der Klang des ViNYLS]<sub>F</sub>.  
*today pleases the.DAT nostalgic only yet the.NOM sound of.the vinyl*

(97) and (98) illustrate that the order  $DP_{DAT} > DP_{NOM}$  is unrestricted, while the order  $DP_{NOM} > DP_{DAT}$  is only acceptable if  $DP_{NOM}$  is not focused. In line with the argumentation above, this suggests that  $DP_{DAT} > DP_{NOM}$  is the underlying base-order.

The overall picture so far is summarized in (99).

<sup>37</sup> I have no position to take as to the precise position of the dative experiencer as this is orthogonal to the issue at hand.

(99) Linear Order of DP<sub>NOM</sub> and DP<sub>DAT</sub>

Voice	Order	Example	Acceptability	Base order
<b>Active</b>	[DP <sub>NOM</sub> ] > [DP <sub>DAT</sub> ] <sub>F</sub>	(93a)	✓	DP <sub>NOM</sub> >DP <sub>DAT</sub>
	[DP <sub>DAT</sub> ] <sub>F</sub> > [DP <sub>NOM</sub> ]	(93b)	* (don't scramble focus!)	
	[DP <sub>NOM</sub> ] <sub>F</sub> > [DP <sub>DAT</sub> ]	(95a)	✓	
	[DP <sub>DAT</sub> ] > [DP <sub>NOM</sub> ] <sub>F</sub>	(95b)	✓	
<b>Passive</b>	[DP <sub>NOM</sub> ] > [DP <sub>DAT</sub> ] <sub>F</sub>	(94a)	✓	DP <sub>DAT</sub> >DP <sub>NOM</sub>
	[DP <sub>DAT</sub> ] <sub>F</sub> > [DP <sub>NOM</sub> ]	(94b)	✓	
	[DP <sub>NOM</sub> ] <sub>F</sub> > [DP <sub>DAT</sub> ]	(96b)	* (don't scramble focus!)	
	[DP <sub>DAT</sub> ] > [DP <sub>NOM</sub> ] <sub>F</sub>	(96a)	✓	
<b>Unaccusative</b>	[DP <sub>NOM</sub> ] > [DP <sub>DAT</sub> ] <sub>F</sub>	(97a)	✓	DP <sub>DAT</sub> >DP <sub>NOM</sub>
	[DP <sub>DAT</sub> ] <sub>F</sub> > [DP <sub>NOM</sub> ]	(97b)	✓	
	[DP <sub>NOM</sub> ] <sub>F</sub> > [DP <sub>DAT</sub> ]	(98a)	* (don't scramble focus)	
	[DP <sub>DAT</sub> ] > [DP <sub>NOM</sub> ] <sub>F</sub>	(98b)	✓	

The table above shows that the order [DP<sub>DAT</sub>]<sub>F</sub> > [DP<sub>NOM</sub>] is only acceptable if this is the unscrambled base-order, which is the case if the predicate is passive or unaccusative. This is relevant for the argument to follow, as the order of a focused DP<sub>DAT</sub> and a topical DP<sub>NOM</sub> will be used to investigate the argument structure of LMs, e.g. the base-position of DP<sub>NOM</sub>. The prediction is the following: if DP<sub>NOM</sub> was merged higher than DP<sub>DAT</sub> (as would be the case in the reflexive analysis), LMs should pattern with the active examples above in disallowing the order [DP<sub>DAT</sub>]<sub>F</sub> > [DP<sub>NOM</sub>]. If, by contrast, the unaccusative analysis was correct, both orders should be acceptable. (100) shows that the latter situation is the case.

(100) Wem lassen sich heute noch die Haare leicht schneiden?

‘Whose hair can be cut easily these days?’

a. [DP<sub>NOM</sub>] > [DP<sub>DAT</sub>]<sub>F</sub>

Heute lassen sich die Haare nur noch [dem Glatzköpfigen]<sub>F</sub> leicht  
*today let REFL the.NOM hair only yet the.DAT baldy easily*  
 schneiden.

*cut*

b. [DP<sub>DAT</sub>]<sub>F</sub> > [DP<sub>NOM</sub>]

Heute lassen sich nur noch [dem Glatzköpfigen] die Haare leicht  
*today lets REFL only yet the.DAT baldy the.NOM hair easily*  
 schneiden.

*cut*

‘These days, only the hair of a baldy can be cut easily.’

To complete the picture, (101) shows that if  $DP_{NOM}$  is focused in LMs, only one word order –  $DP_{DAT} > DP_{NOM}$  – is acceptable. This is to be expected if  $DP_{DAT} > DP_{NOM}$  is the unscrambled base-order. (I changed the verb to ensure semantic coherence, but do not expect this to affect the argument.)

(101) Was lässt sich dem Autobesitzer heute noch kostengünstig reparieren?

‘What can be repaired cheaply for the car owner these days?’

a.  $[DP_{NOM}]_F > [DP_{DAT}]$

\*Heute lassen sich nur noch [die SCHEINwerfer]<sub>F</sub> dem Autobesitzer  
*today let REFL only yet the.NOM headlamps the.DAT car.owner*  
 kostengünstig reparieren.  
*cheaply repair*

b.  $[DP_{DAT}] > [DP_{NOM}]_F$

Heute lassen sich dem Autobesitzer nur noch [die SCHEINwerfer]<sub>F</sub>  
*today let REFL the.DAT car.owner only yet the.NOM headlamps*  
 kostengünstig reparieren.  
*cheaply repair*

‘Nowadays, only the headlamps can be cheaply repaired for the car owner.’

LMs thus pattern with verbal passives and unaccusatives in that  $DP_{NOM}$  is base-generated below a free dative. This is compatible with the unaccusative analysis, and incompatible with the reflexive one.

This conclusion is further strengthened by the following observation. Recall that the reflexive analysis of LMs was essentially based on the syntax of *lassen*-passives. It is therefore illustrative to see how reflexive *lassen*-passives behave with respect to the word order possibilities of focused phrases.

(102) Wem lässt der Finanzminister heute noch helfen?

‘Whom is the finance minister going to make someone help today?’

a.  $[DP_{NOM}] > [DP_{DAT}]_F$

Heute lässt der Finanzminister nur noch [den REIchen]<sub>F</sub> helfen.  
*today lets the.NOM finance minister only yet the.DAT rich help*

b.  $[DP_{DAT}]_F > [DP_{NOM}]$

\*Heute lässt nur noch [den REIchen]<sub>F</sub> der Finanzminister helfen.  
*today lets only yet the.DAT rich the.NOM finance minister help*

‘Nowadays, the finance minister makes someone help only the rich.’

(103) Wer lässt heutzutage noch den Reichen helfen?

‘Who is going to make someone help the rich today?’

a.  $[DP_{NOM}]_F > [DP_{DAT}]$

Heute lässt nur noch [der FiNANZminister]<sub>F</sub> den Reichen helfen.  
*today lets only yet the.NOM finance minister the.DAT rich help*

b.  $[DP_{DAT}] > [DP_{NOM}]_F$

Heute lässt den Reichen nur noch [der FiNANZminister]<sub>F</sub> helfen.  
*today lets the.DAT rich only yet the.NOM finance minister help*

‘Nowadays, it is only the finance minister who makes someone help the rich.’

The data show that *lassen*-passives pattern like simple active clauses and unlike LMs in allowing both orders only if  $DP_{NOM}$  is focused. This is because  $DP_{NOM}$  is merged in the matrix clause, and is thus structurally higher than the subcategorized dative, an argument of the embedded predicate. In other words, in reflexive *lassen*-passives, in contrast to LMs, the base order is  $DP_{NOM} > DP_{DAT}$ . The order  $DP_{DAT} > DP_{NOM}$  must therefore be derived by scrambling, which, according to (92), is impossible if  $DP_{DAT}$  is focused (cf. (102b)).

The contrast between (100)/(101) and (102)/(103) is therefore further evidence against a high merging position for  $DP_{NOM}$  in LMs. It is also more evidence against a reflexive analysis.

Before I proceed to the next argument, let me discuss one possible way to derive the scrambling facts of LMs discussed in this section. Note in that regard that the data above reflect Bobaljik & Wurmbrand's (2012; B&W 2012 henceforth)  $\frac{3}{4}$  signature: the table in (99) illustrates that, out of four logical possibilities, only three are acceptable. B&W (2012) show that in addition to the partial correlation between focus and word order, this  $\frac{3}{4}$ -pattern holds between word order and scope possibilities as well. Their theory is designed to account for this fact. I will briefly review their analysis and then show how the situation for LMs can be explained within their theory.<sup>38</sup>

B&W's analysis is essentially based on the assumption that LF serves as an input to PF, with certain economy conditions selecting the 'best' (e.g. most economical) PF representation for a given LF. One such condition is the Scope Transparency Principle (ScoT) in (104).

**(104) Scope Transparency**

If the order of two elements at LF is  $A > B$ , the order at PF is  $A > B$ .  
(B&W 2012: 373)

ScoT, a soft constraint, essentially favors LF-PF isomorphism. As a soft constraint, it can be violated in cases where a language lacks the resources to express LF differently. ScoT thereby makes sense of the observation that typically languages with relatively free word order (e.g. German) show scope rigidity effects, while languages with a more restricted word order (e.g. English) allow for scope ambiguities. Consider the possible readings of the English example in (105a), and the readings available for the German correlate in (105b).<sup>39</sup>

- (105) a. Every student loves a teacher.       $\forall > \exists; \exists > \forall$   
       b. Jeder Schüler liebt einen Lehrer.       $\forall > \exists; * \exists > \forall$

While the narrow scope reading for the universally quantified subject is available in English,

<sup>38</sup> I am not saying that this is the only way to capture the facts, see e.g. Neeleman and van de Koot (2008) for a different analysis of similar facts in Dutch.

<sup>39</sup> I am considering a neutral intonation here. It is well known that under a rise-fall intonation, (105b) does allow the inverse scope reading.

it is not available in German under normal intonation (see e.g. Frey 1993; Haider 1993; Lechner 1998; Wurmbrand 2008; a.o.). Why should quantifier scope (in the basic word order) in German, but not in English, be determined by the surface serialization of the quantificational terms? B&W argue that this is a consequence of the fact that German, unlike English, allows scrambling of the direct object across the subject, thereby making available a surface word order that more directly reflects the respective LF interpretation, and thus satisfies ScoT.<sup>40</sup>

(106) Einen Lehrer liebt jeder Schüler.  $\exists > \forall$  available  
*a.ACC teacher loves every.NOM student*

Since English is not a scrambling language, the only PF that can express the high scope reading of the existentially quantified direct object is the one in (105a), violating ScoT. The contrast between English and German can be summarized as follows (see B&W's (3)/(4)).

(107) **English**

LF	PF	ScoT	Acceptability (under normal intonation)
$DP_{NOM} > DP_{ACC}$	$DP_{NOM} > DP_{ACC}$	✓	✓
	* $DP_{ACC} > DP_{NOM} > t_{DP_{ACC}}$	*	*(scrambling)
$DP_{ACC} > DP_{NOM}$	$DP_{ACC} > DP_{NOM} > t_{DP_{ACC}}$	✓	*(scrambling)
	$DP_{NOM} > DP_{ACC}$	*	✓(quantifier raising)

(108) **German**

LF	PF	ScoT	Acceptability (under normal intonation)
$DP_{NOM} > DP_{ACC}$	$DP_{NOM} > DP_{ACC}$	✓	✓
	* $DP_{ACC} > DP_{NOM} > t_{DP_{ACC}}$	*	*
$DP_{ACC} > DP_{NOM}$	$DP_{ACC} > DP_{NOM} > t_{DP_{ACC}}$	✓	✓ (scrambling)
	$DP_{NOM} > DP_{ACC}$	*	*(quantifier raising)

<sup>40</sup> English does allow topicalization of the direct object, but since topicalization has information structural effects, B&W argue that it is a PF representation that expresses a different LF.

B&W argue that the  $\frac{3}{4}$  signature arises if two LF conditions pose conflicting requirements on PF, such that no PF satisfies all LF conditions. As a consequence, all competing PFs are possible word orders. I will now turn to such a case: the interaction between focus and word order that is the topic of this section.

B&W propose that LF contains a representation of information structure  $LF_{IS}$ , which reflects the tendency of a focused phrase to appear as far to the right as possible (e.g. towards the end of the middle field; Lenerz 1977). This tendency is implemented by the assumption that at  $LF_{IS}$  a topical phrase precedes a focused phrase (whatever precedence means at this level of representation), see (109).

(109)  $A > B_F$ ;  $*B_F > A$

ScoT will then be a faithfulness constraint that favors isomorphism between information structure ( $LF_{IS}$ ) and PF. To capture Lenerz's condition on scrambling in (92), B&W assume that this level of representation contains a further (soft) economy constraint which favors an object DP to stay in situ (*Don't move object*; DMO). The combination of these two constraints will then correctly predict the configurational possibilities in (112) for the active sentences in (93) and (95), repeated here as (110) and (111) respectively (*lassen*-passives would work identically; note again that B&W's theory involves LF as the input to PF, so I group together the different focus structures and associate them with different PF representations).

(110) Wem hilft heutzutage noch die Bibel?

'Whom does the Bible help these days?'

a.  $[DP_{NOM}] > [DP_{DAT}]_F$

Heute hilft die Bibel nur noch [dem GLÄUbigen]<sub>F</sub>.  
*today helps the.NOM Bible only yet the.DAT believer*

b.  $[DP_{DAT}]_F > [DP_{NOM}]$

\*Heute hilft nur noch [dem GLÄUbigen]<sub>F</sub> die Bibel.  
*today helps only yet the.DAT believer the.NOM Bible*  
 'These days, the Bible only helps the believer.'

(111) Wer hilft heutzutage noch dem Gläubigen?

'What helps the believer these days?'

a.  $[DP_{NOM}]_F > [DP_{DAT}]$

Heute hilft nur noch [die Bibel]<sub>F</sub> dem Gläubigen  
*today helps only yet the.NOM Bible the.DAT believer*

b.  $[DP_{DAT}] > [DP_{NOM}]_F$

Heute hilft dem Gläubigen nur noch [die Bibel]<sub>F</sub>.  
*today helps the.DAT believer only yet the.NOM Bible*  
 'These days, only the Bible helps the believer.'

(112) a. **LF<sub>IS</sub>: [DP<sub>NOM</sub>] > [DP<sub>DAT</sub>]<sub>F</sub>**

<b>LF<sub>IS</sub></b>	<b>PF</b>	<b>ScoT</b>	<b>DMO</b>	<b>Acceptability</b>	<b>Example</b>
[DP <sub>NOM</sub> ] > [DP <sub>DAT</sub> ] <sub>F</sub>	DP <sub>NOM</sub> > DP <sub>DAT</sub>	✓	✓	✓	(110a)
	DP <sub>DAT</sub> > DP <sub>NOM</sub>	*	*	*	(110b)

b. **LF<sub>IS</sub>: [DP<sub>DAT</sub>] > [DP<sub>NOM</sub>]<sub>F</sub>**

<b>LF<sub>IS</sub></b>	<b>PF</b>	<b>ScoT</b>	<b>DMO</b>	<b>Acceptability</b>	<b>Example</b>
[DP <sub>DAT</sub> ] > [DP <sub>NOM</sub> ] <sub>F</sub>	DP <sub>DAT</sub> > DP <sub>NOM</sub>	✓	*	✓	(111b)
	DP <sub>NOM</sub> > DP <sub>DAT</sub>	*	✓	✓	(111a)

(112a) corresponds to the situation in which DP<sub>DAT</sub> is focused. The only acceptable PF representation is the unscrambled base-order DP<sub>NOM</sub> > DP<sub>DAT</sub>, as the other order would violate both ScoT and DMO. (112b) involves focused DP<sub>NOM</sub>. In this case, either PF order would violate one of the two constraints, such that both orders are acceptable. This brings us to the fact that only three of the four possible word orders are grammatical for the active sentences in (110)/(111).

Turning to passives, unaccusatives, and LMs, we arrive at the picture in (115) in B&W's system (I use the LMs in (100)/(101), repeated here as (113)/(114), for expository reasons; the situation for passives and unaccusatives would be derived identically).

(113) Wem lassen sich heute noch die Haare leicht schneiden?

'Whose hair can be cut easily these days?'

a. **[DP<sub>NOM</sub>]<sub>F</sub> > [DP<sub>DAT</sub>]<sub>F</sub>**

Heute lassen sich die Haare nur noch [dem Glatzköpfigen]<sub>F</sub> leicht  
*today let REFL the.NOM hair only yet the.DAT baldy easily*  
 schneiden.  
*cut*

b. **[DP<sub>DAT</sub>]<sub>F</sub> > [DP<sub>NOM</sub>]**

Heute lassen sich nur noch [dem Glatzköpfigen] die Haare leicht  
*today lets REFL only yet the.DAT baldy the.NOM hair easily*  
 schneiden.  
*cut*

'These days, only the hair of a baldy can be cut easily.'

(114) Was lässt sich dem Autobesitzer heute noch kostengünstig reparieren?

‘What can be repaired cheaply for the car owner these days?’

a.  $[DP_{NOM}]_F > [DP_{DAT}]$

\*Heute lassen sich nur noch [die SCHEINwerfer]<sub>F</sub> dem Autobesitzer  
*today let REFL only yet the.NOM headlamps the.DAT car.owner*  
 kostengünstig reparieren.  
*cheaply repair*

b.  $[DP_{DAT}] > [DP_{NOM}]_F$

Heute lassen sich dem Autobesitzer nur noch [die SCHEINwerfer]<sub>F</sub>  
*today let REFL the.DAT car.owner only yet the.NOM headlamps*  
 kostengünstig reparieren.  
*cheaply repair*  
 ‘Nowadays, only the headlamps can be cheaply repaired for the car owner.’

(115) a. **LF<sub>IS</sub>:  $[DP_{NOM}] > [DP_{DAT}]_F$**

LF <sub>IS</sub>	PF	ScoT	DMO	Acceptability	Example
$[DP_{NOM}] > [DP_{DAT}]_F$	$DP_{DAT} > DP_{NOM}$	*	✓	✓	(113b)
	$DP_{NOM} > DP_{DAT}$	✓	*	✓	(113a)

b. **LF<sub>IS</sub>:  $[DP_{DAT}] > [DP_{NOM}]_F$**

LF <sub>IS</sub>	PF	ScoT	DMO	Acceptability	Example
$[DP_{DAT}] > [DP_{NOM}]_F$	$DP_{DAT} > DP_{NOM}$	✓	✓	✓	(114b)
	$DP_{NOM} > DP_{DAT}$	*	*	*	(114a)

Since we established that, in LMs, the underlying order is  $DP_{DAT} > DP_{NOM}$ , a focused  $DP_{DAT}$  is correctly predicted to allow for both PF orders, since in either case one of the two constraints (ScoT or DMO) will be violated (115a). If, however, the nominative is focused, the order  $DP_{NOM} > DP_{DAT}$  violates both ScoT and DMO, correctly rendering this order unacceptable (115b). We thus correctly derive the  $\frac{3}{4}$  signature for the LMs in (113)/(114).<sup>41</sup>

#### 4.5.5 Binding

A further piece of evidence in favor of the unaccusative, and against the reflexive, analysis of LMs involves pronominal binding. Generally, a quantified DP may bind a possessor in an

<sup>41</sup> If, by contrast,  $DP_{NOM} > DP_{DAT}$  was the underlying base-order in LMs, the data in (113)/(114) could not correctly be derived. For example, the system would predict that with a focused  $DP_{DAT}$ , the PF order  $DP_{DAT} > DP_{NOM}$  would violate both ScoT and DMO and should thus be degraded, contrary to fact.



asymmetrically c-commanded DP, but not in a context where the pronoun c-commands the quantifier (cf. (116); I use dative DPs for illustration to ensure the highest degree of parallelism to the examples involving LMs).

(116) **DP<sub>NOM</sub> > DP<sub>DAT</sub>**

- a. weil [jeder Lehrer]<sub>i</sub> sicherlich gerne [seinem<sub>i/j</sub> Schüler] hilft.  
*because every.NOM teacher surely gladly his.DAT student helps*  
 ‘because every teacher is surely glad to help his student.’
- b. weil [seinem<sub>i/j</sub> Lehrer] sicherlich gerne [jedem Schüler]<sub>i</sub> hilft.  
*because his.NOM teacher surely gladly every.DAT student helps*  
 ‘because his teacher is surely glad to help every student.’

While in (116a) both a bound and a free variable reading of the possessor are acceptable, (116b) only allows the free variable reading, since the quantifier in DP<sub>DAT</sub> does not c-command the possessor in DP<sub>NOM</sub>.

Restricting ourselves to the situation in which a nominative quantifier binds a possessor in DP<sub>DAT</sub> (i.e. the situation illustrated in (116a)), it can be observed that unaccusatives and passives behave differently from the transitive, active example above. In the unscrambled word order, in which DP<sub>NOM</sub> is merged below DP<sub>DAT</sub> (see Lenerz 1977 and the preceding section for evidence that this is in fact the unmarked base order in these contexts), the quantifier takes narrow scope and can therefore not bind the pronoun in DP<sub>DAT</sub>. Thus, unlike in (116a), only the free variable reading is available:

(117) **DP<sub>DAT</sub> > DP<sub>NOM</sub>**

- a. weil [seiner<sub>i/j</sub> Mutter] [jeder Sohn]<sub>i</sub> am Besten gefällt  
*because his.DAT mother every.NOM son at.the.best pleases*  
 ‘because every son pleases his mother the best.’
- b. weil [seinem<sub>i/j</sub> Besitzer] [jedes Haus]<sub>i</sub> abgekauft wurde.  
*because his.DAT owner every.NOM house off.bought became*  
 ‘because someone bought every house from its owner.’

Scrambling of DP<sub>NOM</sub> across DP<sub>DAT</sub>, however, leads to a configuration that licenses the bound variable reading, as (118) shows.

(118) **DP<sub>NOM</sub> > DP<sub>DAT</sub> > tDP<sub>NOM</sub>**

- a. weil [jeder Sohn]<sub>i</sub> [seiner<sub>i/j</sub> Mutter] am Besten gefällt.  
*because every.NOM son his.DAT mother at.the.best pleases*
- b. weil [jedes Haus]<sub>i</sub> [seinem<sub>i/j</sub> Besitzer] abgekauft wurde.  
*because every.NOM house his.DAT owner off.bought became*

In other words, in (118) scrambling feeds binding.

At this point, it has to be added that the ungrammaticality of the bound variable reading in (117) has been contested in the literature. Frey (1993), and Haider (1993, 2010) argue that

DP<sub>NOM</sub> can freely bind into DP<sub>DAT</sub> even if it does not c-command it. Frey provides the following examples (Frey 1993: 44, 46); grammaticality judgments are his).

- (119) a. [Seinen<sub>i</sub> Eltern] darf [kein Kind]<sub>i</sub> weggenommen werden.  
*his.DAT parents must no.NOM child away.taken become*  
 ‘No child must be taken away from its parents.’  
 b. [Seiner<sub>i</sub> Schwiegermutter] sollte [jeder Bräutigam]<sub>i</sub> gefallen.  
*his.DAT mother-in-law should every.NOM groom please*  
 ‘Every groom should please his mother in law.’

In updated terminology, the analysis Frey develops is that, since DP<sub>NOM</sub> agrees with T (e.g. by valuing its  $\phi$ -features), its binding domain is extended. Since T c-commands DP<sub>DAT</sub>, the bound variable reading will be licensed independently of whether DP<sub>NOM</sub> itself c-commands DP<sub>DAT</sub>. The same argument accounts for the fact that scrambling of DP<sub>DAT</sub> in (116a) does not destroy the binding configuration (cf. (120)).

- (120) **DP<sub>DAT</sub> > DP<sub>NOM</sub> > t<sub>DP<sub>DAT</sub></sub>**  
 weil [seinem<sub>i/j</sub> Schüler] sicherlich [jeder Lehrer]<sub>i</sub> gerne hilft.  
*because his.DAT student surely every.NOM teacher gladly helps*

If Frey and Haider were correct, the binding data above could not be used to investigate the base position of a DP<sub>NOM</sub>, which will always bind into a DP<sub>DAT</sub> independently of whether it is merged below or above the dative. It seems, however, that even if the examples in (117) allowed the bound variable reading, this interpretation is much harder to get than in (120), which is perfectly acceptable to me under the relevant interpretation. Under Frey's analysis, this contrast is unexplained, as one would expect that (117) can just as easily give rise to a bound variable reading as (120), since the underlying process that leads to this interpretation is identical: DP<sub>NOM</sub> agrees with T, which again c-commands DP<sub>DAT</sub>. It seems then that even if the relevant reading in (117) is available, the base position of the binder does play a role.

I thus assume that the order DP<sub>DAT</sub> > DP<sub>NOM</sub>, with a pronoun in the former and a quantifier in the latter, licenses a bound variable interpretation of the pronoun only if this is the derived order. If only a free variable reading is possible, it is the unscrambled base order. This is abstractly represented in (121).

(121) **Interaction of Word Order and Bound Variable Reading**

	<b>Word order</b>	<b>Bound variable</b>	<b>Example</b>
a)	quantifier (DP <sub>NOM</sub> ) > pronoun (DP <sub>DAT</sub> )	✓	(116a)
b)	pronoun (DP <sub>DAT</sub> ) > quantifier (DP <sub>NOM</sub> ) > t <sub>DP<sub>DAT</sub></sub>	✓	(120)

c) pronoun (DP <sub>DAT</sub> ) > quantifier (DP <sub>NOM</sub> )		*		(117)
d) quantifier (DP <sub>NOM</sub> ) > pronoun (DP <sub>DAT</sub> ) > t <sub>DP<sub>NOM</sub></sub>		✓		(118)

Apparently, while reconstruction of DP<sub>DAT</sub> into its base position, and thus into the scope of the quantifier, is possible in the case represented by (120), the quantified nominative in (118) has its binding properties determined in its surface position.

The empirical picture in (121) can be explained under the assumption that different types of movement are involved in (120) and (118). Haider (2010) distinguishes scrambling, which has properties of A-movement, from A'-movement (Focus Fronting, Topicalization). Similarly, Bobaljik & Wurmbrand (2012) distinguish between A- and A'-scrambling.<sup>42</sup> While the question whether A'-movement of a certain type qualifies as scrambling or not is not relevant at this point (see Haider 2010 for discussion), the different properties the authors assign to the respective movement operations are.

Haider notes that in (A-)scrambling contexts (signalled in the examples below by movement to a position below the subject), binding is determined at the target position of scrambling, and not at the base position. Evidence for this view comes from the following data (the (b.)-examples are taken from Haider (2010)).

- (122) a. *dass man [seinem\*<sub>i/j</sub>] Chef [fast jeden]<sub>i</sub> ankündigte.* (base order)  
*that one his.DAT boss almost everyone.ACC announced*  
 b. *dass man [fast jeden]<sub>i</sub> [seinem<sub>i/j</sub> Chef] ankündigte.* (derived order)  
*that one almost everyone.ACC his.DAT boss announced*  
 ‘that almost everyone was announced to his boss.’ (Haider 2010: 149)

- (123) a. *dass man [jedem]<sub>i</sub> [seinen<sub>i/j</sub> Chef] ankündigte.* (base order)  
*that one everyone.DAT his.ACC boss announced*  
 b. *dass man [seinen\*<sub>i/j</sub> Chef] [jedem]<sub>i</sub> ankündigte.* (derived order)  
*that one his.ACC boss everyone.DAT announced*  
 ‘that his boss was announced to everyone.’ (Haider 2010: 150)

In (122b), scrambling extends the binding domain, giving rise to a bound variable reading that was not available in the base order (122a). In (123b) scrambling destroys a binding configuration that existed in the base order by moving the bindee out of the scope of the quantifier. Under the assumption that binding is determined based on the surface position of a scrambled DP, the data in (122) and (123) are accounted for.

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<sup>42</sup> One has to add here, that the authors ultimately reject this terminology, arguing that what is relevant is the information structural effects a particular movement has, no matter whether it targets an A- or A'-position.

By contrast, in the context of A'-movement/Topicalization (signalled in the examples below by movement across the subject), binding is determined in the base position of the moved element. In other words, this type of movement allows reconstruction. This is illustrated by the examples in (124).

- (124) a. Man kann [jedem]<sub>i</sub> [sein<sub>i</sub> Glück] verderben. (base order)  
*one can everyone.DAT his.ACC luck spoil*  
 b. [Sein<sub>i</sub> Glück] kann man [jedem]<sub>i</sub> verderben. (derived order)<sup>43</sup>  
*his.ACC luck can one everyone.DAT spoil*  
 'One can spoil everyone's luck.'

Based on this distinction, the facts in (121) can be explained. (120) involves A'-movement (i.e. movement across the subject). Therefore, as in (124b), the moved phrase reconstructs into its base-position, where it is c-commanded by the quantified DP and can thus be bound. By contrast, (118) involves A-movement (i.e. movement to a position below the subject), which does not reconstruct (cf. (122)/(123)). As a consequence, the illegitimate binding relation in the base order is saved by scrambling DP<sub>NOM</sub> across DP<sub>DAT</sub>, thereby extending the binding domain of the quantifier.

Turning now to LMs, the crucial question to ask is whether a bound variable reading for a possessive pronoun in DP<sub>DAT</sub> is independent from the actual order of DP<sub>NOM</sub> and DP<sub>DAT</sub> or not. If it is, LMs pattern with the active clauses discussed above, suggesting that DP<sub>NOM</sub> is base-generated externally. If it is not, LMs pattern with unaccusatives and passives, indicating that DP<sub>NOM</sub> needs to be merged internally, below DP<sub>DAT</sub>.

- (125) a. **DP<sub>DAT</sub> > DP<sub>NOM</sub>**  
 Ich glaube, dass sich [seinem<sub>i/j</sub> Besitzer] [jedes Haus]<sub>i</sub> leicht abkaufen lässt.  
*I believe that REFL its.DAT owner every.NOM house easily off.buy lets*  
 b. **DP<sub>NOM</sub> > DP<sub>DAT</sub>**  
 Ich glaube, dass sich [jedes Haus]<sub>i</sub> [seinem<sub>i/j</sub> Besitzer] leicht abkaufen lässt  
*I believe that REFL every.NOM house its.DAT owner easily off.buy lets*  
 'I believe that every house can easily be bought from its owner.'

The data in (125) show that a bound variable reading is only possible in one order, namely if the nominative precedes the dative. LMs thus pattern with unaccusatives and passives, suggesting that DP<sub>NOM</sub> needs to be base-generated below DP<sub>DAT</sub>. As the dative DP in (125) clearly needs to be associated with the embedded predicate, it cannot be the case that DP<sub>NOM</sub> is merged as the external argument of *lassen*, but rather has to be merged as the internal argument of the embedded predicate. This is only compatible with the unaccusative analysis.

<sup>43</sup> Arguably, this example requires a rise-fall intonation, indicating that the movement involved has information structural effects. See Bobaljik & Wurmbrand (2012) for the claim that the effects attributed to A'-scrambling should be treated in terms of information structure.

Again, if LMs are structurally distinct from *lassen*-passives in base-generating  $DP_{NOM}$  as an internal argument of the embedded predicate, it is expected that *lassen*-passives should systematically differ from LMs with respect to the interaction of binding possibilities and word order. To be precise, *lassen*-passives should allow a bound variable reading of the possessor under either order of  $DP_{NOM}$  and  $DP_{DAT}$ . This is exactly what we find.

- (126) a.  $DP_{NOM} > DP_{DAT}$   
 weil [jeder Arzt]<sub>i</sub> [seinem<sub>i/j</sub> Patienten] sofort helfen lässt.  
*because every.NOM doctor his.DAT patient immediately help lets*
- b.  $DP_{DAT} > DP_{NOM}$   
 weil [seinem<sub>i/j</sub> Patienten] [jeder Arzt]<sub>i</sub> sofort helfen lässt.  
*because his.DAT patient every.NOM doctor immediately help lets*  
 ‘because every doctor has his patient helped immediately.’

#### 4.5.6 *Wh*-Indefinites

Even though German is a scrambling language, there are certain elements that cannot be scrambled. Amongst these are weak *wh*-indefinites (Haider 1993, 2010). (127) shows that if an internal argument is realized as a pronoun, it can either appear in its base-position, where it linearly follows  $DP_{NOM}$ , or in scrambled position, where it precedes the subject. If, however, it is realized as a *wh*-indefinite (as in (128)), only the base-order is acceptable.

- (127) a.  $DP_{NOM} > DP_{ACC}$   
 weil glücklicherweise der Mann ihn gefangen hat.  
*because luckily the.NOM man him.ACC caught has*
- b.  $DP_{ACC} > DP_{NOM}$   
 weil ihn glücklicherweise der Mann gefangen hat.  
*because him.ACC luckily the.NOM man caught has*  
 ‘because luckily, the man has caught him.’

- (128) a.  $DP_{NOM} > DP_{ACC}$   
 weil glücklicherweise der Mann was gefangen hat.  
*because luckily the.NOM man something.ACC caught has*
- b.  $DP_{ACC} > DP_{NOM}$   
 \*weil was glücklicherweise der Mann gefangen hat.  
*because something.ACC luckily the.NOM man caught has*  
 ‘because luckily, the man has caught something.’

I will now use the fact that *wh*-indefinites do not scramble to investigate the base-position of  $DP_{NOM}$  in LMs. To see the logic of the argument, consider (128). If  $DP_{NOM}$  is merged as the external argument of *fangen* ‘catch’, (128a) instantiates the base order in which  $DP_{NOM}$  precedes  $DP_{ACC}$ . This entails that the order  $DP_{ACC} > DP_{NOM}$  can only be derived via scrambling of the *wh*-indefinite across  $DP_{NOM}$ . Since *wh*-indefinites cannot scramble, (128b) is ungrammatical. (129) shows that the same pattern arises with a predicate like *helfen* ‘help’ if

the lexical dative is realized as a *wh*-indefinite: only the base order  $DP_{NOM} > DP_{DAT}$  is acceptable.

- (129) a.  $DP_{NOM} > DP_{DAT}$   
 weil der Mann wem geholfen hat.  
*because the.NOM man someone.DAT helped has*
- b.  $DP_{DAT} > DP_{NOM}$   
 \*weil wem der Mann geholfen hat.  
*because someone.DAT the.NOM man helped has*  
 ‘because the man has helped someone.’

(129) suggests that  $DP_{NOM} > DP_{DAT}$  is the base order, and  $DP_{DAT} > DP_{NOM}$  is derived. Since this means that in (129b) scrambling of a *wh*-indefinite has taken place, the resulting sentence is expected to be ungrammatical.

So far,  $DP_{NOM}$  has exclusively corresponded to the external argument. A direct prediction of the claim that *wh*-indefinites cannot scramble is that, if it was internally merged, e.g. below a dative *wh*-indefinite, both orders should be acceptable. This is indeed what we find with unaccusative *gefallen* ‘please’ (130), or in the case of verbal passives (131).<sup>44</sup>

- (130)a.  $DP_{NOM} > DP_{DAT}$   
 weil der Spieler wem gefallen hat.  
*because the.NOM boy someone.DAT pleased has*
- b.  $DP_{DAT} > DP_{NOM}$   
 ?weil wem der Spieler gefallen hat.  
*because someone.DAT the.NOM boy pleased has*  
 ‘because the boy pleased someone.’
- (131) a.  $DP_{NOM} > DP_{DAT}$   
 weil der Hut wem verkauft wurde.  
*because the.NOM hat someone.DAT sold became*
- b.  $DP_{DAT} > DP_{NOM}$   
 ?weil wem der Hut verkauft wurde.  
*because someone.DAT the.NOM hat sold became*  
 ‘because the book was sold to someone.’

The (relative) acceptability of the  $DP_{DAT} > DP_{NOM}$  order in (130b) and (131b) arises from the fact that this constitutes the base, rather than the derived word order. The serialization in the (a.)-examples ( $DP_{NOM} > DP_{DAT}$ ) involves scrambling of  $DP_{NOM}$ , which is perfectly acceptable since  $DP_{NOM}$  is not realized as a *wh*-indefinite. In other words, in unaccusative and passive contexts, both orders are acceptable since they do not involve scrambling of a *wh*-indefinite.

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<sup>44</sup> (130b) and (131b) are not as good as the corresponding (a.)-examples. Whatever the reason for this, it is important to note that the (b.)-examples are not nearly as bad as (129b). Hence, the reader should compare the grammaticality of the examples to follow against the judgment in (129). Even though the *wh*-indefinite  $> DP_{NOM}$  examples in passives or LMs do not represent the favored word order, they are clearly better than the same order in the active examples (128b) and (129b).

In the preceding sections, arguments have been provided that favor the unaccusative analysis of LMs. If this was correct, one would predict that LMs should pattern with unaccusative predicates and verbal passives in allowing both orders of DP<sub>NOM</sub> and a dative *wh*-indefinite. As (132) shows, this prediction is borne out (again keeping in mind the relative acceptability in comparison to the unacceptable active examples above).

- (132) a. **DP<sub>NOM</sub> > DP<sub>DAT</sub>**  
 weil sich das Buch wem sicherlich leicht verkaufen lässt.  
*because REFL the.NOM book someone.DAT surely easily sell lets*
- b. **DP<sub>DAT</sub> > DP<sub>NOM</sub>**  
 ?weil sich wem das Buch sicherlich leicht verkaufen lässt.  
*because REFL someone.DAT the.NOM book surely easily sell lets*  
 ‘because the book can surely be sold easily to someone.’

The fact that both orders are acceptable in (132) is only compatible with an internal merge-position of DP<sub>NOM</sub>. The data presented in this section are therefore support for the unaccusative analysis. The reflexive analysis would wrongly predict the order DP<sub>DAT</sub> > DP<sub>NOM</sub> to be ungrammatical. Again, it can be shown that *lassen*-passives differ systematically from LMs. Consider (133).

- (133) a. **DP<sub>NOM</sub> > DP<sub>DAT</sub>**  
 weil der Lehrer wem helfen ließ.  
*because the.NOM teacher someone.DAT help let*
- b. **DP<sub>DAT</sub> > DP<sub>NOM</sub>**  
 \*weil wem der Lehrer helfen ließ.  
*because someone.DAT the.NOM teacher help let*  
 ‘because the teacher made someone help someone.’

The grammaticality judgements in (133) are expected if DP<sub>NOM</sub> is merged as the external argument of *lassen*. Since this means that DP<sub>NOM</sub> > DP<sub>DAT</sub> is the base order, (133b) needs to be derived via scrambling of the *wh*-indefinite across DP<sub>NOM</sub>, giving rise to ungrammaticality.

#### 4.5.7 Summary

In sum, the arguments provided in sections 4.5.1 - 4.5.6 show that the reflexive analysis of LMs has to be rejected. This is because the structural subject, and not the reflexive pronoun, has to be base-generated as the internal argument of the embedded predicate (as suggested in Reis 1976; Grewendorf 1983; Everaert 1986; Kunze 1996). I thus adopt the unaccusative analysis of LMs, repeated in (134).

#### (134) Unaccusative Analysis

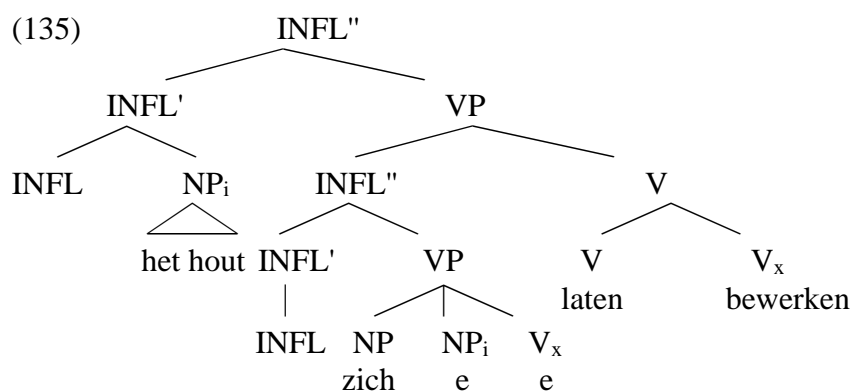
[<sub>VP</sub> [<sub>VoiceP</sub> [<sub>VP</sub> DP<sub>NOM</sub> +  $\sqrt{\text{ROOT}}$  + v ] <sub>VoicePASS</sub>] v- $\sqrt{\text{LASS}}$  ]

If  $DP_{\text{NOM}}$  is merged as the internal argument of the embedded predicate, the question arises as to where the reflexive pronoun is base-generated. Several ways of associating it with the embedded predicate come to mind (some, but not all of them, have been proposed in the literature). In the following sections, I will critically review such analyses and show that none of them can be upheld. As a consequence, the reflexive pronoun has to be associated with the matrix predicate *lassen* (as stipulated in Reis 1976). This has to be taken as further evidence for the claim that *lassen* in LMs cannot be treated as an auxiliary or a modal, as it would be unprecedented that such an element requires the presence of a reflexive pronoun.

## 4.6 Against a Low Position for the Reflexive Pronoun

### 4.6.1 Everaert (1986)

Everaert (1986) is one of the earliest syntactic analyses of LMs in Dutch. Even though he also proposes that the subject in LMs starts out as an internal argument of the embedded predicate, he associates the reflexive pronoun with the embedded predicate, too. The structure he assigns to LMs is given in (135).



(Everaert 1986: 133)

While the embedded predicate undergoes verb raising to the matrix predicate (see Evers 1975 for the original formulation of this process), the embedded theme argument moves to the matrix subject position. The crucial property that makes this movement possible is Everaert's assumption that LMs involve permissive *laten* 'let', which does not select an external argument. Movement of the theme leaves behind a trace which is subject to the Generalized Empty Category Principle, according to which traces have to be locally identified (see Chomsky 1981 for the original formulation of the ECP).

(136) **The Generalized ECP** (Everaert 1986: 151)

$[e]_{\text{NP}}$  must be locally X-bound



(136) forces every empty category to have a local antecedent, i.e. a c-commanding coindexed element. In (135), the domain in which the ECP needs to be satisfied is, Everaert argues, the embedded VP. Without *zich*, the ECP would be violated as the trace of the moved theme argument would not be locally bound. Everaert argues that, in order to prevent this, the reflexive pronoun is inserted into the embedded VP, where it functions as an antecedent for the trace. In other words, in Everaert's analysis of LMs, *zich* is inserted to satisfy the Generalized ECP.

With respect to the obligatorily unrealized embedded subject in LMs (cf. the ungrammaticality of (137)), Everaert proposes the filter in (138).

(137)\*Het hout laat zich de mannen gemakkelijk bewerken.  
*the wood lets REFL the men easily carve*  
 'The wood can be easily carved by the men.' (Everaert 1986: 139)

(138)\*[*laten* + V ]  
 <-realized> <+realized> (Everaert 1986:140)

The feature <± realized> expresses whether the external theta-role is syntactically realized or not. (138) thus stipulates that if verb raising results in a complex predicate containing permissive *laten*, the originally embedded verb must not overtly realize its external argument.

A number of issues arise out of Everaert's account. First of all, the core assumption that drives the whole analysis, namely that permissive *laten* does not assign an external theta-role, is unmotivated. It is well-known that Dutch *laten* occurring in PCCs is ambiguous between a causative/directive and a permissive interpretation, behaving exactly like German *lassen* in this regard (e.g. Loewenthal 2003, Kemmer & Verhagen 1994, Verhagen & Kemmer 1997).

(139) De conducteur liet de hooligans de trein afbreken  
*the conductor let the hooligans the train demolish*  
 'The conductor let the hooligans demolish the train.' (Loewenthal 2003: 98)

In (139), it is unlikely that the matrix subject is base-generated as anything but the external argument of *laten*, even though *laten* can be interpreted as expressing permission. If LMs involve permissive *laten*, as Everaert suggests, it is unclear what motivates the failure to assign an external theta-role in exactly this context.

A further problem involves the assumption that the reflexive pronoun is inserted in order to prevent an ECP-violation. This is particularly obvious in the context of impersonal LMs (which exist in German, but not in Dutch; see chapter 8 for discussion).

(140) a. Dort lässt (es)sich gut tanzen.  
*there lets it REFL well dance*  
 'One can dance well there.'

- b. Hier lässt (es) sich angenehm schlafen.  
*here lets it REFL comfortably sleep*  
 ‘One can sleep well here.’

Impersonal LMs are characterized by the absence of a (thematic) subject. This means that in the examples in (140), there is no embedded argument that could potentially move to subject position: In (140a), the embedded predicate is unergative and does not combine with an internal argument; in (140b), the internal argument is marked with lexical dative case and therefore does not move to subject position (see section 4.5.4). In other words, there is no empty category in the infinitival complement in those examples that could be subject to the Generalized ECP. Thus, no ECP-violation arises and insertion of the reflexive pronoun should not be required. Leaving out the reflexive pronoun in (140), however, leads to ungrammaticality, which is not expected if Everaert's account is on the right track.

- (141) a.\*Dort lässt (es) gut tanzen.  
*there lets it well dance*  
 Intended: ‘One can dance well there.’  
 b.\*Hier lässt (es) angenehm schlafen.  
*here lets it comfortably sleep*  
 Intended: ‘One can sleep well here.’

To conclude, Everaert's account cannot explain a number of core properties of (German) LMs, such as why *lassen* in LMs does not combine with an external argument and how impersonal LMs in German can be accounted for. For the purposes of this section, I conclude that it is not reasonable to treat the reflexive pronoun in LMs as an element associated with the embedded predicate that functions to bind the trace of the moved internal argument.

The existence of impersonal LMs in German is problematic for a number of other related approaches. Marelj (2004), as well as Broekhuis & Corver (in prep), following Everaert's analysis of inherent reflexivity, assume that a SE-anaphor can be used as a non-argument that nevertheless must be assigned C/case. In LMs, the reflexive pronoun thus absorbs the accusative C/case of the embedded predicate, which leads to movement of the theme argument to the structural subject position to prevent a violation of the Case Filter (Chomsky 1981). The unavailability of impersonal LMs in Dutch is a consequence of the embedded verb's inability to assign structural accusative Case.

Again, such an account does not extend to German due to the existence of impersonal LMs. Since the embedded predicate in impersonal LMs does not assign (structural) Case, it would not have to be absorbed, and there should not be a reflexive pronoun in impersonal LMs, contrary to fact. In addition, approaches that treat the reflexive pronoun as a Case absorber fail to explain why impersonal LMs do not exist in Dutch (even though this is often advanced

as one of the main arguments in favor of such an analysis). In principle, if the embedded predicate is not a Case-assigner, no reflexive pronoun would be needed. Thus, there is nothing that blocks the existence of impersonal LMs without *zich* in Dutch.

Marelj and Broekhuis & Corver's accounts also have a number of other shortcomings. First, as in Everaert's analysis, it is not explained how the permissive AcI-predicate *laten*, which Marelj and Broekhuis & Corver assume is involved in LMs, loses its ability to combine with an external argument or assign accusative Case. Second, the assumption that the reflexive functions as an accusative Case-absorbing adjunct still requires some process to get rid of the embedded external argument. Otherwise, this latter argument would receive nominative, and the embedded internal argument would remain caseless, rendering even personal LMs ungrammatical. If, however, some process of passivization is used to account for the absence of the embedded agent, no reflexive pronoun would be required to absorb embedded accusative Case (cf. Burzio's Generalization).

Although none of the above mentioned problems is insurmountable, additional assumptions are needed. I therefore reject an account of the type advanced in Marelj (2004) or Broekhuis & Corver (in prep). In other words, the reflexive pronoun in LMs cannot be associated with the embedded predicate to absorb Case.

#### 4.6.2 Klingvall (2012)

Another way of treating the reflexive as being base-generated in the infinitival complement is presented in Klingvall (2012), who provides a discussion of Swedish LMs (142).

- (142) a. Boken låter sig läsa-s utan svårighet.  
*book.DEF lets REFL read-PASS without difficulty*  
 'The book reads easily.'  
 b. Kakan låter sig baka-s med lätthet.  
*cake.DEF lets REFL bake-PASS with ease*  
 'The cake bakes easily.'

(Klingvall 2012: 395)

In general, Klingvall treats Swedish LMs as complex passives: 'they are complex in the sense that the morphologically passive verb is embedded under a matrix verb, *låta*' (ibid:396). Thus, similar to what I have proposed in section 4.2, Klingvall treats *låta* in LMs as a predicate that projects its own verbal domain.<sup>45</sup> Furthermore, the fact that Swedish LMs surface with passive morphology on the embedded verb (cf. the form of the embedded

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<sup>45</sup> Thereby distinguishing it from passive auxiliaries in periphrastic passives.

predicate in (142) to the morphological *s*-passives in (143)) supports the view that the complement of *let* must be bigger than a bare vP (see my argumentation in section 4.3.4).

- (143) a. Boken läste-s utan svårighet.  
*book-DEF read.PAST-PASS without difficulty*  
 ‘The book was read without difficulty.’  
 b. Kakan bakade-s med lätthet.  
*cake-DEF bake.PAST-PASS with ease*  
 ‘The cake was baked with ease.’

(Klingvall 2012: 396)

With respect to the position of the reflexive pronoun, Klingvall argues for an analysis in which both the reflexive and DP<sub>NOM</sub> are associated with the embedded predicate. The data in (144) are taken to provide evidence for such a low merge position of the reflexive pronoun.

- (144) a. Boken låter sig läsa-s.  
*book-DEF lets REFL read-PASS*  
 ‘The book can be read.’  
 b. <sup>?</sup>Boken låter läsa sig.  
*book-DEF lets read REFL*  
 ‘The book can be read.’

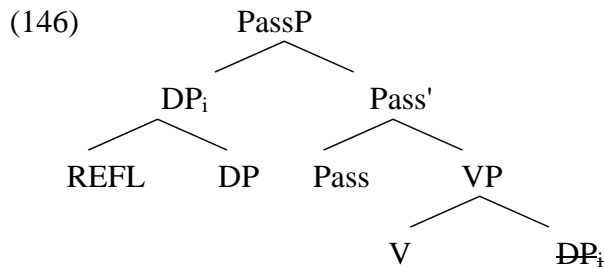
(Klingvall 2012: 397)

(144a) corresponds to a 'canonical' LM, where *låta* embeds an *s*-passive. Klingvall argues that even though (144a) is the preferred way of expressing LMs, (144b) is marginally acceptable, as well. The crucial property of (144b) is that the embedded predicate is not marked with passive morphology and the reflexive surfaces in postverbal position. Klingvall takes this to mean that in (144b), *läsa* is the active form of the verb and the reflexive pronoun appears in the canonical object position. (144a), then, would be derived from (144b) by passivizing the embedded predicate, which requires the reflexive to move. Yet, Klingvall also assumes that DP<sub>NOM</sub> is base-generated as the internal argument of the embedded predicate. The problem which thus arises, namely that the reflexive pronoun and the subject DP compete for the same position, is solved by assuming that the reflexive pronoun and DP<sub>NOM</sub> form a complex DP (see Kayne (2002) for the source of this idea). In particular, Klingvall takes the reflexive pronoun to be the head of such a complex DP, and merges DP<sub>NOM</sub> in its complement position. This is illustrated in (145).

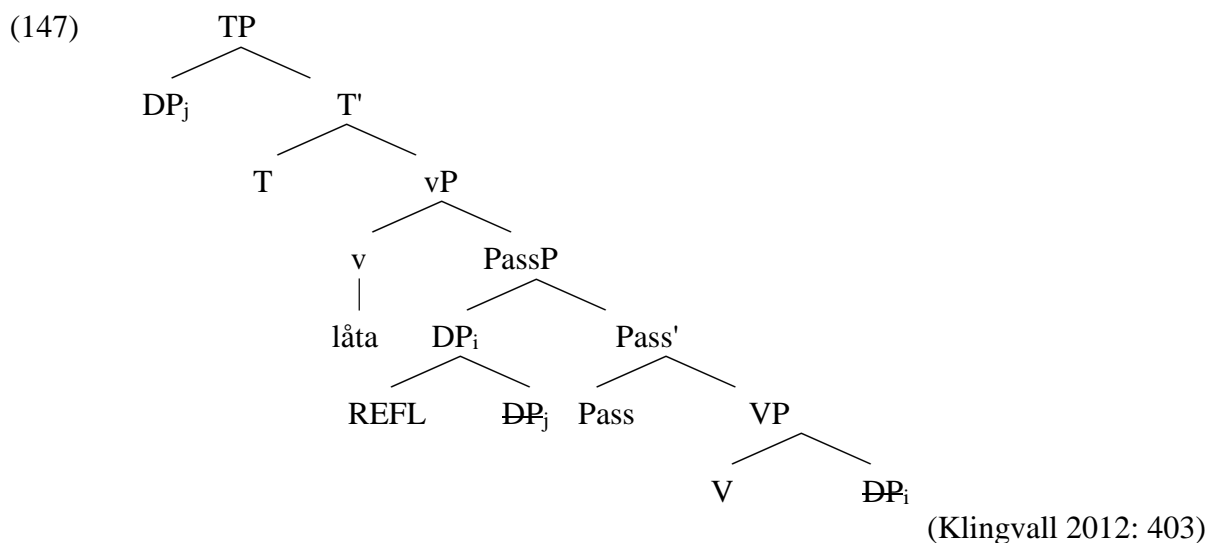
- (145) 
$$\begin{array}{c} \text{DP} \\ \diagdown \quad \diagup \\ \text{REFL}[u\phi] \quad \text{DP}[\phi] \end{array}$$

Let me illustrate how her analysis works. The reflexive pronoun enters the derivation with unvalued  $\phi$ -features (see the discussion in chapter 3 and the references cited there), probes its

c-command domain for a goal, and finds the DP in complement position. This DP has interpretable  $\phi$ -features and can thus serve as a goal, valuing the  $[u\phi]$ -features of the probe. The complex DP in (145) is merged in the complement position of the embedded predicate, where it is also assigned its theta-role. Since in ‘canonical’ LMs, the embedded predicate is passive, Klingvall proposes that the embedded VP is dominated by a PassP whose head has an EPP-feature that attracts the complex DP to its specifier. The complement of *lâta* is thus as is illustrated in (146).



Since PassP blocks Case assignment, the whole DP remains active and can function as a goal for higher probes. In the next step, *lâta* is merged to the structure in (146). As an ECM-predicate, *lâta* has uninterpretable  $\phi$ -features and agrees with the DP in Spec,PassP. This agree-relation triggers accusative Case-assignment. Crucially, Case is assigned only to the head of the complex DP (the reflexive pronoun) thereby leaving the complement DP active for further computation. In the next step, T is merged and the only element it can agree with is the complement DP within the complex DP. T thus assigns nominative to it and attracts it to its specifier, resulting in the surface structure in (147).



There are some issues with Klingvall's analysis in general, and the complex DP analysis in particular, which lead me to reject it. A first problem is the claim that the reflexive pronoun functions as the head of the complex DP, since for German Fagan (1992) and Steinbach

(2002) have shown that *sich* is phrasal (see also Haider & Rindler-Schjerve 1987 for the claim that German lacks clitics, and that the reflexive pronoun in German cannot be treated on a par with its French or Italian counterpart, but has to be treated as a full DP). The complex DP analysis cannot be adjusted to capture this fact. Apart from the question of what would function as the head of such a DP, if the complex DP contained two fully fledged DPs, it would be unclear why accusative Case should be assigned to the reflexive pronoun rather than to the referential DP. Furthermore, if Klingvall's analysis were adjusted in this way, her explanation as to why Swedish LMs disallow an expletive subject (148), despite the fact that they involve a non-thematic subject position, fails.

(148)<sup>22</sup> Det lät sig läsa-s en hel del böcker förra året.  
*it let REFL read-PASS quite a few books last year.DEF*  
 (Klingvall 2012: 405)

Klingvall argues that in order to derive (148), one would have to move the reflexive out of the complex DP, leaving its complement in situ. As this would involve movement of a head to a specifier, (148) is expected to be unacceptable. Clearly, if the reflexive pronoun was a fully fledged DP, the reason for the ungrammaticality of (148) must lie elsewhere, and this example would no longer support Klingvall's complex DP analysis.<sup>46</sup>

A second problem for a complex DP analysis is that it cannot account for German impersonal LMs such as the ones in (149).

(149) a. Ihm lässt (\*es) sich leicht helfen.  
*him.DAT lets it REFL easily help*  
 'He can be helped easily.'  
 b. Der Bundeskanzlerin lässt (\*es) sich nicht leicht widersprechen.  
*the.DAT federal.chancellor lets it REFL not easily against.talk*  
 'It is not easy to contradict the Federal Chancellor.'

Since the expletive is unacceptable in impersonal LMs with an argumental dative marked DP (see chapter 8; also Höhle 1978), it cannot be the case that the reflexive and the expletive form a complex DP in impersonal LMs. It is also not possible that the dative marked DP functions as complement to the reflexive pronoun. If this was the case, the embedded predicate would assign lexical dative case to the complex DP, which should, in line with Klingvall's analysis of accusative case in personal middles, surface on the head, e.g. the reflexive pronoun. There is no evidence, however, that the reflexive receives dative in (149). And even if one assumes that the reflexive bears dative, there is no way of explaining how the

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<sup>46</sup> (148) is not a good example to test the hypothesis that LMs are incompatible with expletive subjects to begin with. This is so because the ungrammaticality might depend on the time adverbial that forces an episodic interpretation which, however, is known to be unacceptable with dispositional middles.

referential DP could surface with dative case as well. One would rather expect accusative (if *lassen* is the case-licensor), or nominative (if T agrees with the DP), contrary to fact. If neither the expletive nor the referential DP can form a complex DP with the reflexive pronoun in (149), one would have to postulate some covert element that does. As long as there is no evidence for the presence of such an element, however, the complex DP approach does not extend to German (impersonal) LMs.

A third reason why Klingvall's analysis has to be rejected has to do with her argument that the data in (144) (repeated here as (150)) provide independent support for a complex DP analysis.

- (150) a. Boken låter sig läsa-s.  
*book-DEF lets REFL read-PASS*  
 'The book can be read.'  
 b. ?Boken låter läsa sig.  
*book-DEF lets read REFL*  
 'The book can be read.'

Recall that it is argued that the embedded predicate in (150b) is active and can assign accusative to the complex DP (i.e. the reflexive pronoun), while the complement DP receives nominative from T. If the reflexive receives accusative from the embedded predicate in (150b), however, what prevents the ECM-predicate *låta* from assigning accusative case to the complement DP? In other words, the DP *boken* should in principle surface with accusative, rather than nominative. It is not clear at all why *låta* should lack uninterpretable  $\phi$ -features in (150b), but not in (150a). Note that if *låta* assigned Case to the complement DP in (150b), this example should be considered ungrammatical (for the lack of a subject), or involve an expletive subject that can value the  $\phi$ -features of T, as is the case in Swedish impersonal passives (151).

- (151) Det lästa-s / blev läst en hel del böcker förra året.  
*it read.PAST-PASS/ became read.PART quite a few books last year.DEF*  
 'Quite a few books were read last year.'

(Klingvall 2012: 405)

As has been shown in (148), Swedish LMs are incompatible with an expletive subject. This means that the data provided by Klingvall to support her particular approach to LMs cannot be accounted for by the proposed analysis.<sup>47</sup>

In sum, a complex DP analysis can neither account for the fact that Swedish LMs disallow expletive subjects, nor can it explain cases like (151b). I have also shown that a complex DP

<sup>47</sup> In fact, the acceptability of this example is unclear in the first place. As Klingvall herself points out, an LM with an embedded active predicate is highly marked, and speakers always prefer the canonical variant with an embedded s-passive. Since (150b) is in fact the only argument Klingvall presents for a low merge position of the reflexive, her complex DP analysis stands on shaky empirical ground in the first place.

approach does not extend to German. The assumption that the reflexive and its antecedent form a complex DP is thus not a possible way of associating the reflexive with the embedded predicate while maintaining an unaccusative analysis.

### 4.6.3 The Reflexive Pronoun and Movement

Hornstein (1999, 2001) suggests that anaphors are really just spell-outs of traces, i.e. the reflexive sentence in (152a) would have the structure in (152b).

- (152) a. John likes himself.  
 b. [TP John [VP John [likes John]]]<sup>48</sup>

The lowest copy of the chain headed by the DP *John*, which is located in a case-position, is spelled-out as an anaphor. Binding is therefore simply a residue of movement.

It could thus be assumed that the reflexive pronoun in LMs is just a spell-out of the trace of the moved DP<sub>NOM</sub>, such that the LM in (153a) has the structure in (153b) (this is a very simplified structure; for the details of the syntax of LMs, see section 4.8).

- (153) a. weil das Buch sich lesen lässt.  
*because the book REFL read lets*  
 b. [TP das Buch [VP [VoiceP [VP das Buch lesen] Voice] v-lassen]]

The lowest copy of the A-chain headed by *das Buch* in (153) is spelled-out as *sich*.

Note that this approach requires the embedded theme position to be assigned case. This could either be done by *lassen* or by the embedded predicate (given that it is not passive). Ignoring this complication for the moment, the crucial aspect is that the presence of the reflexive pronoun is contingent on movement. If no movement applies, no anaphor is expected to appear. It is this aspect of the theory that renders an extension to LMs impossible.

First, recall that in German, a DP does not have to move to the subject position, but can receive nominative in its base-position (den Besten 1982; Haider 1993, 2010; Wurmbrand 2006, a.o.). If, then, DP<sub>NOM</sub> in LMs can stay in situ (as the example in (154) suggests, given that the *wh*-indefinite precedes DP<sub>NOM</sub>; see section 4.5.6), no trace would be present that could be spelled-out as the reflexive pronoun, such that its presence in (154) is unexpected.<sup>49</sup>

- (154) weil sich wem das Buch sicherlich leicht verkaufen lässt.  
*because REFL someone.DAT the.NOM book surely easily sell lets*  
 ‘because the book can surely be sold easily to someone.’

<sup>48</sup> Hornstein (2001) argues that the antecedent merges with *-self* first. As, in German, the *-self*-component is optional, I ignore this aspect.

<sup>49</sup> Note that the surface position of the reflexive pronoun cannot be taken as an argument against an analysis that treats it as a spell-out of a case-assigned copy. One could assume that movement of the reflexive to the *Wackemagel*-position involves movement at PF.



Second, consider the impersonal LMs in (155).

- (155) a. weil \*(sich) dort gut klettern lässt.  
*because REFL there well climb lets*  
‘because one can climb well there.’
- b. weil \*(sich) auch auf der Terrasse gut sitzen lässt.  
*because REFL also on the terrace well sit lets*  
‘because one can also sit well on the terrace.’
- c. weil \*(sich) seiner leicht gedenken lässt.  
*because REFL his.GEN easily remember lets*  
‘because he can be remembered easily.’

Assuming that the reflexive pronoun in LMs is a spell-out of a trace in the infinitival complement makes it difficult to account for the obligatory presence of the reflexive pronoun in (155) for at least two reasons. On the one hand, there is no clear case of movement involved. All that could have moved, leaving a copy spelled-out as an anaphor, is the R-pronoun in (155a), the locative PP in (155b), or the genitive marked DP in (155c). There is no overt evidence for these elements having moved, and, even if they had, they certainly would not have done so to an A-position. It seems, however, that only a copy in an A-chain can be spelled-out as an anaphor, blocking the ungrammatical example in (156) which involves A'-movement to Spec,CP.

- (156) a. \*Den Peter hat Mark sich gesehen.  
*the.ACC Peter has Mark REFL seen*  
b. [CP den Peter<sub>i</sub> hat [TP [VoiceP Mark [VP sich<sub>i</sub> gesehen] Voice]T]]

On the other hand, under the account discussed in this section, no reflexive pronoun would be expected to surface in (155) in the first place. This is so because the reflexive pronoun in Hornstein's system is the spell-out of a copy in a case-position. Since the embedded verbs in (155a,b) are unergative and thus do not assign case, no reflexive pronoun should surface, contrary to fact.

Since in German LMs the reflexive pronoun can surface in contexts where no (A-) movement has taken place, *sich* cannot be treated as the spell-out of the moved internal argument.<sup>50</sup>

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<sup>50</sup> Other contexts in German that involve a reflexive pronoun in the absence of movement are passives of reflexive verbs (see e.g. Schäfer 2012b, 2013; Schäfer, Zarries & Schulte im Walde 2013).

- (i) Dort wurde sich gewaschen.  
*there became REFL washed*  
‘People washed themselves there.’
- (ii) Zuerst wurde sich geküsst.  
*first became REFL kissed*  
‘First, people kissed each other.’

#### 4.6.4 The Reflexive Pronoun as a Marker of Argument Reduction

It has sometimes been argued that a SE-anaphor does not occupy an argument position, but rather simply functions as a morphological marker for valency reduction (e.g. Grewendorf 1983). One particular implementation of this can be found in Lekakou (2005), who argues that *sich* in German ‘indicates (or enables/instigates) the assignment of an internal thematic role to the external position’ (ibid: 211). Take, for example, a CM as in (157).

(157) Das Buch liest sich leicht.  
the book reads REFL easily  
‘The book reads easily.’

As mentioned several times in this thesis, CMs lack a syntactically projected external argument. Lekakou follows Cabredo Hofherr (2005), Ackema & Schoorlemmer (1994, 1995, 2006), and others in assuming that syntactically, German CMs are unergative. That is to say that the theme argument is merged in the external argument position. The reflexive pronoun would then simply serve as a morphological means to indicate that a change in valency has taken place and the theme argument is not merged as an internal, but rather as an external argument. If the reflexive in LMs was such a valency reduction marker on the infinitival predicate, this would mean that the embedded theme argument was merged externally in the embedded Spec, VoiceP.

One issue that arises for an extension of Lekakou's treatment of *sich* to LMs is that it has been shown in section 4.5 that the embedded predicate is not syntactically unergative: the theme argument is merged in its base-position, and not in the specifier of the embedded VoiceP (in fact, the same has been argued to be the case in CMs and reflexively marked anticausatives, see Schäfer 2008; Pitteroff & Schäfer to appear).

A further reason that makes it unlikely that the reflexive in LMs is a marker of valency reduction on the embedded predicate is that the function of the reflexive pronoun in LMs compared to its function in, say, CMs would be different. Recall that Lekakou in principle proposes that the presence of *sich* in German correlates with the syntactic absence of the thematic agent. Crucially, however, LMs differ from CMs in passing (some) tests that diagnose the presence of an agent argument (see chapter 5 in particular). In other words, the argument structure of LMs differs from that of CMs in being much closer to that of verbal passives. For the treatment of the reflexive as a marker of valency reduction, this difference raises the following two issues: First, the same reflexive would have to mark two fundamentally different types of arity operations – one involving argument reduction comparable to what is found in anticausatives, the other being more similar to passivization.

Although such a syncretism is not impossible, it comes as a surprise that it would be found in all languages that have LMs (see discussion in chapter 8). Second, since the embedded predicate is much closer to a verbal passive than to a CM, the question arises as to why the reflexive should encode this particular argument alternation in LMs, and not in verbal passives. One could assume that the reflexive marks a passive-like argument alternation only in the absence of passive morphology. Such complementary distribution in the encoding of the same valency changing process seems, in fact, what Suchsland (1987) has in mind when he says ‘Wir müssen nun davon ausgehen, dass die Passivierung mit *sich* dieselben Effekte hat wie die übliche morphologische Passivierung.’ (Suchsland 1987:662) [We have to assume that passivization via *sich* has the same effects as morphological passivization. M.P.]. That this cannot be true, however, is shown by Swedish LMs ((142), repeated here as (158))

- (158) a. Boken        låter sig    läsa-s     utan    svårighet.  
*book.DEF lets REFL read-PASS without difficulty*  
 ‘The book reads easily.’  
 b. Kakan        låter sig    baka-s     med    lätthet.  
*cake.DEF lets REFL bake-PASS with ease*  
 ‘The cake bakes easily.’

If the reflexive pronoun was a marker of valency reduction, its occurrence in Swedish LMs would be unexpected, because the embedded verb is already morphologically marked for passivization. In other words, if the reflexive pronoun in (158) was associated with the embedded predicate, functioning as a marker of valency reduction, the embedded predicate would be doubly marked (for the same process!) – a situation that is highly unlikely.

I thus reject the possibility that the reflexive pronoun in LMs can be associated with the embedded predicate as a marker of valency reduction: first, it would encode a valency reduction different from the one it encodes in, say, CMs or anticausatives; and second, this analysis would entail that in Swedish LMs, the embedded predicate is doubly marked.

#### 4.6.5 Summary

I have shown in this section that there is no plausible, non-stipulative way in which the reflexive pronoun could be associated with the embedded predicate: it cannot be treated as occupying the internal argument position (either being merged there directly, or as part of a complex DP / the spell-out of a case-marked copy), nor can it be analyzed as a morphological marker of valency reduction. I thus conclude that the reflexive pronoun in LMs has to be associated in some way with the matrix predicate *lassen*.

This fact, then, provides crucial evidence in favor of the Identity Hypothesis (i.e. the claim that *lassen* in LMs is identical to the occurrence of *lassen* in periphrastic causatives) and against analyses that treat middle *lassen* as an auxiliary or modal verb. This is because, typically, neither auxiliaries nor modals require the presence of a reflexive pronoun, which would lead to having to assign a rather exceptional status to *sich lassen* in LMs.

Since it is clear now that LMs and periphrastic causatives involve the same element causative *lassen*, the question arises as to why the matrix external argument in LMs is not projected. In the next section, I will argue that the reflexive pronoun plays a relevant role in this regard (cf. Reis 1976; Höhle 1978; Huber 1980. Labelle 2013 argues that the same holds for *se* in French PSFs, see the discussion in section 4.5.2).

#### 4.7 The Syntax of *Sich Lassen*

Having shown that the reflexive pronoun in LMs belongs to *lassen*, rather than the embedded predicate, the null hypothesis is that *sich lassen* is an instantiation of an independently available configuration that involves a predicate and what Steinbach calls a non-argumental reflexive (henceforth: a non-thematic reflexive; see section 4.7.4 for discussion). There are three constructions in German that have to be taken into consideration: inherent reflexives (159a), CMs (159b), and reflexively marked anticausatives (159c).

- (159) a. Der Junge schämte sich.  
*the.NOM boy shamed REFL*  
 ‘The boy was ashamed.’  
 b. Das Buch liest sich gut.  
*the.NOM book reads REFL well*  
 ‘The book reads well.’  
 c. Der Schrank öffnete sich.  
*the.NOM cupboard opened REFL*  
 ‘The cupboard opened.’

In this section, I will compare the properties of *sich lassen* to those of each of these constructions. It will be shown that, while *sich lassen* differs from inherent reflexives and CMs, it shares fundamental properties with reflexively marked anticausatives. I will thus conclude that the reflexive pronoun in LMs functions to block the introduction of an external argument in matrix Spec, VoiceP, assimilating the *lassen* – *sich lassen* pair to canonical instances of the causative alternation.

##### 4.7.1 Against *Sich Lassen* as Inherent Reflexive

One frequently expressed assumption in the discussion of LMs (Haider 1985; Kunze 1996;

Gunkel 2003) is that *sich lassen* is an inherent reflexive.<sup>51</sup> There are, however, ways in which *sich lassen* differs from an inherently reflexive predicate, rendering this approach problematic.

First, it has been observed that inherently reflexive predicates can passivize in German (e.g. Abraham 1986; Frey 1993; Schäfer 2012b, 2013. See Schäfer, Zarries & Schulte im Walde 2013 for a questionnaire study and corpus data). Consider the data in (160) and (161).

(160) a. Viele Jahre hat man sich einfach so durchgewurschtelt.

*many years has one REFL simply so through.muddled*

b. Viele Jahre wurde sich einfach so durchgewurschtelt.

*many years became REFL simply so through.muddled*

‘For many years, one simply muddled through.’

(161)a. Die Anhänger des 1. FC Köln schämten sich.

*the supporters of.the 1. FC Cologne shamed REFL*

‘The supporters of the 1.FC Cologne were ashamed.’

b. Da wurde teilweise schon der Kopf von Soldo gefordert, es wurde sich geschämt und gepöbelt.<sup>52</sup>

*shamed and accosted*

‘Some people already demanded Soldo’s head, people were ashamed and accosted others.’

Generally, passives involve the suppression of the external argument and, if possible, the advancement of an internal argument. Thus, the fact that inherently reflexive predicates passivize and retain the reflexive pronoun in their passive use suggests that the reflexive pronoun must be merged as the internal argument.<sup>53</sup>

If *sich lassen* was an inherent reflexive, this would mean that the reflexive pronoun should occupy the complement position of *lassen*, which is, however, already occupied by the infinitival complement (see chapter 3). Thus, it is not clear what it would mean to say that a predicate that combines with an infinitival complement is inherently reflexive.

Furthermore, since inherently reflexives passivize, they must be assumed to combine with an external argument in their active use. As I have shown in section 4.6, this is not the case with *sich lassen*, where the structural subject is base-generated as an argument of the embedded

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<sup>51</sup> I have to add that neither Haider nor Kunze distinguish between inherently reflexive predicates and anticausatives. It might be that, in view of this more detailed classification, the authors in fact do not differ from, but concur with, my analysis.

<sup>52</sup> <http://fc-forum.net/archive/index.php/t-3243-p-2.html>

<sup>53</sup> But see chapter 7 for a different approach to passivization that is able to incorporate the attested acceptability of passives involving unaccusative predicates (e.g. Primus 2010). Yet, even if it should turn out that inherently reflexives are syntactically unaccusative, and passives of reflexive verbs are (productive!) instances of passivization of unaccusative predicates, one would expect that *sich lassen* should passivize as well, if it was indeed an inherent reflexive. This, however, is not the case.

predicate. Treating *sich lassen* as an inherently reflexive predicate would thus mean that it is an inherently reflexive raising predicate. It is even less clear what that is supposed to mean.

A second argument against the inherent reflexive approach is that inherent reflexives are characterized by the lack of a corresponding transitive counterpart.

- (162) a.\*Seine Mutter hat ihn einfach so durchgewurschtelt.  
*his mother has him simply so through-muddled*  
Intended: ‘His mother caused him to live through difficult times.’  
b.\*Die Fußballer hatten ihre Fans geschämt.  
*the soccer.players have their fans shamed*  
Intended: ‘The soccer players caused their fans to be ashamed.’

I have argued extensively that there is a transitive counterpart to *sich lassen*, namely causative/permissive *lassen*. The fact that a transitive use of *lassen* exists makes *sich lassen* fundamentally different from inherently reflexive verbs.

#### 4.7.2 Against *Sich Lassen* as a Canonical Middle

Due to the semantic parallels, it seems reasonable to assume that *sich lassen* in LM is actually a canonical middle that combines with an infinitival predicate. In addition, since the predicates involved in CMs do have a transitive counterpart, the problem of the inherently-reflexive approach discussed in the preceding section does not arise.

An analysis that treats *sich lassen* as a CM, however, can be easily refuted. Recall that CMs imply agentivity. Thus, if *sich lassen* was a CM, the implied agent of LMs would be expected to be an argument of *lassen*, contrary to fact. The implied agent in LMs is clearly understood as an argument of the infinitival predicate. Consider the data in (163).

- (163) a. Der Lehrer lässt das Buch lesen.  
*the teacher lets the book read*  
‘The teacher makes someone read the book.’  
b. Das Buch lässt sich leicht lesen.  
*the book lets REFL easily read*  
‘The book can be read easily.’

If *sich lassen* was the CM of causative *lassen*, the external argument of *lassen* in the *lassen*-passive in (163a) should be the implicit agent in the LM in (163b). In other words, (163b) should mean that the book has some properties such that it is easy for anyone to make someone read it. The only agent implied in LMs, however, is the agent of the infinitival predicate. It is unclear how, if *sich lassen* was a CM, the absence of an implicit agent associated with the matrix predicate could be explained.

A second issue is that if *sich lassen* was a CM, which typically require the presence of a modifying adverb, *leicht* ‘easily’ in (163b) should be associated with *lassen*, contrary to fact: it is the reading-event that can be carried out easily, not the causing event.

Finally, under the analysis proposed in this subsection, the manner adverb would wrongly be expected to be obligatory in LMs (164b), since CMs require adverbial modification (164a).

- (164) a. Das Buch liest sich \*(gut).  
           ‘The book reads well.’  
       b. Das Buch lässt sich (gut) lesen.  
           ‘The book reads well.’

Since *sich lassen* diverges in a number of properties from CMs, I reject an analysis that treats LMs as actually involving a CM.

#### 4.7.3 *Sich Lassen* as (Reflexively Marked) Anticausative

Let me summarize the properties of *sich lassen* that have been identified so far: no agent must be introduced (neither syntactically nor semantically), and there is a transitive, causative counterpart. All of these properties are shared by (reflexively marked) anticausatives. In this section, I will elaborate on the similarities between *sich lassen* and anticausatives.

It is well-known that across languages, the causative alternation is morphologically realized differently (see Haspelmath 1993 for an overview). Based on the morphological marking, three classes of anticausatives can be distinguished in German (see Alexiadou, Anagnostopoulou & Schäfer 2006, 2014; Schäfer 2008): either the anticausative is morphologically unmarked (Class A; (165b)), comes with an obligatory non-thematic reflexive pronoun (Class B; (166b)), or is optionally marked with a non-thematic reflexive (Class C, (167b)).

- (165) a. Mark zerbrach die Vase.  
           *Mark broke the vase*  
           ‘Mark broke the vase.’  
       b. Die Vase zerbrach.                               Class A - unmarked anticausatives  
           *the vase broke*  
           ‘The vase broke.’

- (166) a. Mark schloss die Tür.  
           *Mark closed the door*  
           ‘Mark closed the door.’  
       b. Die Tür schließt sich.                           Class B - reflexively marked anticausatives  
           *the door closes REFL*  
           ‘The door closes.’

- (167) a. Mark kühlte die Batterie ab.  
*Mark cooled the battery off*  
 ‘Mark cooled down the battery.’  
 b. Die Batterie kühlte (sich) ab.      Class C - optionally marked anticausatives  
*the battery cooled REFL off*  
 ‘The battery cools down.’

All the predicates above denote a change-of-state event, and are thus assumed to have a complex event structure. It is often claimed, however, that the event structure of an anticausative is nevertheless simpler than that of the corresponding causatives, since it lacks the CAUSE layer. This is illustrated by the following event decompositions of lexical causatives (168a) and anticausatives (168b):

- (168) a. [X CAUSE [BECOME [y <STATE>]]]  
 b. [BECOME [y <STATE>]]

While I will not go into the question of whether the causative or the anticausative variant is basic, or whether both variants are derived from a common Root (see Alexiadou, Anagnostopoulou & Schäfer 2006, 2014 for extensive discussion), I will here focus on the frequently made claim that anticausatives do not lack the CAUSE-component (to the best of my knowledge, Hale & Keyser 1987 and Levin & Rappaport Hovav 1995 were amongst the first to propose this; see a.o. Alexiadou, Anagnostopoulou & Schäfer 2006, 2014; Schäfer 2008, 2009; Koontz-Garbodden 2009 for different executions of this idea).

To provide one argument in favor of this view, Alexiadou, Anagnostopoulou & Schäfer (AAS henceforth) (2006) note that while anticausatives block an agent-introducing *by*-phrase (testifying to the lack of agentivity), they render acceptable the addition of a *through/from*-PP, which introduces a non-human causer or causing event. The possibility of adding such a PP in German is independent of the morphological marking of the anticausative (169)/(170).

- (169) a. Maria / Der Windstoß öffnete die Tür.  
 ‘Mary / the draft opened the door.’  
 b. Die Tür öffnete sich [durch den Windstoß /\*durch Maria /\*von Maria].  
*the door opened REFL through the draft      through Mary by Mary*  
 ‘The door opened through the draft.’

- (170) a. Peter / Die Erschütterung zerbricht die Vase.  
 ‘Peter / The jolting breaks the vase.’  
 b. Die Vase zerbrach [durch die Erschütterung /\*durch Peter /\*von Peter].  
*the vase broke through the jolting      through Peter by Peter*  
 ‘The vase broke through the jolting.’

Crucially, the availability of a *durch*-PP introducing a causer or a causing event cannot be treated as a consequence of the preposition *durch* assigning a causer theta-role to its



complement; rather, it must be due to the presence of a causing event (AAS 2006, 2014; Schäfer 2008, 2009, 2012c). This can be seen by the fact that in the absence of causative semantics, a causer PP is unacceptable, in contrast to what would be expected if the preposition could assign a causer theta-role.

- (171) Die Straße ist seit zwei Stunden (\*durch die Sonne) warm.  
*the street is for two hours through the sun warm*  
 'The street is warm for two hours through the sun.' (AAS 2014: 70)

The adjectival construction in (171) is stative as is indicated by the presence of the aspectual adverb *seit zwei Stunden* 'for two hours'. Clearly, no causing event is involved in (171), and the addition of a causer PP leads to ungrammaticality. This is unexpected if the preposition itself licenses a causer. The acceptability of *durch*-PPs in (169b) and (170b), then, is evidence in favor of the view that even anticausatives involve causative semantics (see AAS 2014 for further refutation of the claim that it is the preposition *durch* that licenses a causer).

Turning to LMs, if *sich lassen* was a reflexively marked anticausative, it is expected that a *durch*-PP should be acceptable as well. (172) illustrates that this is indeed the case.

- (172) a. Durch die großen Buchstaben lässt sich das Buch leicht lesen.  
*through the big letters lets REFL the book easily read*  
 'Because of the big letters, the book can be read easily.'  
 b. Durch die Korrosion des Steines lässt sich Excalibur mittlerweile  
*through the corrosion of the stone lets REFL Excalibur in the meantime*  
*leicht herausziehen.*  
*easily out.pull*  
 'Due to the corrosion of the stone, Excalibur can be pulled out easily by now.'

(172) suggests that, in addition to the event properties of the embedded predicate, LMs in fact involve causative semantics.<sup>54</sup> Note that this is a further difference between LMs and CMs, in which the addition of a *durch*-phrase is barely possible.<sup>55</sup>

- (173) a. \*<sup>2</sup>Durch die großen Buchstaben liest sich das Buch leicht.  
*through the big letters reads REFL the book easily*  
 b. \*<sup>2</sup>Durch die Korrosion des Steines zieht sich das Schwert leicht heraus.  
*through the corrosion of the stone pulls REFL the sword easily out*

Furthermore, as is expected if *sich lassen* was the reflexively marked anticausative of causative *lassen*, the causers introduced in the *durch*-phrases in (172) can function as the structural subject in the corresponding periphrastic causatives (174). This replicates the pattern found with anticausatives and their causative counterparts (169)/(170).

<sup>54</sup> Arguably, this further supports the Identity Hypothesis. If *lassen* in LMs is causative *lassen*, and causative *lassen* is responsible for the causative semantics in periphrastic causatives, it is expected that LMs involve causative semantics as well.

<sup>55</sup> Thanks to Florian Schäfer for pointing this out to me.

- (174) a. Die großen Buchstaben lassen Kinder das Buch leicht lesen.  
*the big letters let children the book easily read*  
 ‘Because of the big letters, children can read the book easily.’
- b. Die Korrosion des Steins lässt jeden Ritter Exkalibur leicht herausziehen.  
*the corrosion the stone lets every knight Excalibur easily out.pull*  
 ‘Because of the corrosion, every knight can easily pull Excalibur from the stone.’

Before I proceed, I would like to address a number of potential objections to the claim that LMs involve causative semantics. First, the *durch*-PP could be associated with the embedded predicate, thus telling us nothing about the status of *sich lassen*. Yet, the fact that, in the examples above, the *durch*-PP cannot easily be combined with the embedded predicate (175) suggests that it has to be associated with *sich lassen*.

- (175) a.<sup>??</sup> Durch die großen Buchstaben lesen selbst Kinder das Buch.  
*through the big letters read even children the book*
- b.<sup>??</sup> Durch die Korrosion des Steines zieht selbst dieser Ritter Excalibur heraus.  
*through the corrosion of the stone pulls even this knight Excalibur out*

Second, the *durch*-PPs in (172) are interpreted as facilitators, rather than real causers. While this point is true, I do not believe that it invalidates the argument. It is clear that PCCs are structurally more complex than lexical causatives in that the caused event may contain an agent argument itself. A causer that enables an agent to do something will then necessarily receive the interpretation of a facilitator, as can be seen by the interpretation of the causer subjects in (174). Furthermore, since LMs involve modality that is absent from lexical causatives, it is expected that this factor potentially has an influence on the interpretation of a causer argument. I therefore propose that it is the structural complexity of PCCs and LMs, along with the modality involved, that is responsible for the slight asymmetry with respect to the interpretation of *durch*-PPs in anticausatives and LMs.

Returning to the comparison between *sich lassen* and reflexively marked anticausatives, the parallelism deepens if one turns to the following two questions: first, what predicates can undergo the anticausative alternation; and second, why are certain anticausatives in German reflexively marked, while others are not? Since Levin & Rappaport Hovav (L-RH, 1995), the answer to the first question has been the generalization in (176) (see also Reinhart 2000, 2002).<sup>56</sup>

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<sup>56</sup> It has often been pointed out that (176) overgenerates (see e.g. AAS 2006, 2014; Rappaport Hovav 2014). For example, it wrongly predicts predicates like, e.g., *kill* or *destroy*, to undergo the anticausative alternation. AAS (2006) delimit the class of predicates that can undergo the alternation based on a root ontology which distinguishes four classes of Roots: (i) agentive, (ii) externally caused, (iii) cause unspecified, (iv) internally caused. Only roots of class (iii) are compatible with an anticausative syntax. For the purposes of this section, however, the generalization in (176) suffices.

(176) The transitive verbs that cannot form anticausatives restrict their subjects to agents or agents and instruments, but disallow causers.

Consider the examples in (177) and (178).

(177) a. The lunatic / \*the accident murdered John.  
b. \*John murdered.

(178) a. John / the storm broke the vase.  
b. The vase broke.

*Murder* in (177) is a Root that requires its external argument to be agentive. Due to this restriction, it cannot occur as an anticausative in line with (176). *Break*, by contrast, does not require an external argument of a specific type; it is compatible with both agents and causers (177a). According to (176), this underspecification makes the Root susceptible to the alternation, rendering the anticausative in (178b) acceptable.<sup>57</sup>

The generalization in (176) makes a direct prediction for *lassen*: if *sich lassen* was an anticausative, causative *lassen* should not restrict its external argument to agents. As has been shown repeatedly in this thesis, this prediction is borne out - causative *lassen* readily combines with causer subjects, independently of the actual interpretation of *lassen* as expressing directive causation, permission, simple causation, or ‘enabling’ causation.<sup>58</sup>

(179) a. Der Veranstalter / Schneefall ließ die Menschen vorzeitig nach Hause gehen.  
*the host / snow.fall let the people earlier to home go*  
‘The host / the snowfall made the people go home earlier.’

b. Der Magier / der Sturm ließ die Scheibe zerbrechen.  
*the magician / the storm let the window break*  
‘The magician / the storm made the window break.’

(180) a. Die Mutter / die Brücke lässt die Kinder die Autobahn überqueren.  
*the mother / the bridge lets the children the highway cross*  
‘The mother / the bridge lets the children cross the highway.’

b. Der Erzieher / die große Schrift lässt selbst Kleinkinder das Buch lesen.  
*the educator / the large font lets even small.children the book read*  
‘The educator / the large font lets even small children read the book.’

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<sup>57</sup> Note that the relevant information is not necessarily information encoded on the verb / root itself, but may be information about the eventuality expressed. Levin and Rappaport Hovav (1995) show that the acceptability of an anticausative also depends on the type of complement the verb combines with.

(i) a. He broke the vase / his promise / the world record.

b. The vase / \*his promise / \*the world record broke.

(i) shows that while *break* in principle alternates, the anticausative is ungrammatical if *break* combines with complements like *promise*, or *world record*. The reason is that, by world knowledge, breaking a promise or breaking a world record requires an intentional agent, such that the corresponding anticausative is blocked.

<sup>58</sup> Whether *lassen* is interpreted as ‘enabling’ causation or plain causation appears to be dependent on, among other things, the pragmatic evaluation of the caused event as positive or negative. Compare (179a) to (i).

(i) Der Schneefall ließ die Kinder ihre neuen Schlitten ausprobieren.

‘The snowfall enabled the children to test their new sleds.’

The two instances of *lassen* in LMs and periphrastic causatives thus conform to the generalization in (176). In other words, with respect to the question of what types of verbs can potentially undergo the causative alternation, causative *lassen* is expected to allow an anticausative counterpart, thereby further supporting the claim that *sich lassen* in LMs has to be treated as a reflexively marked anticausative.<sup>59</sup>

Let me now turn to the second question raised above: what determines whether, in a language such as German, a particular anticausative is morphologically marked or not. It can be shown that an anticausative of causative *lassen* is in fact expected to be reflexively marked, further supporting the argument of this section that *sich lassen* is the reflexively marked anticausative of causative *lassen*.

Building on Haspelmath's (1993) spontaneity scale, Schäfer (2008) suggests an answer to the question above. In view of more recent investigations (Heidinger 2013; Haspelmath et al. to appear), I will make use of the term 'causalness' instead of spontaneity, though nothing in particular hinges on this. Haspelmath and Heidinger show that, with respect to the class of verbs that enter the anticausative alternation, causalness, which denotes the tendency of a verb to be used more frequently as a causative or anticausative, is a factor in the morphological encoding of the anticausative variant. In particular, verbs that have a higher ratio of causative uses will show morphological marking in their anticausative use, while verbs that have a lower ratio will be unmarked. This observation can be interpreted in the following way: divergence from the 'default' use of a predicate (as transitive) requires formal marking.<sup>60</sup>

In order to implement this generalization, I follow Schäfer (2008) in assuming that verbs which enter the anticausative alternation and whose 'default' use is causative have a formal requirement to occur in a transitive syntax. This means that, syntactically, these verbs need to occur in the context of Voice, independent of semantic valency. To put it differently, verbs that more commonly are used as transitive causatives can occur as anticausatives, but still require the presence of Voice. Unlike in the causative context, however, this VoiceP must not introduce external argument semantics. I will show below how the reflexive pronoun effects this reduction. This, then, is how the observation that predicates with a higher degree of

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<sup>59</sup> One might object that only change of state predicates can undergo the anticausative alternation, which would raise the question of in which way causative *lassen* expresses a change of state. First, note that not every predicate that occurs in an anticausative syntax needs to denote a change of state (cf. *Martin hängt das Bild an die Wand*. 'Martin hangs the picture on the wall.' *Das Bild hängt an der Wand*. 'The picture hangs on the wall'. See also Schäfer's analysis of CMs discussed in chapter 5). Second, Labelle (2013) assumes that French causative *faire* expresses a change of state, claiming that the caused event has to be treated as a result clause which is brought into existence by the causing event. The same could be said of German *lassen*.

<sup>60</sup> Potentially, this is a general principle applying to passives as well, as has been claimed in Haspelmath (1990). I will argue in chapter 7, however, that, with respect to passivization, the picture is more complicated.

causalness need to be marked in the corresponding anticausative can be formally implemented.

Turning to *lassen*, the expectation is clear: the default use of *lassen* is the transitive AcI-predicate. Thus, *lassen* has a high degree of causalness, which entails that if *lassen* occurs as an anticausative, it will have to be morphologically marked. This accounts for the obligatory presence of the reflexive pronouns in LMs (even cross-linguistically; see chapter 8). Hence, with respect to morphological marking, the *lassen* - *sich lassen* pair conforms to the properties and expectations of the anticausative alternation.<sup>61</sup>

In sum, *sich lassen* shows all the core properties of an anticausative. In particular, it lacks an implied agent, licenses *durch*-PPs, and has a corresponding transitive use. Furthermore, causative *lassen* belongs to the set of predicates that potentially alternate by having an underspecified subject and which in their anticausative use need to be morphologically marked, accounting for the presence of the reflexive pronoun in LM. I conclude that LMs involve a reflexively marked anticausative (*sich lassen*) that embeds a passive VoiceP (see section 4.3 for the size of the infinitival complement in LMs).

#### 4.7.4 The Syntax of (Reflexively Marked) Anticausatives

I adopt a common base approach to the causative alternation, meaning that I assume that the causative and the anticausative variant do not stand in a derivational relationship (see Pylkkänen 2008; Embick 2004; AAS 2006, 2014; Schäfer 2008, 2012a for different implementations). Rather the same Root is involved and the causative and anticausative variant simply differ in the number of functional projections merged on top. Since I further assume that VoiceP and vP are different projections (Cuervo 2003; Pylkkänen 2008; Harley 2013 among many others), the syntactic decomposition of a causative predicate is as in (181) (see also chapter 1).

#### (181) Abstract Decomposition of Lexical Causatives

[VoiceP DP.Voice [vP v [√P √ROOT DP]]]

The structural combination of an activity (contributed by little *v*), and a resultant state (contributed by the  $\sqrt{P}$ ) is interpreted as a causal relation at the CI-interface (Schäfer 2008, 2012c). Causation itself, in other words, is not contributed by a functional head (pace Harley 1995; Folli and Harley 2005; AAS 2006).

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<sup>61</sup> Note that in German, the majority of anticausatives are reflexively marked, and newly-coined verbs undergoing the alternation mark their anticausative variants, too. Against this background, it is also no surprise that the anticausative use of *lassen* is reflexively marked.

I have also shown above that there is evidence supporting the view that anticausatives involve causation as well (recall the licensing of *durch*-PPs that introduce a causer), which means that anticausatives must also project a vP on top of  $\sqrt{P}$ . The structure of unmarked anticausatives is thus identical to that of simple change-of-state-unaccusatives.

**(182) Abstract Decomposition of Unmarked Anticausatives**

$[_{vP} V [_{\sqrt{P}} \sqrt{ROOT} DP]]]$

The abstract structures represented in (181) and (182) illustrate one of the central conclusions reached in AAS (2006, 2014), namely that the causative alternation is essentially a Voice alternation. While the causative variant involves the external argument introducing projection VoiceP, this projection is absent from (unmarked) anticausatives. The *durch*-PP introducing a causer is thus not treated as the counterpart of the agentive *by*-phrase, overtly realizing an implicit causer argument. Instead, it is a simple event-modifier adjoined to the vP. The causer interpretation of this modifier is licensed by the presence of causative event semantics (the combination of an activity and a resultant state, that is).

Schäfer (2008), building on AAS (2006), provides a detailed analysis of the syntax of reflexively marked anticausatives. Based on the fact that the special morphology that occurs in marked anticausatives is in complementary distribution with an external argument, Schäfer concludes that anticausative morphology needs to be Voice related. There are essentially two positions available for anticausative morphology: the Voice-head and Spec,VoiceP. Schäfer argues that crosslinguistically, both options are realized. While languages like Greek use non-active morphology in marked anticausatives, which is related to the Voice head itself, German, as well as the Romance languages, instantiate the second option. In other words, all SE-reflexives are base-generated in Spec,VoiceP.<sup>62</sup> The syntax of reflexively marked anticausatives in German is thus the following.<sup>63</sup>

**(183) Abstract Decomposition of Reflexively Marked Anticausatives**

$[_{VoiceP} REFL Voice_{expletive} [_{vP} V [_{\sqrt{P}} \sqrt{ROOT} DP]]]$

The VoiceP involved in marked anticausatives must necessarily be different from the one involved in their causative counterparts. Since anticausatives are semantically intransitive, lacking agent semantics, Voice in (183) must not assign a theta-role to its specifier. Schäfer calls a VoiceP devoid of thematic properties *expletive Voice*. If expletive Voice projects a specifier as it does in German, it must be filled by an element that is compatible with the

<sup>62</sup> In French, unlike in German, the reflexive subsequently cliticizes onto the verb.

<sup>63</sup> That the theme DP is, in fact, merged in the theme position is not an uncontroversial claim. Labelle (2002,2013) or Steinbach (2002) assume that the theme is base-generated in Spec,Voice. See Schäfer (2008), and Pitteroff & Schäfer (to appear) for arguments in favor of a low base-position of the theme argument.

absence of a theta-role. Schäfer argues that a reflexive pronoun, due to its referential deficiency, is such an element. He thereby accounts for the fact that, across languages, reflexive morphology is involved in marked anticausatives.<sup>64</sup>

Since I argue that *sich lassen* is a marked anticausative, its syntactic representation should be based on (183). Clearly, however, an adjustment is necessary. Unlike 'canonical' marked anticausatives, the complement of *v* in the case of *sich lassen* cannot be a  $\sqrt{P}$ . Rather, in line with the argumentation provided in section 4.3.4, it must be a VoiceP. I therefore assume the following syntactic representation for *sich lassen* in LMs.

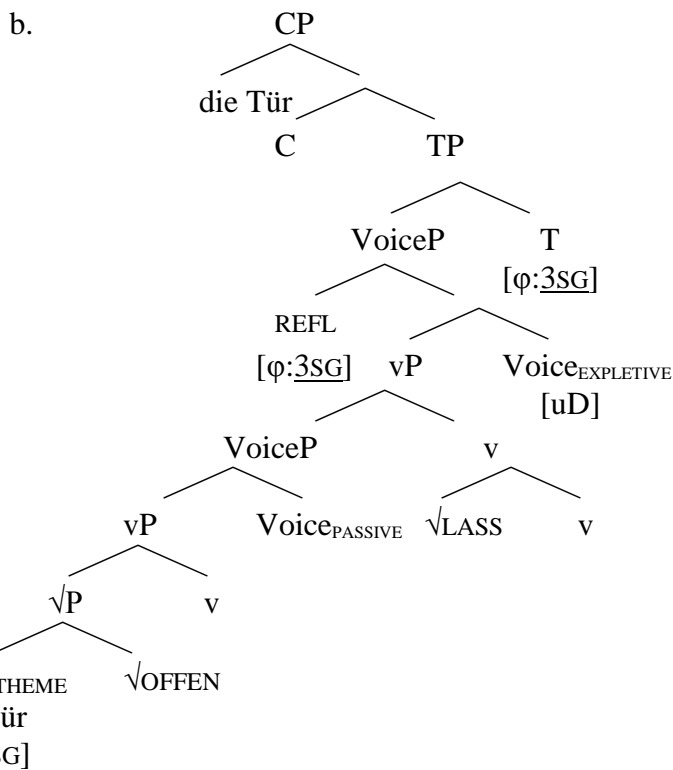
(184) **Syntactic Representation of *Sich Lassen***

[VoiceP REFL Voice<sub>EXPLETIVE</sub> [<sub>vP</sub> v- $\sqrt{LASS}$  [VoiceP ...]]]

**4.8 Deriving *Lassen*-Middles**

Putting together the results of this chapter, I propose the syntax in (185b) for the LM in (185a). (I abstract away from representing any movement for the sake of clarity).

- (185) a. Die Tür lässt sich leicht öffnen.  
*the door lets REFL easily open*  
 'The door opens easily.'



<sup>64</sup> The structure in (183) raises a number of non-trivial questions concerning Binding Theory and Case Theory. I will discuss these issues in the next section.

The Root  $\sqrt{\text{OFFEN}}$  merges with the theme argument *die Tür*, forming a  $\sqrt{\text{P}}$  that is interpreted as a resultant state (Embick 2004). This  $\sqrt{\text{P}}$  merges with the categorizing head *v*, which identifies the Root as verbal. As discussed in section 4.3.4, the infinitival complement in LMs, exactly like the one in *lassen*-passives, contains a passive VoiceP, i.e. an agentive Voice projection that, nevertheless, does not project a specifier (see Embick 2004 for this representation of passive Voice).<sup>65</sup>

Since I also argued that middle and causative *lassen* are one and the same element, I represent *lassen* in LMs, just like *lassen* in *lassen*-passives and PCCs as a Root that modifies matrix little *v*, semantically contributing causative/permisive semantics. Up to this point, the derivation of an LM and a *lassen*-passive is completely identical. However, while the matrix VoiceP in PCCs and *lassen*-passives is active, introducing an external argument in Spec,VoiceP, as a consequence of the anticausative nature of (*sich*) *lassen*, the matrix VoiceP in LMs must be expletive. This means that the matrix Voice in LMs lacks thematic properties; therefore no agent is introduced (neither syntactically nor semantically) that is associated with the causing event. Voice<sub>EXPLETIVE</sub> in German, however, requires an element in its specifier (indicated by the [uD]-feature). Since, as argued above, only a reflexive pronoun can be merged in this position, the matrix Spec,VoiceP in (185b) is occupied by the referentially defective reflexive pronoun *sich*.<sup>66</sup> This structure then combines with matrix T, which lacks an EPP-feature in German. As a consequence, even though the embedded DP<sub>THEME</sub> agrees with T (see discussion in the next section), it does not have to move to Spec,TP. Finally, the phase head C is merged. The finite verb moves to C and some phrasal element (*die Tür* in the example above) moves to Spec, CP, thus satisfying the V2-requirement.

Before I turn to the questions of how case is determined in LMs and how binding works, let me briefly stress one point. Consider the example in (186a).

- (186) a. *dass mir der Roman nicht zu übersetzen gelang.*  
*that me.DAT the.NOM novel not to translate managed*  
 ‘that I did not manage to translate the novel.’  
 b. *dass mir den Roman nicht zu übersetzen gelang.*  
*that me.DAT the.ACC novel not to translate managed*  
 ‘that I managed not to translate the novel.’

(186a) involves an unaccusative matrix predicate (*gelingen* ‘to manage’) that combines with a restructuring infinitive, which is signaled by the nominative case marking on the embedded

<sup>65</sup> See chapter 7 for a more detailed discussion of the syntax of verbal passives.

<sup>66</sup> To be precise, the specifier of expletive Voice is occupied by a variable which is spelled-out at PF as either the reflexive pronoun *sich* (if its  $\phi$ -features are valued as 3<sup>rd</sup> person) or the personal pronoun *mich*, *dich*, etc. (in cases of a non-3<sup>rd</sup> person value).



theme argument. Due to the fact that (186a) involves long object movement, this example is essentially identical to the long passives discussed in Wurmbrand (2001). LMs involve exactly the same type of object movement due to the unaccusative nature of the matrix predicate, which means that in terms of argument realization, LMs are comparable to the example in (186a) in involving long object movement. This provides crucial support for the claim that LMs are restructuring constructions (see section 4.3.3), even though the infinitival complement involves Voice. I return to the consequences this has for the theory of restructuring in chapter 7.

Note, furthermore, that (186b) shows that not only nominative but also accusative case is acceptable on the theme argument, which is a consequence of the observation that *to*-infinitives are ambiguous between restructuring and non-restructuring (Bech 1955; Haider 1986a,b; Wurmbrand 2001, 2004, a.o.). Since the infinitival complement of causative *lassen* is obligatorily a restructuring infinitive, it is not expected that the embedded theme ever surfaces with accusative case in LMs.

Let me now address the issues the proposed analysis of LMs raises for Case and Binding Theory.

#### 4.8.1 *Lassen*-Middles and Case Theory

LMs pose an interesting problem for Case Theory. Note that under a checking or assignment approach to Case, the derivation outlined above would essentially have the following characteristics: since the embedded predicate is passive, it cannot assign accusative Case to its object. While in *lassen*-passives, the theme can be assigned accusative Case by the ECM-predicate *lassen*, the fact that *lassen* in LMs surfaces as an anticausative entails the loss of its Case-assigning property (cf. the relation between accusative case assignment and the presence of an external argument known as Burzio's Generalization). In other words, since in LMs neither the embedded nor the matrix predicate can assign Case to the embedded theme, it will be Case-marked by T. Thus, it will surface as nominative.

The issue LMs raise for such an account, however, involves the fact that the reflexive pronoun bears accusative case. Although this cannot be seen with the reflexive pronoun *sich* (whose form is invariable across different cases), it becomes obvious in sentences such as (187).

- (187) Du            lässt Dich    leicht verkaufen.  
           *you.NOM let you.ACC easily sell*  
           'You can be sold easily.'

Due to the 2<sup>nd</sup> person subject, combined with the fact that German lacks 1<sup>st</sup> or 2<sup>nd</sup> person reflexive pronouns, the DP in the specifier of matrix VoiceP surfaces as the personal pronoun *dich* in (187). This element is clearly marked with accusative case (compare *Er.NOM liebt dich.ACC*. ‘He loves you.’). It is not immediately clear under a checking/assignment account how the reflexive could ever receive this case (in fact, reflexively marked anticausatives, which lack an external argument but nevertheless involve an accusative case-marked reflexive pronoun, are in direct contradiction to Burzio’s generalization).

But even for a dependent case approach, the case distribution in LMs requires some comment: why is the structurally lower DP (i.e. the theme argument) marked with nominative, while in a canonical transitive context, the lower argument surfaces with dependent accusative? The solution I will propose follows from the particular assignment principles advanced in chapter 1 (cf. (188)). It is essentially based on the discussion of case in reflexively marked anticausatives in Schäfer (2008, 2012a).

- (188) a. A DP is realized at PF with dependent accusative case if it is not ‘marked’ and has not valued the uninterpretable  $\phi$ -features on T (via Agree).  
b. A DP is realized at PF with unmarked nominative case if it is not ‘marked’ and has valued the uninterpretable  $\phi$ -features on T (via Agree).

(188) entails that, in order for the reflexive to surface with (dependent) accusative in LMs, some other element, e.g. the theme DP, must have valued the  $\phi$ -features on T. The issue thus reduces to the question of why the theme, but not the reflexive, agrees with T.

Consider again what happens upon the merger of matrix T. T enters the derivation with a set of unvalued  $\phi$ -features. T probes the tree and finds the DP in matrix Spec, VoiceP. Recall that, following Burzio (1991) and Schäfer (2008), I assumed that anaphors are characterized by having a set of unvalued  $\phi$ -features. Due to this deficiency, the reflexive in LMs establishes an Agree-chain with T, but it cannot value its uninterpretable  $\phi$ -features. As a consequence, T has to probe further. Since I assumed with Chomsky that only active Voice is a phase, everything in the complement of matrix Voice will still be visible for T, which thus finds the embedded DP<sub>THEME</sub>. This DP has interpretable and valued  $\phi$ -features, is still active (i.e. it has not valued the  $\phi$ -features of some other head), and values [ $u\phi$ :] on T.

Upon the completion of CP, the whole structure is sent to the interfaces and case-assignment is calculated according to the principles given above. Since the reflexive has not valued the  $\phi$ -features on T, it surfaces with dependent accusative in line with (188a). By contrast, DP<sub>THEME</sub>, even though structurally the lower argument, has valued T’s  $\phi$ -features and is assigned nominative case (provided it has not been specified for lexical or inherent case).

#### 4.8.2 *Lassen-Middles and Binding Theory*

I will now address the problem that the structure in (185b) appears to violate Principle A of the Binding Theory: since  $DP_{\text{THEME}}$  can stay in situ, the reflexive does not have a local c-commanding antecedent that could value its  $\varphi$ -features and determine its reference. In other words, the reflexive in LMs is unbound, which should lead the derivation to crash, contrary to fact.

Schäfer (2008), faced with the same situation in reflexively marked anticausatives and CMs, has proposed an adjustment of the canonical Binding Theory that solves this issue. The core idea is that the binding of anaphors falls into two parts: syntactic and semantic. The syntactic requirement of binding is a consequence of more general minimalist assumptions, namely that all unvalued features must be valued before they are sent off to the interfaces. If reflexives have a set of unvalued  $\varphi$ -features, they will have to be valued during the derivation to prevent ungrammaticality. At LF, the Agree-relation will be evaluated as a (semantic) binding relation iff the DP that valued  $[u\varphi:]$  on the reflexive also c-commands it. Schäfer argues that, while the syntactic aspect of binding is an obligatory requirement, the semantic part is not. If at LF, there is no c-commanding antecedent, semantic binding cannot take place and the reflexive will remain without interpretation, the result being a non-thematic reflexive pronoun.

This mismatch is exactly what we find in LMs, too. I argued in the preceding section that the reflexive enters an Agree-chain with T. At the moment  $DP_{\text{THEME}}$  Agrees with T, it thus values the  $\varphi$ -features of T as well as those of the reflexive pronoun, thereby satisfying the syntactic requirement on binding. Since the reflexive is base-generated in a position from which it c-commands its antecedent, semantic binding will not take place, deriving the non-thematic reflexive in LMs (see Schäfer 2008: 276-279) for a discussion of why movement to Spec,TP or Spec,CP cannot feed semantic binding).

In sum, while Schäfer only discusses reflexively marked anticausatives and CMs, where the reflexive pronoun and its ‘syntactic’ antecedent ( $DP_{\text{NOM}}$ ) belong to the same predicate, LMs provide a context in which the two elements belong to two different predicates. I have argued extensively in this chapter that an analysis of LMs that merges  $DP_{\text{NOM}}$  in a position from which it c-commands the reflexive pronoun is incorrect. Rather, it must be the case that the reflexive c-commands the base-position of  $DP_{\text{NOM}}$ , thereby providing an independent context in which the particular configuration discussed in Schäfer’s work arises. In other words, the existence of LMs has to be seen as crucial evidence in support of Schäfer’s adjustment of the Binding Theory.

## CHAPTER 5

### CANONICAL & LASSEN-MIDDLES - EXPLAINING THE DIFFERENCES

#### 5.1 Introduction

In this chapter, I provide an account of the differences between CMs and LMs that were been discussed in chapter 2. In particular, I focus on the availability of a *by*-phrase in LMs, which is not an option in CMs (section 5.3.1). I will address the question of why, under normal circumstances, a manner adverb is obligatory in CMs but not in LMs (section 5.3.2), and will suggest an account of the difference in terms of verb class restriction (section 5.3.3). A discussion of the differences between the impersonal variants of CMs and LMs will be taken up in chapter 8.

Since I will be arguing that all of the above properties are in one way or other the consequence of structural differences between the two constructions, I will have to take a position concerning the syntax of CMs. I turn to this issue now.

#### 5.2 The Syntax of Canonical Middles

Many years of research on CMs have led to numerous different analyses of this construction. One of the most difficult properties to account for has been the fact that in CMs, the theme argument functions as the structural subject, while the agent argument is not expressed overtly (see Troseth 2009 for the claim that this latter aspect is, in fact, the core property of CMs). Many researchers have argued in favor of an unergative analysis of CMs, where the theme is merged in the external argument position, while the external argument itself is not projected into the syntax (Fagan 1988, 1992; Ackema & Schoorlemmer 1994, 1995, 2006; Cabredo Hofherr 2005; Zwart 1998; Marelj 2004; Lekakou 2005, a.o.). Unergative analyses of CMs have to be contrasted with what could be called a ‘transitive’ analysis – which has been proposed particularly for German CMs. Under such an approach, the reflexive pronoun and the theme DP occupy (different) argument positions. There is, however, also disagreement among transitive analyses of middles with respect to where the theme argument should be base-generated. Steinbach (2002) proposes that the theme argument is base-generated in the external argument position, while the reflexive pronoun is merged internally (see chapter 4 for discussion), essentially assimilating the syntax of CMs to the one of thematic reflexives (e.g. *Hans hasst sich*. ‘Hans hates himself.’). Schäfer (2008), by contrast, argues that the theme is merged as the internal argument, while the reflexive pronoun is merged externally in the

specifier of an expletive VoiceP. This approach syntactically identifies CMs and reflexively marked anticausatives, making sense of the fact that the two constructions cross-linguistically share the same type of morphological marking.

Of course, the different analyses (unergative vs. transitive) are informed by different properties of English/Dutch and German CMs. While the former are morphologically unmarked, the latter contain a reflexive pronoun that needs to be accounted for (see Marelj 2004 and Lekakou 2005 for an account of this difference that does not involve a transitive syntax for German CMs). As a null hypothesis, however, these differences are not idiosyncratically linked to different syntaxes. This means that, even though Dutch CMs do not involve a reflexive pronoun, one would not want to assume that they merge the theme argument in a fundamentally different way than is the case in German – the reason being that German and Dutch CMs are semantically identical.

Obviously, this is not the place to discuss and decide among all the different accounts that have been provided for CMs (see Steinbach 2002 or Ackema & Schoorlemmer 2006 for very detailed and comprehensive overviews). As ultimately the differences between CMs and LMs are linked to the absence of the agent argument from the syntax of CMs, an aspect which all the analyses above share, this is no shortcoming. For the sake of concreteness, I will adopt Schäfer's analysis of CMs. Let me briefly explain this choice.

First, in terms of a configurational theta-theory (as adopted in this thesis) the analysis provided in Schäfer has to be preferred: if thematic roles are linked to structural positions, a DP interpreted as a theme should always be merged in the same position as an internal argument (cf. a strong version of the *Uniformity of Theta Assignment Hypothesis* (UTAH)).

Second, Pitteroff & Schäfer (to appear) apply the configurational DAT-NOM tests, which I used in chapter 4 to determine the base position of DP<sub>NOM</sub> in LMs (cf. sections 4.5.4 – 4.5.6) to CMs, reflexively marked anticausatives, and thematic reflexives. They show that the former two differ systematically from the latter (contrary to what would be expected under Steinbach's analysis). DP<sub>NOM</sub> in anticausatives and CMs patterns with the internal argument of unaccusatives and passives, but it behaves like an external argument in the case of thematic reflexives. This contrast is exemplified below, using the Information Structure test (chapter 4, section 4.5.4; see Schachtl 1991 for the original application of this test to CMs).

- (1) Wem räumt sich heute noch die Wohnung leicht auf?  
 'For whom is it easy to clean the apartment nowadays?'

a. [DP<sub>NOM</sub>] > [DP<sub>DAT</sub>]<sub>F</sub>

Heute räumt sich die Wohnung nur noch [dem BLINden]<sub>F</sub> leicht auf.  
*today cleans REFL the.NOM apartment only yet the.DAT blind easily up*

b.  $[DP_{DAT}]_F > [DP_{NOM}]$

Heute räumt sich nur noch [dem BLINDen]<sub>F</sub> die Wohnung leicht auf.  
*today cleans REFL only yet the.DAT blind the.NOM apartment easily up*  
 ‘Nowadays, it is only easy to clean up the apartment for/of a blind man.’

(2) Wem öffnet sich während der Finanzkrise noch die Tür zum Reichtum?

‘Who becomes rich in times of the financial crisis?’

a.  $[DP_{NOM}] > [DP_{DAT}]_F$

Während der Finanzkrise öffnet sich die Tür zum Reichtum nur noch  
*during the financial.crisis opens REFL the.NOM door to.the wealth only yet*  
 [dem SCHLEImer]<sub>F</sub>.  
*the.DAT bootlicker*

b.  $[DP_{DAT}]_F > [DP_{NOM}]$

Während der Finanzkrise öffnet sich nur noch [dem SCHLEImer]<sub>F</sub> die  
*during the financial.crisis opens REFL only yet the.DAT bootlicker the.NOM*  
 Tür zum Reichtum.  
*door to.the wealth*  
 ‘During the financial crisis, only the bootlicker becomes rich.’

(3) Wem vertraut sich der Arbeitnehmer heute noch an?

‘To whom does the employee still entrust himself these days?’

a.  $[DP_{NOM}] > [DP_{DAT}]_F$

Heute vertraut sich der Arbeitnehmer nur noch [dem PsychoLOgen]<sub>F</sub>  
*today trusts REFL the.NOM employee only yet the.DAT psychologist*  
 an.  
*on*

b.  $[DP_{DAT}]_F > [DP_{NOM}]$

\*Heute vertraut sich nur noch [dem PsychoLOgen]<sub>F</sub> der Arbeitnehmer  
*today trusts REFL only yet the.DAT psychologist the.NOM employee*  
 an.

*on*

‘Nowadays, the employee only entrusts himself to the psychologist.’

Recall from chapter 4 that, descriptively, the order  $[DP_{DAT}]_F > [DP_{NOM}]$  is only acceptable if it is the base-order, as otherwise the derivation would involve scrambling of a focused phrase, which is illicit (Lenerz 1977, 2001; Neeleman & van de Koot 2008; Bobaljik & Wurmbrand 2012, a.o.). This suggests that  $DP_{NOM}$  in CMs (1) and reflexively marked anticausatives (2) – but not in thematic reflexives (3) – is base-generated below  $DP_{DAT}$ , i.e. as an internal argument. With thematic reflexives, by contrast, only the order  $[DP_{NOM}] > [DP_{DAT}]_F$  is acceptable, indicating that this is the unscrambled base order.

Compare the results above to the situation in passive and active contexts ((4) and (5) respectively, repeated from chapter 4 for the sake of convenience).

(4) Wem hilft heutzutage noch die Bibel?

‘Whom does the bible still help these days?’

a.  $[DP_{NOM}] > [DP_{DAT}]_F$   
 Heute hilft die Bibel nur noch [dem GLÄUbigen]<sub>F</sub>.  
*today helps the.NOM Bible only yet the.DAT believer*

b.  $[DP_{DAT}]_F > [DP_{NOM}]$   
 \*Heute hilft nur noch [dem GLÄUbigen]<sub>F</sub> die Bibel.  
*today helps only yet the.DAT believer the.NOM Bible*  
 ‘These days, the Bible only helps the believer.’

(5) Wem wird heutzutage noch das Leben gerettet?  
 ‘Whose life is still saved these days?’

a.  $[DP_{NOM}] > [DP_{DAT}]_F$   
 Heute wird das Leben nur noch [dem VerSICHerten]<sub>F</sub> gerettet.  
*today becomes the.NOM life only yet the.DAT insured saved*

b.  $[DP_{DAT}]_F > [DP_{NOM}]$   
 Heute wird nur noch [dem VerSICHerten]<sub>F</sub> das Leben gerettet.  
*today becomes only yet the.DAT insured the.NOM life saved*  
 ‘Nowadays, only the life of the insured is saved.’

The thematic reflexive in (3) patterns with the active construal in (4), while  $DP_{NOM}$  in CMs and anticausatives (1)/(2) behaves like  $DP_{NOM}$  in verbal passives (5). The results above, i.e. that  $DP_{NOM}$  in CMs and reflexively marked anticausatives needs to be merged as an internal argument, are only compatible with Schäfer's analysis, They are unexpected under Steinbach's approach or an unergative account (see Schäfer 2008 and Pitteroff & Schäfer to appear for more arguments in favor of a low base-position of  $DP_{NOM}$  in reflexively marked anticausatives and CMs). Note also that this similarity between CMs and reflexively marked anticausatives is compatible with the view expressed in Schäfer that the two constructions are, in fact, syntactically identical (modulo the generic operator in CMs, see below for discussion).

Third, as mentioned above, the syntactic identity between CMs and reflexively marked anticausatives – which is at the core of Schäfer's analysis – also accounts for the fact that, cross-linguistically, the two constructions (often) exhibit the same morphological marking (Schäfer 2008). This is illustrated in (6)-(10).

(6) a. The door opens. (English)  
 b. The book reads easily

(7) a. De deur opent. (Dutch)  
 b. Dit boek leest makkelijk.

(8) a. Die Tür öffnet **sich**. (German)  
 b. Das Buch liest **sich** gut.

(9) a. La porte s'ouvre. (French)  
 b. Ce livre se lit facilement.

- (10) a. i porta anik-i (Greek)  
*the door open-NACT.PRES.3SG*  
 b. Afto to vivlio diavaze-te efkola  
*this the book read-NACT.PRES.3SG easily*

While in English and Dutch, both constructions are morphologically unmarked (6)/(7),<sup>1</sup> reflexively marked anticausatives and CMs involve the same morphological marking in German and French (8)/(9). In Greek (10), in turn, anticausatives and CMs are marked by the same non-active morphology.<sup>2</sup>

The syntax Schäfer assigns to CMs is thus identical to the one he postulates for reflexively marked anticausatives. This syntax is provided in (11) (GEN stands for the generic operator that scopes over the expletive VoiceP. Since CMs are not restricted to change of state predicates, I use the abbreviated structure for the vP seen elsewhere in this thesis. For a detailed discussion of the nature of expletive Voice, the reader is referred to Schäfer 2008).<sup>3</sup>

(11) **The Syntax of CMs (Schäfer 2008)**

[GEN<sub>[VoiceP REFL [vP DP<sub>THEME</sub> + √ROOT + v]Voice<sub>EXPLETIVE</sub>]]</sub>

Due to the claim that CMs are syntactically anticausative, Schäfer's analysis is in line with the view expressed in Condoravdi (1989) and Lekakou (2005), which holds that the middle is an interpretation that independently available morpho-syntaxes give rise to.

Before I proceed to the explanation of the differences between CMs and LMs, let me address one issue that arises from the discussion of Schäfer's analysis so far: If anticausatives and CMs are syntactically identical (meaning both involve an expletive VoiceP), how can the difference in terms of agentivity be explained? Recall from the discussion in chapter 2 that anticausatives do not license instrument PPs (12a), while CMs do (12b), and that the acceptability of an instrument is contingent on the (semantic) presence of an agent.

- (12) a. Die Tür öffnete sich (\*mit einem Vorschlaghammer).  
*the door opened REFL with a sledgehammer*  
 'The door opened (\*with a sledgehammer).'  
 b. Die Tür öffnet sich (mit einem Vorschlaghammer) leicht.  
*the door opens REFL with a sledgehammer easily*  
 'The door opens easily (with a sledgehammer).'

<sup>1</sup> This is not absolutely correct for Dutch. Everaert (1986) shows that Dutch has some reflexively marked anticausatives. I will return to this issue in chapter 8.

<sup>2</sup> Alexiadou & Doron (2012) show that the same holds for Hebrew. This does not necessarily mean that in all these languages, CMs are parasitic on anticausatives. Lekakou (2005) argues that in Greek, CMs are parasitic on passives. I will turn to this issue in chapter 6.

<sup>3</sup> Note that the presence of (expletive)Voice in CMs solves the problem that Hale & Keyser's (1987) analysis of CMs as unaccusatives faced, namely the fact that with a transitive - unaccusative pair like *raise-rise*, only the transitive form occurs in CMs. This results nicely if CMs involve (expletive) Voice. See chapter 4 for an account that relates this type of stem allomorphy to the presence of Voice.



Schäfer argues that the agent implicature in CMs is established under genericity at the C-I interface. Initial evidence supporting this view comes from the observation that a reflexively marked anticausative in the context of a generic operator is ambiguous between an anticausative and a middle interpretation. In other words, (13), taken from Schäfer (2008), is compatible with or without an implied agent.

- (13) *Trockenes Holz entzündet sich leicht.*  
*dry wood ignites REFL easily*  
 (i) ‘It is easy to ignite dry wood.’  
 (ii) ‘Dry wood ignites at the slightest provocation.’

Schäfer claims that the ambiguity in (13) results from encyclopedic knowledge about the verbal Root / the Root-theme complex, which denotes an event that is compatible with both the presence and absence of an agent. As soon as world-knowledge strongly suggests the presence of an agent, the ambiguity is resolved in favor of the middle interpretation. If, however, the denoted event is more likely to come about spontaneously, the anticausative reading is favored. This is shown in (14) using the Root *spalten* ‘to decompose’. Due to the particular verb-object combination, the event denoted by the predicate in (14a) is more likely to involve an agent who carries out the splitting, leading to the middle interpretation. World knowledge about uranium renders (14b) compatible with the lack of an agent, hence the preference for the (generic) anticausative reading.

- (14) a. *Eine instabile Regierung spaltet sich leicht.* (middle reading preferred)  
*an unstable government splits REFL easily*  
 ‘An insecure government splits easily.’  
 b. *Uran spaltet sich leicht.* (anticausative reading preferred)  
*uranium decomposes REFL easily*  
 ‘Uranium decomposes easily/quickly.’

(13) and (14) suggests that there is no syntactic difference between CMs and (generic) anticausatives, the difference in interpretation being a consequence of the particular type of Root / Root and object DP involved.

Yet, encyclopedic knowledge and the presence of a generic operator alone are not enough to trigger an agent implicature. This can be seen if one embeds unmarked anticausatives, which lack the Voice layer altogether (AAS 2006, 2014), below a generic operator (15a).

- (15) a. *\*Versprechen brechen leicht.*  
*promises break easily*  
 b. *Versprechen brechen sich leicht.*  
*promises break REFL easily*  
 Intended: ‘Promises break easily.’

(15) illustrates that, even if encyclopedic knowledge dictates that the event denoted by the Root-theme complex (e.g. the breaking of promises) involves an agent, this will not automatically lead to an agent implicature - (15a) is ungrammatical on the intended middle interpretation. Only if the reflexive pronoun (and thus expletive VoiceP) is present can the structure be interpreted as a middle (cf. (15b)). In other words, the agentivity in CMs is a consequence of the interplay of genericity, the encyclopedic knowledge associated with the Root/vP, and the presence of an expletive VoiceP.

The need for the presence of an expletive VoiceP in CMs directly follows from Schäfer's explanation of why some anticausatives, but not others, are morphologically marked in German. Recall from chapter 4 that Roots / Root-theme complexes that have a strong tendency to be used transitively can only occur as anticausatives if expletive Voice is present. Prototypical middles such as *Das Buch liest sich gut* 'The book reads well.' involve an agentive Root – one that is canonically used transitively, that is. If such a Root is used in an anticausative syntax, it will have to be morphologically marked, i.e. occur in the context of expletive Voice. This accounts for the syncretism in the morphological marking of (a certain class of) anticausatives and CMs.

With respect to the details of how the agent implicature arises at the C-I interface, Schäfer makes use of a modal approach to genericity (see Krifka et al. 1995 and references cited there), combined with Kratzer's modal theory (Kratzer 1977, 1981, 1991). In Kratzer's work, it is assumed that the interpretation of a modal is influenced by three components: the *modal relation*, the *conversational background*, and the *ordering source*. While the modal relation is lexically specified as involving a *possibility* or *necessity* operator (existential or universal quantification over possible worlds), the conversational background and the ordering source are context dependent. The former corresponds to a set of propositions (or properties; see Brennan 1993, and Lekakou 2005) that determine the accessibility relation and thus the set of possible worlds over which the modal operator quantifies. This means, roughly, that in evaluating the truth of a modal statement, only those possible worlds are taken into consideration in which the propositions that make up the conversational background are true. The ordering source, finally, ranks the possible worlds according to their closeness to some contextually specified ideal, which in the cases relevant to the discussion here, is the actual world (this means that middles involve a realistic ordering source; see Menéndez-Benito (to appear)). Only those worlds that are closest to this ideal are taken into consideration for the evaluation of the truth of the modal statement.

Schäfer follows Lekakou (2005) in assuming that CMs, being generic statements, involve universal quantification over possible worlds. The conversational background and the ordering source are realistic, consisting of facts that hold in the actual world. In the case of the conversational background, these facts involve the existence of the entity denoted by the structural subject, combined with all the properties it has in the actual world. Let me illustrate with an example.

- (16) Das Buch liest sich leicht.  
'The book reads easily.'

Based on the modal theory of genericity, (16) has the following interpretation: In every possible world that is closest to the actual world, in which there is a reading event, in which the book is the theme of this event and in which the book has all the properties it has in the actual world (e.g. it is written in a certain way), reading of the book is easy. Schäfer argues that, since only worlds closest to the actual world are considered (due to the realistic ordering source), and in the actual world reading events involve agents, we conclude that an agent is involved in the statement in (16), too, giving rise to the agent implicature in CMs.

An analysis of CMs that is comparable to the one proposed in Schäfer (2008), but gives a different explanation for the agentivity involved in CMs, is provided in Klingvall (2007). There, the view is that the syntax of CMs differs language-internally and depends on the type of (verbal) Root involved, which, at the same time, plays a crucial role with respect to the source of the agentive semantics. Consider the two English CMs in (17).

- (17) a. The book reads easily.  
b. This glass breaks easily.

The CM in (17a) involves an agentive Root, while the one in (17b), which is effectively ambiguous between a middle interpretation and a generic anticausative, is of the type *cause unspecified*. In Klingvall's analysis, the class a particular Root belongs to crucially interacts with the functional structure a Root combines with. She claims that since agentive Roots as in (17a) are inherently specified for agentive semantics, they do not need to combine with Voice in CMs.<sup>4</sup> Due to the underspecification of the Root in (17b), by contrast, it cannot contribute agentivity by itself, but needs a syntactic projection to do so: VoiceP. In her system, this VoiceP contributes an inactive agent feature and harbors middle morphology in the case of morphologically marked middles (I refer the interested reader to Klingvall's work for details

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<sup>4</sup> An agentive Root has to combine with Voice in an eventive context. 'In the absence of any events at all, no agent can be licensed because the agent always presupposes an eventive reading.' (Klingvall 2007: 113). Genericity thus plays a relevant role for the recoverability of an agent in her analysis, too.

concerning the nature of the inactive agent feature). In the absence of Voice, (17b) will be interpreted as a generic anticausative, rather than a middle. The different structures for (17a) and the middle use of (17b) are provided in (18a,b) respectively.

- (18) a. [<sub>VP</sub> V [<sub>VP</sub> √READ the book]]  
 b. [<sub>VoiceP</sub> Voice [<sub>VP</sub> V [<sub>VP</sub> √BREAK the glass]]]

I argue here that Schäfer's analysis of CMs is to be preferred over the one developed in Klingvall (2007). While the former approach predicts that, in German, all CMs will be reflexively marked, this fact is unexpected in Klingvall's system. If only Roots that are *cause unspecified* need to occur in the context of Voice, only CMs involving such Roots should be morphologically marked, contrary to fact (19a).

- (19) a. \*Das Buch liest gut.  
       *the book reads well*  
 b. Dieses Fenster öffnet sich leicht.  
       *this window opens REFL easily*

Furthermore, Klingvall cannot account for the fact that a certain class of *cause-unspecified* Roots in German involve the same morphological marking in their anticausative and middle use. The example in (19b) is ambiguous between a middle interpretation and a generic anticausative reading. If one follows the argumentation in Klingvall, only the middle reading should involve Voice and morphological marking, since *öffnen* is a Root of the type *cause unspecified*, which does not require the presence of Voice. The anticausative reading should therefore lack Voice and is wrongly expected to be unmarked. Since, in German, the majority of anticausatives are reflexively marked, most of the *cause unspecified* Roots will exhibit the syncretism above and hence fall outside the explanatory scope of Klingvall's analysis.

Having outlined the analysis of CMs I am adopting, I am now in a position to address the differences between CMs and LMs observed in chapter 2.

## 5.3 Explaining the Differences

### 5.3.1 By-Phrase

Recall that LMs can combine with a *by*-phrase that introduces the agent, while CMs cannot.

- (20) a. Das Lied lässt sich (von kleinen Kindern) leicht lernen.  
       *the song lets REFL by small children easily learn*  
       ‘The song can be learned easily even by small children.’  
 b. Das Lied lernt sich (\*von kleinen Kindern) leicht.  
       *the song learns REFL by small children easily*  
       ‘The song learns easily by small children.’

- (21) a. Dieses Schloß lässt sich (von einem erfahrenen Dieb) leicht knacken.  
*this lock lets REFL by an experienced thief easily pick*  
 ‘This lock can be picked easily by an experienced thief.’  
 b. Dieses Schloß knackt sich (\*von einem erfahrenem Dieb) leicht.  
*this lock picks REFL by an experienced thief easily*  
 ‘This lock picks easily by an experienced thief.’

In that regard, LMs behave like verbal passives, in which the acceptability of agentive *by*-phrases is one of the canonical tests advanced to identify a syntactically active implicit agent (cf. e.g., Lyngfelt & Solstad 2005; Alexiadou & Doron 2012; Alexiadou 2012; Alexiadou & Schäfer 2013; see Bhatt & Pancheva 2006 for a discussion of what the acceptability of *by*-phrases entails for the syntactic status of the implicit argument).

- (22) a. Das Lied wurde (von kleinen Kindern) gelernt.  
*the song became by small children learned*  
 ‘The song was even learned by small children.’  
 b. Dieses Schloß wurde (von einem erfahrenem Dieb) geknackt.  
*this lock became by an experienced thief picked*  
 ‘This lock was picked by an experienced thief.’

As for the question of how implicit arguments are best represented (e.g. as PRO; *pro*; IMP as in Roberts (1987)), this is orthogonal to the issue at hand. I will not try to answer it here and simply follow the more recent syntactic literature in assuming that *by*-PPs are indicative of a VoiceP that introduces, but does not fill, an external argument slot (see Embick 2004; Bruening 2012; Spathas, Alexiadou, & Schäfer to appear). For the purpose of this chapter, I will use the term *thematic Voice* for such a head to contrast it with expletive Voice, which does not make such an argument slot available.<sup>5</sup>

Based on the discussion of the syntax of CMs in the preceding section, it is clear why CMs are incompatible with *by*-phrases. Being reflexively marked anticausatives syntactically, CMs involve expletive Voice, which is thematically deficient and thus incompatible with a *by*-PP introducing an agent. This latter fact is again illustrated by the following contrast between passives and reflexively marked anticausatives.

- (23) a. Die Tür wurde (von Martin) geöffnet.  
*the door became by Martin opened*  
 ‘The door was opened by Martin.’  
 b. Die Tür öffnete sich (\*von Martin).  
*the door opened REFL by Martin*  
 ‘The door opened by Martin.’

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<sup>5</sup> With argument slot I am referring to a lambda abstracted variable, rather than the projection of a specifier. In fact, thematic Voice that surfaces in passives does not project a specifier, while expletive Voice does.

For LMs, by contrast, I have argued that, in addition to the matrix expletive VoiceP, an embedded thematic Voice is present. This structural contrast between CMs and LMs is schematically represented in (24), with the relevant projections in bold.

- (24) a. [**VoiceP REFL** [<sub>VP</sub> DP +  $\sqrt{\text{ROOT}}$  + v] **Voice**<sub>EXPLETIVE</sub>] CM  
 b. [**VoiceP REFL** [<sub>VP</sub> [**VoiceP** [<sub>VP</sub> DP +  $\sqrt{\text{ROOT}}$  + v] **Voice**<sub>PASSIVE</sub>] v- $\sqrt{\text{LASS}}$ ] **Voice**<sub>EXPLETIVE</sub>] LM

It is the lower (passive) Voice head in (24b) which renders *by*-PPs in LMs acceptable.

### 5.3.2 Adverbial Modification

In this section, I turn to the question why (under normal circumstances) CMs require the addition of an adverbial modifier, while LMs do not show such a restriction. The contrast is illustrated below, with examples taken from chapter 2.

- (25) a. Dieses Problem löst sich \*(leicht).  
*this problem solves REFL easily*  
 ‘This problem solves easily.’  
 b. Dieses Problem lässt sich (leicht) lösen.  
*this problem lets REFL easily solve*  
 ‘This problem can be solved (easily).’
- (26) a. Das Buch verkauft sich \*(gut).  
*the book sells REFL well*  
 ‘The book sells well.’  
 b. Das Buch lässt sich (gut) verkaufen.  
*the book lets REFL well sell*  
 ‘The book can be sold (easily).’
- (27) a. Feuchtes Holz verbrennt sich \*(schlecht).  
*damp wood burns REFL badly*  
 ‘Damp wood burns badly.’  
 b. Feuchtes Holz lässt sich (schlecht) verbrennen.  
*damp wood lets REFL badly burn*  
 ‘Damp wood can be burned (with difficulty).’

In order to make sense of this difference, it is first necessary to understand why such a restriction should exist for CMs in the first place. This issue has been approached from mainly two sides in the literature. On the one hand, the need for adverbial modification has been linked to semantic well-formedness (Condoravdi 1989; McConnell-Ginet 1994; Marelj 2004; Schäfer 2008) or the pragmatic requirement that utterances be informative (cf. Grice's Maxim of Quantity; see e.g. Fagan 1992; Ackema & Schoorlemmer 1994, 2006; Goldberg & Ackerman 2001; Steinbach 2002). On the other hand, it has been claimed that the restriction must find a structural explanation. It is argued in such accounts that the absence of the external argument from the syntax of CMs requires the presence of an element that functions

to recover the agent argument (Roberts 1987; Hoekstra & Roberts 1993; Lekakou 2005, 2006; Broekhuis & Corver in prep). I will essentially side with this latter type of approach and reject the view that the adverb in CMs is needed for semantic or pragmatic reasons. I will briefly motivate this step by reviewing one semantic and one pragmatic account of the restriction, pointing out their respective shortcomings.

In her analysis of CMs, Condoravdi (1989) adopts a quantificational approach to genericity (see e.g. Carlson 1989; Krifka et al. 1995 and references cited there), which holds that a generic sentence is assigned a tripartite structure at LF consisting of the generic operator, a restrictor, and the nuclear scope. The restrictor contains the material that restricts the domain of quantification, and the nuclear scope contains the main assertion that is predicated over the material in the restrictor. As such, it must not remain empty. The semantic structure Condoravdi assigns to CMs is exemplified in (28b) for the CM in (28a).

- (28) a. This bread cuts smoothly.  
b. GEN [e: bread (x), cut (e), Patient (e,x)] [smooth (e)]

(28b) reads as follows: all cutting events that involve this bread are smooth events.<sup>6</sup> Condoravdi thus maps the manner adverb into the nuclear scope, making it the main assertion, and assigns everything else to the restrictor. Based on this partition, the obligatory presence of the manner adverb is due to the well-formedness requirement that the nuclear scope must not remain empty. Unmodified CMs (cf. the (a.)-examples in ((25)-(27))) are therefore ruled out as instances of empty predication: ‘Without an adverb, which contributes to the content of the nuclear scope, we set up a domain of quantification for whose members we end up predicating nothing.’ (Condoravdi 1989: 19)

It has also been noted in the literature (e.g. Roberts 1987; Condoravdi 1989; Cardinalletti 1990; McConnell-Ginet 1994; Ackema & Schoorlemmer 1995, 2006) that CMs can come without the manner adverb if there is a modal, focus, or negation in the sentence (data and judgments taken from Ackema & Schoorlemmer 2005).

- (29) a. Bureaucrats may bribe, but you never know.  
b. Pine SAWS after all.  
c. This book doesn't read

These cases can be accounted for in Condoravdi's approach if it is assumed that the modal, focus, or the negation induce a different partition of the sentence into restrictor and nuclear scope (see McConnell-Ginet 1994, Marelj 2004 for executions of this idea. That at least focus

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<sup>6</sup> Note that the semantic representation does not contain an agent, which Condoravdi claims can be had as an entailment of the verb. Schäfer's account of CMs can be seen as a proper implementation of this.

does affect the partition has been shown independently, see Krifka et al. 1995 and references cited there).

Lekakou (2005) criticizes Condoravdi's semantic explanation of the obligatory manner adverb, showing that French (30) or Greek middles (31) are not subject to this restriction (the French examples are taken from Fagan 1992 and the Greek ones from Lekakou 2005; I added the respective German CMs to show that the difference does not come from the particular Root / Root-theme complex involved).<sup>7</sup>

- (30) a. *Cette racine se mange.*  
*this root se eat.3SG*  
'This root is edible.'  
b. *Le papier se recycle.*  
*the paper SE recycle.3SG*  
'This paper is recyclable.'
- (31) a. *Afte ta manitaria trogonde.*  
*these the mushrooms eat.3PL.NACT.IMPERF*  
'These mushrooms are edible.'  
b. *To giall anakiklonete.*  
*the glass recycle.3SG.NACT.IMPERF*  
'The glass is recyclable.'
- (32) a. \**Diese Wurzel / dieser Pilz isst sich.*  
*this root this mushroom eat.3SG REFL*  
'This root / this mushroom is edible.'  
b. \**Das Papier / Glas recycelt sich.*  
*the paper glass recycle.3SG REFL*  
'The paper/glass is recyclable.'

Lekakou argues that if semantic ill-formedness was the reason for the ungrammaticality of examples such as (32), it would be expected that the French and Greek sentences in (30) and (31) should be unacceptable as well, contrary to fact.

Although theoretically unattractive, one could propose that languages like Greek or French have some way of rescuing an LF representation containing an unfilled nuclear scope, while German, English, or Dutch lack such a mechanism. Yet, the fact that German (and Dutch) LMs, which are otherwise semantically identical to CMs and should therefore have the same LF representation, the adverb is optional speaks against this possibility. Note that treating *lassen* as a modal verb which induces a different partitioning into restrictor and nuclear scope, much like the modal verb in (29a), does not provide a solution to the problem. This is because CMs with an overt modal but without a manner adverb are extremely marginal, in contrast to LMs, which are fully acceptable (independently of whether an additional modal verb occurs

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<sup>7</sup> For a discussion of this and other similarities between French/Greek middles and German LMs, see chapter 6.



(33b)/(34b), or not (33c)/(34c)).

- (33) a.\*Das Buch sollte sich lesen, (damit wir es verkaufen können).  
*the book should REFL read that we it sell can*  
‘The book should read, in order for us to sell it.’
- b. Das Buch sollte sich lesen lassen, (damit wir es verkaufen können).  
*the book should REFL read let that we it sell can*  
‘The book should be readable, in order for us to sell it.’
- c. Das Buch lässt sich lesen.  
*the book lets REFL read*  
‘The book can be read.’
- (34) a.\*Bürokraten müssen sich bestechen, sonst wären sie keine Bürokraten.  
*bureaucrats must REFL bribe otherwise were they no bureaucrats*  
‘Bureaucrats must bribe, otherwise they would not be bureaucrats.’
- b. Bürokraten müssen sich bestechen lassen, sonst wären sie keine Bürokraten.  
*bureaucrats must REFL bribe let otherwise were they no bureaucrats*  
‘Bureaucrats must bribe, otherwise they would not be bureaucrats.’
- c. Bürokraten lassen sich bestechen.  
*bureaucrats let REFL bribe*  
‘Bureaucrats can be bribed.’

The relative ungrammaticality of (33a) and (33b), then, seems to indicate that modals in German cannot save adverbless middles, which makes it unlikely that LMs render the adverb optional because *lassen* functions as a modal. Although it is not altogether unimaginable that *lassen* plays some role in the different partitioning (leading to a filled nuclear scope in the absence of an adverb) I will show below that there is a more straightforward account. For this reason, I will no longer entertain the possibility that the adverb is required for semantic reasons.

Proponents of a pragmatic account of adverbial modification in middles argue that a CM such as the one in (35) is odd essentially because it is uninformative. Our world-knowledge tells us that books can be read, such that uttering (35) does not add any new information.

- (35) \*Das Buch liest sich.  
*the book reads REFL*  
‘The book reads.’

Goldberg & Ackermann (2001), for example, base their pragmatic account of the modification requirement on the observation, made in Grimshaw & Vikner (1993), that obligatory adjuncts do not only surface in CMs, but in certain passives as well.

- (36) a.<sup>#</sup>The house was built.  
b. The house was built last year.

Goldberg & Ackermann argue that (36a) is degraded because the definite subject presupposes the existence of its referent, in this case the house. They argue that it is common knowledge that houses are artifacts, and it is therefore possible to infer that at some point in the past, the house was created. As a consequence, (36a) does not add new information to the conversation: ‘Thus an utterance asserting that a house was built simply states what is already known to competent participants in a conversation.’ (Goldberg & Ackerman 2001: 7). The addition of the temporal adverb in (36b) adds new information and renders the sentence acceptable. Such a pragmatic account of obligatory adjuncts, it is argued, straightforwardly extends to capture the ungrammaticality of the middle in (35). The existence of the subject is presupposed and a speaker is aware of the fact that people can read books. There is thus nothing informative in uttering a sentence like this. Adding negation to (35), in turn, adds non-given information, since our default assumption that books are readable is negated. As a consequence, the negated version of (35) is perfectly acceptable.

- (37) Das Buch liest sich nicht.  
*the book reads REFL not*  
 ‘The book does not read.’

Yet, a pragmatic account faces numerous issues. First, as Lekakou (2005) points out, it is not clear why adverbless CMs are typically judged as being ungrammatical, instead of simply being odd. To this end, note that there is a strong contrast between (38a) and (38b) (compare also the adverbless passive in (36a) to the adverbless CM in (38a)).

- (38) a. \*Books read.  
 b. One can read books.

While (38a) is generally considered unacceptable, (38b), which is virtually identical semantically, might be considered odd, but certainly not ungrammatical. Under a pragmatic approach, this contrast is unexpected, since the two sentences should be equally uninformative.<sup>8</sup>

Second, if informativeness played a role, one would expect unmodified CMs to become acceptable in the right context. Imagine an architects' conference where the task was to design very futuristic houses. One frequent complaint is that although all plans involve a number of great ideas, it is simply not possible to build any of designed houses. The very last presenter

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<sup>8</sup> Klingvall (2007) points out that if a pragmatic approach to the adverb in CMs was on the right track, corresponding *-able* constructions should be ruled out as being uninformative as well, contrary to fact.

(i) a. \*The book reads.  
 b. The book is readable.

comes up with a type of house both futuristic and 'buildable'. The chair utters (39).<sup>9</sup>

(39) \*Und das Beste: diese Häuser bauen sich.  
*and the best: these houses build REFL*  
'And the best thing is: these houses can be built.'

In the given scenario, (39) should be informative, as it expresses a contrast to the 'default situation' encountered at this conference that the designed houses are not buildable. Yet, (39) is unacceptable. A pragmatic account cannot account for this.

A third argument against a pragmatic account of the modification requirement in CMs is the following: one would expect that a contrastively focused subject would always render unmodified CMs acceptable. This is so because the speaker implies that some other entity does not have the property denoted by the verbal predicate, thereby contributing non-given information. This prediction is not borne out.

(40)\*Dieses Problem, im Gegensatz zu dem gestrigen, löst sich.  
*this problem in.the contrast to the yesterday's solves REFL*  
'This problem, in contrast to the one we had yesterday, solves.'

Furthermore, (40) should in principle be acceptable without a contrastively focused subject. Even if the existence of the problem is presupposed, in order to make the statement uninformative one would have to assume that the default assumption is that problems are solvable. It is not clear how one can show that this is indeed the case.

Finally, the acceptability of unmodified LMs (as well as unmodified French and Greek middles) is completely unexpected under the pragmatic approach. The LM in (41) roughly paraphrases as *The book can be read*. Based on the discussion of the ungrammaticality of (35), one would expect that (41) also violates the Maxim of Quantity, leaving the contrast in acceptability fully unexplained.

(41) Das Buch lässt sich lesen.  
*the book lets REFL read*  
'The book is readable.'

One might argue that (41) means more than just that the book can be read. It involves some additional manner component which indicates that the book is a good read. I assume that this is, in fact, a pragmatic effect, which arises due to the relative uninformativeness of (41) in an

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<sup>9</sup> Zwart (1998) argues that verbs with effected objects (such as *build*) are unacceptable in CMs to begin with. Ackema & Schoorlemmer (2006), however, show that this is not the case. Taking into account the semantics of dispositional middles, verbs like *build* can occur in middles if the subject is generic, i.e. refers to a type of house, rather than a particular one.

(i) Diese Art Haus baut sich leicht.  
'This type of house builds easily.'

out-of-the-blue context. This does not invalidate the arguments against a pragmatic account of the obligatory adverbial in CMs. First, it is unclear why (35) could not get a similar interpretation, preventing it from being uninformative. Second, in a different context, this additional meaning component disappears from the sentence in (41). Imagine some archeologists who come across a number of very old books. The pages of most of the books are bleached or torn, making it impossible to read them. One book, however, is still in pretty good shape. (41) can be uttered in such a context without implying that the book is worth reading (this is even more so as in the given context, the archeologists do not even know the content of the book). Still, (35) would be unacceptable in such a context.

I thus conclude that an explanation for the obligatory adjunct in CMs cannot be based on pragmatic arguments.

What the different structural accounts of the modification requirement have in common is that they propose that the manner adverb in CMs functions to recover the suppressed agent argument. While the original proponents of this type of account, Roberts (1987) and Hoekstra & Roberts (1993), assume that the agent argument is syntactically realized in CMs as *pro*, more recent structural accounts of the manner modification (such as Lekakou (2005) and Broekhuis & Corver (in prep)) assume that the implicit agent in CMs is not syntactically realized in any form. These accounts are thus more compatible with the approach to CMs adopted here. In any case, the gist of all ‘structural’ approaches to the manner modification in CMs is that the agent argument needs to be identified somehow, as it is not overtly expressed; This, in their opinion, is the function of the adverb (see also Hale & Keyser 1987 for suggestions along these lines).

Taking a closer look at the class of adverbs that is acceptable in CMs, it has often been observed that only those adverbs can occur in middles that have an implicit benefactor/experiencer argument themselves (see e.g. Abraham 1994). The adverb effects an identification process between the two implicit arguments (i.e. the one of the verb and the one of the adverb), thereby recovering the implicit agent. Where no such adverb is present, this process fails. Consider the data in (42).

- (42) a. \*Das Buch liest sich.  
       *the book reads REFL*  
       Intended: ‘The book can be read.’  
       b. Türen öffnen sich.  
       *doors open REFL*  
       ‘Doors open.’  
       \*‘One can open doors.’

- (43) Das Buch liest sich leicht.  
*the book reads REFL easily*  
 ‘The book reads easily.’

Recall from section 5.2 that reflexively marked anticausatives and CMs are structurally identical, the sole difference being the presence of an implied agent in the latter. In (42a), the Root  $\sqrt{\text{READ}}$  is agentive, but the syntactic structure does not provide it with a corresponding external argument. Furthermore, there is no manner adverb present that could recover the missing agent such that the result is filtered out as uninterpretable at the CI-interface. In (42b), by contrast, a Root is involved that is compatible with the absence of an agent (e.g.  $\sqrt{\text{OPEN}}$  is classified as cause unspecified and thus undergoes the anticausative alternation). Since no adverb is present that potentially recovers the agent, only the anticausative reading is acceptable.<sup>10</sup> If, however, an adverb is present as in (43), the agent argument recovered at the CI-interface in the manner described above is linked to the syntactic structure by means of the identification with the implicit experiencer argument of the manner adverb (see Schäfer 2008 for the claim that an agent recovered at the CI-interface is ‘conceptual language, which cannot be read directly by the linguistic system’ (234). Rather, it needs to be integrated into the linguistic structure).

Before I address the question of how a structural approach to the obligatory manner adverb in CMs can explain the difference between CMs and LMs, let me address one of the major arguments that has been advanced against such an approach. This argument involves the question of how negation, focus, or overt modals could possibly recover the agent. Lekakou (2005, 2006) provides an answer to this question that does not require the rejection of the structural account outlined above. She essentially argues that, in all the acceptable cases of adverbless CMs, there is an implicit manner adverb present that takes part in the recovering of the agent argument. This implicit adverb has a positive default value, corresponding to *well* or *easily*. Consider the following examples.

- (44) a. Hier tanzt sich ’s.  
*here dance REFL it*  
 b.\*Hier tanzt sich’s zwar, nur leider nicht sehr gut.  
 ‘One can dance well here, but unfortunately not very well.’  
 c. Hier kann man zwar tanzen, nur leider nicht sehr gut.  
 ‘One can dance here, but unfortunately not very well.’

- (45) A: Wir sollten das Rad endlich verschrotten. Niemand kann darauf mehr fahren.  
 ‘We should get rid of the bike. No one can ride it anymore.’

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<sup>10</sup> I will have to leave open the question as to what exactly it means to be an agentive Root. If the agent argument is introduced by a functional projection Voice, this specification on the Root cannot correspond to a theta-role. But how else could the requirement of a Root to occur in the context of an agent be interpreted?

B: Das stimmt nicht...  
 ‘That’s not right...  
 \*...das Rad FÄHRT sich...nur eben nicht sehr gut.  
 ...the bike DOES drive...it just does not do so very well’

(46) Ich habe es jetzt stundenlang probiert...  
 ‘I have tried for hours...  
 \* ...dieses Lied singt sich einfach nicht.  
 ...this song simply does not sing.’

The impersonal middle in (44a) does not just mean that one can dance here; it means that one can dance well. The presence of an implicit adverb in (44a) is shown by the ungrammaticality of (44b), where the continuation negates that one can dance well in this place, giving rise to a contradiction. (44c) shows that this is unexpected if the middle in (44a) simply means that dancing is possible.<sup>11</sup>

Similarly, the context for the personal middle with verum focus on the verb in (45) shows that such a middle does not simply mean that it is still possible to ride the bike. If acceptable at all, it is generally considered in the literature to imply that it rides well. This is confirmed by the observation that, just as in (44b), a continuation negating that it drives well is unacceptable.

Finally, the negated CM in (46), although severely degraded to me in the first place, does not mean that the song cannot be sung at all, but that it is not easy to sing it.

Having established that the manner adverb in CMs is required since it functions to recover the implicit agent, I now turn to the question of why the corresponding LMs render the adverb optional. Based on the presence of the embedded thematic Voice, which introduces an external argument slot/variable (cf. the different structures of CMs and LMs in (24), repeated here as (47)), it is reasonable to assume that the optionality of the adverb is the consequence of there being no need to recover an agent – just as in verbal passives, the agent in LMs is structurally anchored to an (embedded) thematic Voice head.

(47) a. [VoiceP REFL [vP DP + √ROOT + v] **Voice**<sub>EXPLETIVE</sub>] CM  
 b. [VoiceP REFL [vP [VoiceP [vP DP + √ROOT + v] **Voice**<sub>PASSIVE</sub>] v-√LASS] **Voice**<sub>EXPLETIVE</sub>] LM

Further evidence for the claim that there is no need to recover an agent in LMs comes from the observation that LMs allow a larger set of adverbs than CMs. This is illustrated in the examples below.

<sup>11</sup> Intuitively, LMs without an adverb also do not give rise to a contradiction, suggesting that no implicit adverb is present in LMs. As the judgments are very subtle, however, I will refrain from drawing any final conclusions here.

(i) Hier lässt es sich zwar tanzen, nur leider nicht sehr gut.  
 ‘One can dance here, but unfortunately not very well.’

- (48) a. Dieses Geschenk lässt sich leicht / schnell verschicken.  
*this present lets REFL easily/quickly send*  
 ‘This present can be sent easily / quickly.’
- b. \*Dieses Geschenk verschickt sich leicht / \*schnell.  
*this present sends REFL easily quickly*  
 ‘This present can be sent easily / \*quickly.’
- (49) a. Dieses Streichholz lässt sich leicht / mehrfach verwenden.  
*this match lets REFL easily / multiple.times use*  
 ‘This match can be used easily / multiple times.’
- b. Dieses Streichholz verwendet sich leicht / \*mehrfach.  
*this match uses REFL easily multiple.times*  
 ‘This match can be used easily / \*multiple times.’

Certain manner adverbs (48) and frequency adverbs (49) are acceptable in LMs but not in CMs. This is expected based on what was said above. Neither *schnell* ‘quickly’ nor *mehrfach* ‘multiple times’ imply an experiencer/benefactor; neither can therefore serve to recover the agent in CMs. As there is no need to recover an agent, those adverbs are acceptable in LMs.

Furthermore, there are LMs that allow agent-oriented modifiers such as *bewusst* ‘intentionally’, *vorsichtig* ‘carefully’, *behutsam* ‘cautiously’, *freiwillig* ‘deliberately’, etc.

- (50) a. Er entfaltet sich und diese Entfaltung lässt sich bewusst unterstützen.<sup>12</sup>  
*he develops REFL and this development lets REFL intentionally support*  
 ‘He develops and this development can be supported intentionally.’
- b. Gelangt ein Fremdkörper ins Auge [...] lässt [er] sich vorsichtig mit einem Tuch oder durch Spülen des Auges entfernen.<sup>13</sup>  
*ends.up a foreign.body in.the eye lets it REFL carefully with a cloth or through rinsing of.the eye remove*  
 ‘If a foreign object ends up in the eye, it can be carefully removed with a cloth or by rinsing the eye.’
- c. Diese Angst lässt sich behutsam abbauen.<sup>14</sup>  
*this fear lets REFL cautiously off.build*  
 ‘This fear can be cautiously reduced.’
- d. Dieser Zauber lässt sich nur freiwillig wirken.<sup>15</sup>  
*this spell lets REFL only deliberately cast*  
 ‘This spell can only be cast deliberately.’

This type of adverb is traditionally used to test for the presence of an implicit agent in passives (see Bhatt & Pantcheva 2006; Alexiadou & Schäfer 2013). If the acceptability of an agent-oriented modifier is dependent on the presence of a thematic VoiceP (see Cinque 1999, Alexiadou 1997 for the claim that adverbs adjoin to the projections they modify), and such a VoiceP is present in LMs (but not in CMs), the acceptability of such adverbs is expected.

<sup>12</sup> <http://www.kulturtransformation.net/prozessbegleitung/>. 31.01.2014

<sup>13</sup> <http://www.apotheken-wissen.de/fremdkoerper-im-auge-entfernen/> 31.01.2014

<sup>14</sup> [http://www.rund-ums-baby.de/erziehung/Schlafen\\_100635.htm](http://www.rund-ums-baby.de/erziehung/Schlafen_100635.htm)

<sup>15</sup> Imagine a world in which a magic spell exists that can only be cast if the magician is not forced to cast it.

For the sake of completeness, however, I have to mention that the examples in (50) are less common than LMs which combine with adverbs such as *easily*. This can be explained by making reference to the nature of dispositionality (see chapters 2 and 6, as well as Lekakou 2005), which focuses properties of the patient, not of the agent (Fellbaum 1986). It has therefore been argued that any adverb that refers to properties of the agent is illicit in dispositional middles (e.g. McConnell-Ginet 1994; Lekakou 2005). In view of the above data, however, this restriction will have to be loosened. Note that the sentences in (50) still ascribe a property to the structural subject, rather than the implicit agent; more importantly, the property denoted by the embedded clause is dependent on some inherent property of the matrix subject, such that the sentences still qualify as dispositional middles semantically. Consider, for example, (50c). It is due to some inherent property of this particular fear (e.g. that it can be manipulated, is not chronic, etc.) that makes reducing it possible. The adverb in (50c) simply adds that this reduction must not take place forcefully, but that one has to proceed cautiously. All of this is still dependent on the specific nature of the fear which functions as subject of the disposition ascription. In other words, the data above show that it is not the case that agent-oriented adverbs are completely incompatible with dispositional semantics (pace Fellbaum 1986; McConnell-Ginet 1994; Lekakou 2005, 2006). Nevertheless, the fact that this type of modification is rather rare seems to indicate that the less reference is made to (properties of) an agent, the better the corresponding middle will be.

### 5.3.3 Verb Class Restriction

As what exactly restricts the set of acceptable verbs in CMs is far from clear (see chapter 2, as well as Ackema & Schoorlemmer 2006 for the discussion of some different proposals), I will begin this section with a discussion of LMs. In chapter 2, I showed that, while the set of verbs acceptable in CMs is a subset of the ones that can appear in LMs (51) - (54), it is not the case that LMs are fully unrestricted (55).

(51) a. \*Diese Krankheit erkennt sich leicht.  
       *this sickness recognizes REFL easily*  
       ‘This sickness recognizes easily.’

      b. Diese Krankheit lässt sich leicht erkennen.  
       *this sickness lets REFL easily recognize*  
       ‘This sickness can be recognized easily.’

(52) a. \*Dieser Gipfel erreicht sich nur schlecht.  
       *this summit reaches REFL only badly*  
       ‘This summit reaches easily.’



- b. Dieser Gipfel lässt sich nur schlecht erreichen.  
*this summit lets REFL only badly reach*  
 ‘This summit can hardly be reached.’
- (53) a.\*Dieses Material spürt sich auf der Haut kaum.  
*this material feels REFL on the skin barely*  
 ‘This material hardly feels on the skin.’  
 b. Dieses Material lässt sich auf der Haut kaum spüren.  
*this material lets REFL on the skin barely feel*  
 ‘This material is hardly felt on the skin.’
- (54) a.\*Hundebabies lieben sich leicht.  
*dog.babies love REFL easily*  
 ‘Puppies love easily.’  
 b. Hundebabies lassen sich leicht lieben.  
*dog.babies let REFL easily love*  
 ‘Puppies can be loved easily.’
- (55) a.\*Ein kleines Auto lässt sich leicht besitzen.  
*a small car lets REFL easily own*  
 Intended: ‘A small car can be owned easily.’  
 b.\*100 Kilo lassen sich leicht wiegen.  
*100 kilogram let REFL easily weigh*  
 Intended: ‘100 kilogram can be weighed easily.’  
 c.\*Ein altes Schiff lässt sich leicht versinken.  
*an old ship lets REFL easily sink*  
 Intended: ‘Old ships can sink easily.’

Based on the syntax I have proposed for LMs in chapter 4 (where *lassen* effectively embeds a passive structure), the null hypothesis seems to be that only those predicates that can occur in a verbal passive should be legitimate in LMs. This seems to be correct: the embedded predicates in (51)-(54) can passivize, while the ones in (55) cannot.

- (56) a. Diese Krankheit wurde schnell erkannt.  
*this sickness became quickly recognized*  
 ‘This sickness was recognized quickly.’  
 b. Der Gipfel wurde letztlich doch erreicht.  
*the summit became finally yet reached*  
 ‘At the end, the summit was reached nonetheless.’  
 c. Eine gewisse Anspannung wurde gespürt.  
*a certain tension became felt*  
 ‘A certain tension was felt.’  
 d. Er wurde von den Massen geliebt.  
*he became by the masses loved*  
 ‘He was loved by the masses.’

- (57) a.\*weil nur ein kleines Auto besessen wurde.<sup>16</sup>  
*because only a small car owned became*  
 b.\*weil von dem Rind 250 Kilo gewogen wurden.<sup>17</sup>  
*because by the ox 250 kilo weighed became*  
 c.\*weil ein altes Schiff versunken wurde.  
*because an old ship sunk became*

The generalization with respect to the verb-class restriction in the context of LMs is thus the following: due to the structural properties of LMs, every verb that can occur in a passive syntax is acceptable in LMs.

Based on this generalization, the answer to the question of why LMs are more liberal in terms of the verb-class restriction than CMs is plausibly related to the presence of a thematic VoiceP in the former but not in the latter. In fact, all attempts to define and explain the verb-class restriction of CMs have in one way or the other treated the restriction as related to the particular argument structural properties of CMs, i.e. the syntactic non-projection of the agent argument. To provide just one example, Ackema & Schoorlemmer (1994) propose that there is a middle-forming lexical rule that assigns arbitrary reference to an *Actor* argument. Arguments are Actors if they can substitute for X in the frame ‘what X did was Y’. The existence of an Actor in a framework that employs such a level of lexical conceptual structure is tied to the presence of an Action tier (in addition to the thematic tier), such that only verbs that have an Actor/Action tier can undergo middle formation.

Under the particular approach to CMs, along with the theoretical assumptions adopted here, the connection between the argument structural properties of CMs and the verb-class restriction can be interpreted as follows: the restriction arises if a verb(al Root) (or: a Root-theme complex) that semantically requires an agent argument is put in a syntactic context where no such argument is present, i.e. if it occurs in an anticausative syntax. As to how precisely this may delimit the class of acceptable verbs is an issue I will largely have to leave for future research, though I will make some initial comments.

Recall from section 5.2 that I follow Schäfer (2008) in assuming that the external argument in CMs is only introduced at a conceptual level, not in the syntax proper. Although Schäfer

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<sup>16</sup> There is a lexicalized exception to the generalization that *besitzen* ‘to possess’ does not passivize.

(i) Er wurde vom Teufel besessen.  
 ‘He was possessed by the devil.’

<sup>17</sup> German has an agentive use of *wiegen* ‘to weigh’ (i), which does passivize (ii). As is expected based on the argumentation in this section, the corresponding LM is acceptable as well (iii).

(i) Der Bauer wiegt die Kuh.  
 ‘The farmer weighs the cow.’

(ii) Die Kuh wurde gewogen.  
 ‘The cow was weighed.’

(iii) Kühe lassen sich nur schlecht wiegen.  
 ‘Cows can hardly be weighed.’

does not discuss the verb-class restriction, the most plausible extension of his approach is to say that, for a certain class of verbs, it is simply impossible to recover the external argument in this way, which leads to an unacceptable structure at the CI-interface.

Interestingly, one of the most successful approaches to the verb-class restriction links the constraint to properties of the external argument. In particular, recall that Ackema & Schoorlemmer (1994) propose that only predicates that combine with an Actor can undergo middle formation. It could thus be assumed that the logical subject in CMs needs to be an agent (as Abraham (1986, 1994) argued), and any verb that does not combine with an agent argument cannot occur in CMs. If this ‘agent’-restriction is on the right track, what would have to be said is that for some reason an agent is easier to recover than other argument types. This is certainly not unimaginable, as, in a transitive construal, the prototypical external theta-role is the agent.

The claim that only agents can be recovered, then, would not only account for the ungrammaticality of the examples in (53), (54), and (55) (in which the external argument is an experiencer); it can also explain the incompatibility of CMs with achievements ((51) and (52)). As Marelj (2004) points out, achievements are not agentive. This can be seen by the impossibility of adding agent-oriented modifiers to such predicates ((58a,b are taken from Marelj’s work).

- (58) a.\*He deliberately recognized her.  
b.\*He deliberately loved her.  
c.\*He deliberately owned a car.

In sum, I offered in this section the following account for the variation between CMs and LMs with respect to the set of verbs that can occur in these constructions.

(59) ***Lassen-Middles***

Due to the embedded thematic VoiceP (i.e. a thematic VoiceP without a specifier, as in passives), LMs do not exhibit any constraint more severe than the one that applies to passives themselves.

**Canonical Middles**

The verb-class restriction is due to the fact that they involve an expletive VoiceP. As the external argument has to be recovered at a conceptual level (and only agents can be recovered), only verbs compatible with an agent can occur in CMs.

Even if it should turn out that the treatment of the verb-class restriction as an agent-restriction is wrong, the discussion in this section has not been in vain. The crucial aspect is that the difference in verb-class restriction must somehow follow from the different Voice heads

involved in the formation of the two constructions. Clearly, the restriction cannot be tied to the dispositional semantics, as otherwise LMs would be expected to be as restricted as CMs.<sup>18</sup>

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<sup>18</sup> A semantic account of the verb-class restriction is developed in Broekhuis & Corver (in prep), who argue that CMs and LMs are semantically different. While the dispositional property in CMs needs to be a prototypical property of the structural subject, no such restriction holds for the disposition ascription in LMs. As a consequence, LMs allow a broader range of predicates. Consider the following examples.

- (i) \*De uitslag van die voetbalwedstrijd vospelt gemakkelijk.  
*the score of that soccer.match predicts easily*
- (ii) De uitslag van die voetbalwedstrijd laat zich gemakkelijk voorspellen.  
*the score of that soccer.match lets REFL easily predict*  
'The score of that soccer match is easy to predict.'

(Broekhuis & Corver in prep: 511)

The authors argue that since the degree of predictability is not a prototypical property of the result of soccer matches, the CM in (i) is ungrammatical. Since for LMs, this particular restriction does not hold, (ii) is acceptable. In German, however, (i) is not ungrammatical (see (iii)). If Broekhuis & Corver were right, this would mean that in German, predictability is a prototypical property of the result of soccer games. There is no independent evidence for this, and so Broekhuis & Coerver's explanation of the contrast in (i) and (ii) has to be rejected.

(iii) Das Ergebnis dieses Fußballspiels sagt sich leicht voraus.

'The score of that soccer match is easy to predict.'

Note, however, that the ungrammaticality of (i) can also not be explained by an 'agent-account' as adopted in this section. I have to leave the reason for the contrast between (i) and (iii) for future research.

## CHAPTER 6

### THE MIDDLE AS A NOTIONAL CATEGORY

#### 6.1 Introduction

This chapter is structured as follows: in section 6.2, I discuss the idea expressed in Condoravdi (1989) that the middle is an interpretation that certain independently available argument alternating processes may give rise to. This view is crucially supported by the existence of LMs, which have been shown to qualify as middles without involving any middle specific process(es) / middle-specific syntax. In section 6.3, I show that LMs pattern with Greek or French middles with respect to a number of properties that set this class of middles apart from English or German CMs. I address the question of why this should be the case by making reference to Lekakou's (2005) analysis of Greek and French middles. Finally, I approach the issue of the source of the dispositional semantics in LMs (section 6.4). Building on Lekakou's generalization that middles are parasitic on (reflexive) passives if the generic operator is overtly realized, combined with the observation that unlike French or Greek middles, LMs cannot be episodic, I propose that the source of the dispositional semantics in LMs is the matrix predicate *lassen*.

#### 6.2 The Middle as a Notional Category

As mentioned in chapter 1, Condoravdi (1989) originally proposed that the middle is neither a distinct lexical category nor a specific construction but instead has to be treated as a notional category. In other words, the middle is a particular interpretation that certain syntactic configurations may give rise to. This view then holds that the Grammar lacks middle specific processes (e.g. a middle forming lexical rule) and middle specific syntactic projections (e.g. dispositional middle Voice), reducing the middle to independently available morpho-syntactic processes and transitivity alternations.

The main reasons for Condoravdi to adopt this position are the following: first, she argues that certain middle specific constraints (such as the verb-class restriction or the class of acceptable adverbs) do not require a grammatical account; they can be shown to follow from the middle semantics. Second, from a cross-linguistic point of view, middles exhibit variation that cannot possibly be captured by the assumption of a specific middle forming process.<sup>1</sup> A unification

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<sup>1</sup> Here and below, I use 'specific middle forming process' as a shorthand for anything that is specifically designed to derive middle constructions. This might either be a specific syntactic projection, a particular lexical rule, or a family of specific rules that work together to form a middle.

of these different constructions is only possible on a semantic level. Third, she argues that, even language internally, middles may exhibit a certain degree of variation in terms of morphological marking, which is incompatible with the assumption that the middle exists as a lexical category. I will briefly discuss each point in turn.

As already outlined in chapter 2, middles are characterized semantically by attributing a property to the theme argument. Condoravdi capitalizes on the two observations that (i) the generalization or regularity expressed by a middle stems from some inherent characteristic property of the theme argument (e.g. van Oosten 1977; Fellbaum 1986; Hale & Keyser 1987); and (ii) the core class of middle verbs denote a change of state (see also Hale & Keyser 1987; Stalmaszczyk 1993; Schäfer 2008). She thus concludes that the middle semantics are based on the fact that 'internal structural properties of objects determine the progress of such changes' (18). In other words, the middle semantics operate on an object-event and event-time mapping from which the restrictions concerning the acceptable adverbs or middle-forming verbs follow. I will briefly illustrate how Condoravdi does this.

Recall from the discussion in chapter 5 the LF-representation Condoravdi assigns to CMs (repeated as (1a,b) for the sake of convenience). The middle interpretation can then roughly be paraphrased as in (1c).

- (1) a. This bread cuts smoothly.  
b. GEN [e: bread (x), cut (e), Patient (e,x)] [smooth (e)]  
c. All events that are cutting events of this bread are events that progress smoothly.

Condoravdi argues that, if middles are statements about how an object determines the progress of an event of which it is a participant (e.g. the event-time mapping), 'the admissible adverbs must be such that they specify something about the mapping of events onto time, or about the amount of change effected by an event over time' (21). To this end, she coins the class of *rate adverbs*. Broadly speaking, while an adverb such as *safely* does not specify anything with respect to the event-time mapping, and is therefore in conflict with the middle semantics, a rate adverb such as *smoothly* or *easily* stresses that subevents are mapped onto intervals of time in a certain manner (see Condoravdi 1989 for details). Rate adverbs (and time-span adverbs such as *in a jiffy*) are thus argued to be the only classes of adverbs compatible with the middle semantics, legitimizing their appearance in CMs.

The verb-class restriction is also argued to follow from the particular semantics expressed by middles. Condoravdi argues that the class of verbs acceptable in CMs comprises change-of-state predicates in addition to predicates that combine with an incremental theme or path argument. For the latter class, it is obvious how the object can be related to and measure out

the progress of the event, thus rendering this class of verbs compatible with the middle semantics. With respect to change-of-state predicates, Condoravdi claims that the object in these cases is 'incremental with respect to the subevents leading to the change of state' (24), thereby also fulfilling the requirement imposed by the middle semantics. In sum, Condoravdi proposes that nothing special needs to be said about the class of predicates or the type of adverbs acceptable in CMs, as the restrictions are a consequence of the particular middle semantics.<sup>2</sup>

Condoravdi goes on to argue that, since there is nothing in the middle semantics that would block the expression of the agent (contrary to Fellbaum 1986), it is expected that languages should exist where the agent is overtly realized in middles. She points out that Greek is such a language, providing the examples in (2).

- (2) a. Afto to psomi kovete efkola akoma ki apo pedia.  
*this the bread cut.NACT.3SG easily still and by children*  
 'This bread can be cut easily even by children.'  
 b. Afto to vivlio diavazete akoma ki apo enilikus.  
*this the book read.NACT.3SG still and by adults*  
 'This book can be read even by adults.'  
 c. Afto to potami diashizete efkola akoma ki apo anembirus.  
*this the river cross.NACT.3SG easily still and by inexperienced*  
 'This river can be crossed easily even by inexperienced people.'

(Condoravdi 1989: 25)

There is thus a contrast between English and German type CMs on the one hand (where the agent cannot possibly be overtly realized), and Greek middles on the other (which allow a *by*-phrase and are thus more similar to passives (a point to which I will return in section 6.3)). Condoravdi concludes that, based on this cross-linguistic variation, there cannot be one unifying middle forming process. If, for example, middle formation involved a rule of agent deletion, Greek middles could not be accounted for.

Finally, Condoravdi claims that even within one language, the variation in the expression of middles is too great to be the result of a specific middle-forming process or a lexical category *middle*. In particular, she claims that the morphological marking of middles in Greek undermines such assumptions. Contrast the data in (2) with the examples in (3).

- (3) a. \*Afti i porta anigi akoma ki apo pedia.  
*this the door open.3.SG still and by children*  
 'This door opens even by children.'

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<sup>2</sup> The obligatoriness of adverbial modification in CMs in her account is the consequence of well-formedness conditions on LF. See chapter 5 for discussion.

b.\*Afti i sfera girizi efkola akoma ki apo pedia.  
*this the door turn.3.SG easily still and by children*  
'This sphere turns easily even by children.'

(Condoravdi 1989: 26)

While the middles in (2) are marked with non-active morphology and allow the overt realization of the agent as a *by*-phrase, this is not possible in (3), where the verb surfaces in its active form. In the absence of the *by*-phrase, the examples in (3) are acceptable, still expressing the middle semantics in the sense of Condoravdi. As a consequence, the same conclusion can be drawn: there cannot be one middle forming process or one lexical category *middle* that can account for the properties of both (2) and (3), though both cases, it is argued, exhibit the middle semantics.

Condoravdi thus concludes that there is not one middle construction; rather, the middle has to be treated as an interpretation which independently available morpho-syntactic operations or transitivity alternations may give rise to. While Greek exploits the process of passivization (2) to derive the middle semantics, middles in languages such as English or German are exclusively based on anticausatives (see Hale & Keyser 1987; Klingvall 2007; Schäfer 2008).

Although I essentially agree with the conclusion that the middle is a notional category, there are two points in Condoravdi's argumentation I do not subscribe to. One of them concerns her claim that the class of middle-forming verbs results from the semantics of middles. I will address this issue in the next section. The second point concerns her 'language-internal variation' argument, to which I now turn.

Condoravdi's formulation of the middle semantics does not make reference to the agent argument (in this regard, compare the LF-representation of (English-type) CMs in (1b)). As pointed out above, there is nothing in the middle semantics that blocks the realization of an agent (as seen in the Greek middles in (2)). Yet, for Condoravdi, there is also nothing in the middle semantics that requires the presence of an agent. In other words, generic unaccusatives as in (4) also qualify as middles in her analysis.

(4) These raisins blacken slowly in the dark.

(4) exhibits the middle semantics in the sense of Condoravdi: some inherent characteristic of raisins determines that any blackening event in which these raisins are involved progresses slowly. Crucially, no agent needs to have instigated the blackening event. In fact, the semantic closeness between generic unaccusatives and middles has been pointed out frequently in the literature (e.g. Marelj 2004; Lekakou 2005; Schäfer 2008). Nevertheless, the dominant view on middles is that they necessarily imply an agent, such that generic unaccusatives are not



considered middles (e.g. Haider 1985; Abraham 1987, 1994; Fagan 1988, 1992; Stroik 1992, 1995; Stalmaszczyk 1993; Ackema & Schoorlemmer 1994, 1995, 2006; Marelj 2004; Lekakou 2005; Schäfer 2008; Troseth 2009). As Lekakou (2005) points out, this dispute might be terminological only. In fact, it is unclear to me how this issue could even be decided empirically, given that the definition of the middle as involving agentivity is purely stipulative. As I assume, however, that Condoravdi's argument based on language internal variation in the expression of the middle semantics is strengthened if one can show that there is such variation between middles of the same type (i.e. middles that imply an agent), I side with the dominant view on middles and take agentivity as a core characteristic. I thus adopt the view that generic unaccusatives must not be taken to bear on the question of whether the middle is a grammatical/lexical or a notional category.

With this in mind, let us return to Condoravdi's 'language-internal variation' argument. Lekakou (2005) argues that only the Greek examples with non-active morphology in (2) imply an agent. The morphologically active examples in (3) are generic anticausatives semantically, and do not imply agentivity. Based on the discussion in the preceding paragraph, then, the data in (3) would not qualify as middles in the narrow sense adopted here.<sup>3</sup> In other words, Greek does not provide evidence that the middle semantics are expressed differently within one language.

Crucially, this particular argument in favor of the middle as a notional category can nevertheless be made: one of the core observations of this thesis is that the lack of uniformity in middle formation within one language is illustrated in German by the existence of LMs. Recall that, even though both CMs and LMs are dispositional generics and imply agentivity, (therefore classifying as middles in the narrow sense), the two constructions are syntactically quite different, as evidenced, for example, by the difference in the acceptability of an added *by*-phrases (5).

- (5) a. Das Buch liest sich (\*von kleinen Kindern) gut.  
*the book reads REFL by small children well*  
 b. Das Buch lässt sich (von kleinen Kindern) gut lesen.  
*the book lets REFL by small children well read*  
 'The book can be read easily by small children.'

The difference between CMs and LMs in that regard parallels the cross-linguistic difference between English and Greek-type middles. While the one class blocks the overt expression of

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<sup>3</sup> This does not mean that the Roots involved in (3) cannot occur in middles at all, but if they do, they have to be marked with nonactive morphology. There is, in other words, a dependency between the presence of non-active morphology and the middle semantics (see Lekakou 2005; Alexiadou & Doron 2012; see Schäfer 2008 who shows that the same holds for German).

the agent argument, the latter class allows it. The existence of LMs alongside CMs in German therefore provides fundamental evidence against the claim that the middle is a lexical or grammatical category, supporting the treatment of the middle as a notional category. Furthermore, I showed in chapter 4 that, structurally, LMs involve a reflexively marked anticausative and an embedded passive, which further supports Condoravdi's conclusion that middles exploit only morpho-syntactic operations that exist independently in a language. To put it differently: middles are parasitic on the Voice heads a language makes available.

### 6.3 *Lassen*-Middles and Greek-Type Middles

While in Condoravdi (1989) only the availability of the agent *by*-phrase is presented as a factor distinguishing Greek and English middles, Lekakou (2005), focusing on Greek and French middles, and Marelj (2004), adding Serbo-Croatian middles to the sample, show that there are more properties that differentiate English-type middles from Greek-type middles (for expository reasons, I will henceforth follow Ackema & Schorlemmer 2006 in calling the two types of middles Type 1 and Type 2, respectively).

In this section, I will show that German LMs pattern with Type 2 middles with respect to all of these properties.<sup>4</sup>

The first such property is the more liberal status of Type 2 middles in terms of the verb-class restriction. Predicates that cannot occur in Type 1 middles ((6) – (7)) are perfectly acceptable in middles of Type 2 ((8) – (10)).

- (6) a.\*French acquires easily. (English; Type 1)  
 b.\*This sickness does not recognize easily.  
 c.\*The Eiffel Tower sees easily from here.
- (7) a.\*Französisch lernt sich leicht (German; Type 1)  
*french acquires REFL easily*  
 b.\*Diese Krankheit erkennt sich nicht leicht.  
*this sickness recognizes REFL not easily*  
 c.\*Der Eiffelturm sieht sich von hier aus leicht.  
*the Eiffel Tower sees REFL from here out easily*
- (8) a. Ta elinika den kataktonde efkola. (Greek; Type 2)<sup>5</sup>  
*the greek not acquire.NACT.3PL easily*  
 'Greek cannot be acquired easily.'

<sup>4</sup> If not indicated otherwise, the Serbo-Croatian data below is taken from Marelj's work; the French and Greek data, from Lekakou (2005).

<sup>5</sup> The Greek variant of (6c) is judged as severely degraded. Importantly, the corresponding passive is judged as equally unacceptable (Giorgos Spathas, p.c.). If the middle in Greek is parasitic on the passive, the absence of this particular middle is expected.

- b. Tetia sfalmata den anagorizonde efkola.  
*such mistakes not recognize.NACT.3PL easily*  
 ‘Such mistakes are not easy to recognize.’

- (9) a. Le francais s'acquiert facilement. (French; Type 2)  
*the french SE acquires easily*  
 ‘French can be acquired easily.’  
 b. Pierre se reconnaît à son nez rouge.  
*Pierre SE recognizes by his nose rouge*  
 ‘Pierre is recognizable by his red nose.’  
 c. La Tour Eiffel se voit de loin.  
*the Tower Eiffel REFL sees from afar*  
 ‘The Eiffel Tower can be seen from afar.’

- (10) a. Francuski se lako uči. (Serbo-Croatian; Type 2)  
*french SE easily learns.*  
 ‘French can be learned easily.’ (Zeljka Caruso, p.c.)  
 b. Nesrećni ljudi se lako prepoznaju.  
*unhappy people SE easily recognize*  
 ‘Unhappy people can be recognized easily.’  
 c. Odavdje se Eiffelov Toranj lako vidi.  
*from.here SE Eiffel Tower easily see*  
 ‘From here, the Eiffel Tower can be seen well.’ (Zeljka Caruso, p.c.)

Recall from chapter 2 that the verb class restriction does not hold for LMs, either. They thus pattern with Type 2 middles.

- (11) a. Deutsch lässt sich nicht leicht lernen. (German; LM)  
*german lets REFL not easily learn*  
 ‘German cannot be acquired easily.’  
 b. Unglückliche Menschen lassen sich leicht erkennen.  
*unhappy people let REFL easily recognize*  
 ‘Unhappy people can be recognized easily.’  
 c. Der Eiffelturm lässt sich von hier aus gut sehen.  
*the Eiffel Tower lets REFL from here out well see*  
 ‘The Eiffel Tower can be seen well from here.’

Note that the acceptability of the middles in (8) - (11) poses an immediate problem for the claim made in Condoravdi (1989) that the class of middle-forming verbs follows from the middle semantics. If this was true, the class of verbs that are acceptable in middles would be expected to remain stable cross-linguistically, yet the evidence does not support this.

A further property that groups Type 2 middles with LMs (but not Type 1 middles) involves the optionality of the manner adverb without the need to compensate for its absence via focus, negation or an added modal verb.

- (12) a.\*This glass recycles. (English; Type 1)  
 b.\*This root eats.  
 c.\*This solution discusses.

- (13) a.\*Dieses Glass recycelt sich. (German; Type 1)  
*this glass recycles REFL*  
 b.\*Diese Wurzel isst sich.  
*this root eats REFL*  
 c.\*Über diese Lösung diskutiert sich.  
*about this solution discusses REFL*
- (14) a. To gialí anakiklonete. (Greek; Type 2)  
*the glass recycle.NACT.3.SG*  
 ‘This glass can be recycled.’  
 b. Afta ta manitaria trogonde.  
*these the mushrooms eat.NACT.3.PL*  
 ‘These mushrooms can be eaten.’  
 c. Afto sizitiete.  
*this discuss.NACT.3.SG*  
 ‘This can be discussed.’
- (15) a. Ce papier se recycle. (French, Type 2)  
*this paper SE recycles*  
 ‘This paper can be recycled.’  
 b. Cette racine se mange.  
*this root SE eats*  
 ‘This root can be eaten.’  
 c. Cette solution se discute.  
*this solution SE discusses*  
 ‘This solution can be discussed.’
- (16) a. Dieses Glass lässt sich recyceln. (German; LM)  
*this glass lets REFL recycle*  
 ‘This glass can be recycled.’  
 b. Diese Wurzel lässt sich essen.  
*this root lets REFL eat*  
 ‘This root can be eaten.’  
 c. Über diese Lösung lässt sich diskutieren.  
*about this solution lets REFL discuss*  
 ‘This solution can be discussed.’

Two questions arise from the data reviewed in this section: (i) What is special about Type 2 middles that accounts for their ability to evade the constraints that hold for Type 1 middles? (ii) What is the reason for the similarity between LMs and the prima facie formally different Type 2 middles? Lekakou (2005) has provided an answer to (i), which I will outline now, as it informs the approach to question (ii).

In the face of the long-standing controversy concerning whether the formation of Type 1 middles takes place in the syntax (Hale & Keyser 1987; Stroik 1992, 1995; Hoekstra & Roberts 1993; Schäfer 2008) or pre-syntactically in the lexicon (Abraham 1987, 1994; Fagan 1992; Ackema & Schoorlemmer 1994, 1995, 2006, a.o.), the cross-linguistic view and the

observed variation in middle formation have led Lekakou (2005) to argue that, in some languages, middles are formed in the lexicon, while they are built in the syntax in others.<sup>6</sup> In particular, due to their more constrained nature, Type 1 middles are claimed to be essentially lexical in nature, while Type 2 middles are syntactic.

This particular assignment of the two types of middles to the lexicon and the syntax, respectively, interacts with the claim that Type 1 middles are syntactically unergative (Fagan 1992; Ackema and Schoorlemmer 1994, 1995, 2006; Marelj 2004; Cabredo Hofherr 2005) while Type 2 middles are unaccusative (Tsimplici 1989 and Lekakou 2005 for Greek; Authier & Reed 1996 for Canadian French; Lekakou 2005 for Continental French). For the former, it is thus assumed that some process in the lexicon force the theme argument to be merged externally in the syntax, with the agent argument unable to project. With respect to Type 2 middles, all arguments are projected from the lexicon in a canonical way, and the syntax is held responsible for both the suppression of the agent and the ‘advancement’ of the theme argument. Hence, abstracting away from the assumption that middles may be built in different modules (which is incompatible with the framework adopted in this thesis to begin with), one core difference between Type 1 and Type 2 middles in Lekakou’s analysis is the absence vs. presence of the agent argument in the syntax, and the corresponding consequences for the syntactic derivation.

Ignoring Lekakou’s analysis of Type 1 middles (see Hale & Keyer 1987; Condoravdi 1989; Hoekstra & Roberts 1993; Stroik 1992, 1995; Schäfer 2008 and Pitteroff & Schäfer 2014 for the claim that even this class is syntactically unaccusative), I would like to elaborate here on the syntax she proposes for Type 2 middles. Following Condoravdi (1989), Lekakou adopts the position that these middles are syntactically identical to (reflexive) passives (Condoravdi 1989; Authier & Reed 1996; Ackema & Schoorlemmer 2006, a.o.). Motivation for this view is drawn not only from the unaccusativity of Type 2 middles (see Lekakou 2005 for evidence), but also from the fact that middles and passives in ‘Type 2 languages’ exhibit identical morphological marking (NACT-morphology in Greek; reflexive morphology in French or Serbo-Croatian). Furthermore, the syntactic identity of passives and Type 2 middles is supported by the shared suppression of the agent argument and the acceptability of the *by*-phrase. With respect to this last point, however, Marelj (2004) points out that in Serbo-Croatian, which has Type 2 middles, a *by*-phrase is not licensed in middles (17a). Yet, she

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<sup>6</sup> See also Marelj (2004) and Ackema & Schoorlemmer (2006) for this conclusion. Although these two accounts take the same position as Lekakou with respect to the verb-class restriction, their explanation of the optionality of the manner adverb in Type 2 middles essentially follows Condoravdi’s (1989) account, which I have shown in chapter 5 cannot be upheld. I therefore focus exclusively on Lekakou’s analysis of Type 2 middles.

also mentions that *by*-phrases are unacceptable in (episodic) reflexive passives (17b), thereby supporting the view that the two constructions are syntactically identical.<sup>7,8</sup>

- (17) a. *Svilene haljine se lako peru* (\*od strane Maksa).  
*silk dresses SE wash easily by Max* (Marelji 2004: 133)  
 b. \**Kuća se gradi* (\*od strane Petra).  
*house SE builds by Peter*  
 ‘The house is being built by Peter.’ (Marelji 2004: 134)

Thus, middles and (reflexive) passives in languages that have Type 2 middles essentially show the same grammatical properties (they differ aspectually and semantically, though - a point I return to in section 6.4), which enforces the conclusion that Type 2 middles are parasitic on a (reflexive) passive syntax.

In the framework adopted in this thesis, this means that Type 2 middles involve the same VoiceP that surfaces in (reflexive) passives. For example, Spathas, Alexiadou & Schäfer (to appear) have argued that Greek passives, unlike passives in English or German, involve Middle Voice, which has the following properties: it is a particular thematic Voice head that introduces the external argument variable, does not introduce an agent DP in its specifier, and allows coreference between the implicit agent and the theme argument (i.e. Middle Voice evades the DRE).<sup>9</sup> The latter aspect accounts for the fact that a sentence such as (18) is ambiguous in Greek between a reflexive and a passive interpretation. Contrast this with the English passive in (19), where a self-reading is unavailable.

- (18) *O Janis pli-thike.*  
*the John.NOM washed-NACT.3SG*  
 ‘John washed/ John was washed.’

- (19) John was washed.

<sup>7</sup> Note that (17a) involves a specific agent, which is incompatible with the generic nature of middles (see the discussion in chapter 2). Zeljka Caruso informs me that (17a) is equally unacceptable with a kind-referring agent such as ‘small children’.

<sup>8</sup> Lekakou (2005) also notes that Continental French middles have been argued to be incompatible with *by*-phrases. Yet she provides the following examples which have been deemed grammatical by native speakers.

- (i) a. *Ces étoffes se repassent facilement par tout le monde.*  
*these fabrics SE iron easily by all the world*  
 ‘These fabrics can be ironed easily by everybody.’  
 b. *La Tour Eiffel se voit de loin par tout le monde (qui veut bien la voir).*  
*the Tower Eiffel SE sees from afar by all the world who wants really it see*  
 ‘The Eiffel Tower can be seen from afar by anyone who really wants to see it.’  
 c. *La français ne s'acquiert pas par tout le monde.*  
*the french NEG SE acquires NEG by all the world*  
 ‘French cannot be acquired by everybody.’

(Lekakou 2005: 28)

But even if the licensing of a *by*-phrase in French middles is restricted, this has to be related to the fact that the addition of such PPs to episodic reflexive passives is also disfavored.

<sup>9</sup> See Alexiadou & Doron (2012) for the same argument, but a different execution.

Without going into the details, if Type 2 middles are parasitic on passives, and Greek uses Middle Voice to express passives, it is expected that dispositional middles in Greek should involve Middle Voice, too. In other words, it is expected that Greek dispositional middles should evade the DRE and allow a reflexive interpretation. This prediction is empirically correct. (20a), taken from Spathas, Alexiadou & Schäfer (to appear, fn. 24), can either mean that it is easy for people in general to wash clean children, or that it is easy for clean children to wash themselves. The fact that the corresponding English middle in (20b) only allows the disjoint reading shows that the DRE is not generally evaded in middles.<sup>10</sup>

- (20) a. Ta kathara pedja plenonte efkola.  
           *the clean children.NOM wash.NACT.3PL easily*  
       b. Clean children wash easily.

Let us return to the question we started out with: how does the observation that Type 2 middles are parasitic on the syntax of passives explain the fact that Type 2 middles evade the constraints that can be found in the context of Type 1 middles? Lekakou argues that, due to their particular syntactic structure, Type 2 middles are not expected to exhibit a verb class restriction more severe than the corresponding (reflexive) passive. In other words, all verbs that can occur in (reflexive) passives should occur in Type 2 middles, accounting for the difference to middles of Type 1, for which a stronger restriction holds. Furthermore, following Roberts (1987) in the claim that the adverb in middles is required to recover the deleted agent (see also Hale & Keyser 1987 as well as the discussion in chapter 5), Lekakou notes that the optionality of the adverb in Type 2 middles can be straightforwardly explained under an analysis that treats them as parasitic on (reflexive) passives. Since the agent argument is in some form syntactically present in Type 2 middles (as PRO, *pro*, a feature on Voice, etc.), there is no need to recover it, rendering the adverb optional. Hence, Lekakou's answer to question (i) makes crucial reference to the syntactic status of Type 2 middles as (reflexive) passives, thereby also accounting for their syntactic unaccusativity, the suppression of the agent, and the (relative) acceptability of the *by*-phrase.

The proposed treatment of Type 2 middles, combined with the analysis of LMs developed in chapter 4, directly provides an answer to question (ii), i.e. how to explain the parallelism between Type 2 middles and LMs observed at the beginning of this section? I propose that the

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<sup>10</sup> Interestingly, French middles also evade the DRE, (i) being ambiguous between a disjoint and a reflexive interpretation (Fabienne Martin, p.c.).

(i) Les enfants propres se lavent facilement  
       *the children clean SE wash easily*

This could either mean that reflexive passives in French instantiate Middle Voice, or that the reflexive can either function as non-thematic or thematic reflexive, giving rise to the disjoint and reflexive reading, respectively.

similarities between LMs and Type 2 middles follows from a certain syntactic similarity, namely the presence of a thematic VoiceP that encodes agentivity but does not project the agent argument in its specifier.<sup>11</sup> Since the shared properties (*by*-phrase, looser verb-class restriction, optionality of adverb) were shown to be directly related to the presence of such a VoiceP, the observed parallelism is accounted for. In other words, the similarity between Type 2 middles and LMs is expected under the syntactic analysis of these constructions developed in Lekakou (2005) and this thesis, respectively.

In the last section of this chapter, I turn to a point I have ignored so far: the source of the dispositional semantics in LMs. To this end, I will be discussing in some detail how Lekakou (2005) accounts for dispositional semantics in the context of CMs and Type 2 middles.

#### **6.4 Dispositional Semantics in *Lassen*-Middles**

In most of the analyses of middles, the modality involved is directly related to the presence of a (covert) generic operator. How exactly this operator leads to the particular semantics of middle constructions, however, is often left unexplained. One of the few studies addressing this issue in some detail is Lekakou (2005), whose account of the middle semantics I summarize briefly, as it plays a role in answering the question of where the modal semantics in LMs come from.

Lekakou's central contribution to the discussion of middles is the claim that they are to be defined semantically by making reference to the notion of dispositional semantics. Dispositional sentences in general are defined by the properties in (21). Middles are treated as a subtype of dispositional statements, exhibiting the characteristic in (22) (cf. chapter 2; taken from Lekakou 2005: 68).

(21) **Disposition Ascriptions**

- a. express 'in virtue of' generalizations
- b. employ a VP-level Gen[eric operator, M.P.]
- c. are subject-oriented

(22) Middles ascribe a dispositional property to the understood object.

While (21a) corresponds to the well-known fact that, in middles, some inherent property of the matrix subject is 'responsible' for the generalization to hold, (21b) identifies middles as a particular type of generic sentence, namely one which involves a VP-level, rather than a

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<sup>11</sup> Note that if the infinitival complement in LMs was a bare VP, e.g. lacking VoiceP, it would be falsely expected that LMs pattern with Type 1 middles, rather than Type 2 middles.



sentence-level, generic operator. Lekakou argues that the property in (21c) follows from this fact.<sup>12</sup> I will elaborate on this a bit.

(21b), which is most relevant to the discussion in this section, is based on Brennan's (1993) account of dynamic modals (e.g. ability *can* or dispositional *will*, as in *Sugar will dissolve if put into water*). Making a distinction into sentence level operators, which take scope over the whole proposition, and predicate operators, which apply at the VP-level, Brennan argues extensively that dynamic modals belong to the latter class. As VP-level operators, dynamic modals thus relate properties (the denotation of the modalized VP, that is) and entities (the syntactic subject). Adopting a possible worlds semantics for modals, Brennan further claims that VP-level and S-level operators differ in how the accessibility relation is defined. While the latter use propositions (Kratzer's *in-view-of*-sentences), the former employ properties associated with the subject (optionally introduced via *in virtue of*). Evidence for the claim that dynamic modals are keyed to properties of the subject comes from the behavior of symmetric predicates such as *kiss* or *marry*. Consider the following data.

- (23) a. John kisses Mary.  
→ John kisses Mary.  
→ Mary kisses John.  
b. John must have kissed Mary.  
→ It must be the case that John kissed Mary.  
→ It must be the case that Mary kissed John.  
c. John can kiss Mary.  
→ John has the ability to kiss Mary.  
\*→ Mary has the ability to kiss John.

While the symmetric reading of (23a) is retained in the context of an epistemic modal (23b), it is lost if the predicate occurs below a dynamic modal (23c). This contrast is explained if dynamic modals, but not epistemic ones, are keyed to properties of the subject. Since *Mary* is not the subject in (23c), the entailment that *Mary* can also kiss *John* is not available.

Extending Brennan's bi-partition of the class of modals to generic operators, Lekakou differentiates between an S-level and a VP-level generic operator. She argues that these two types of operators essentially share the properties of the respective types of modals in the sense of Brennan (1993). To be precise, she argues that S-level GEN, just like S-level modals, has its accessibility relation defined over propositions, while the set of accessible worlds quantified over by VP-level GEN is determined by properties of the structural subject, which

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<sup>12</sup> Unlike middle specific processes that delete the agent argument, (22) allows us to capture the cross-linguistic variation by simply requiring the theme argument to occur in subject position. The suppression of the agent in middles is thus semantically motivated and it does not matter whether the agent is prevented from appearing as subject due to passivization (Type 2 middles) or is completely absent from the syntactic structure (Type 1 middles).

can optionally be realized overtly by means of an ‘in-virtue-of’-phrase. As a consequence of this distinction, VP-level GEN in Lekakou’s analysis results in a generalization that makes (implicit) reference to properties of the subject *in virtue of* which the referent of the subject is assigned the property denoted by the VP. As this is taken to be the core characteristic of dispositional sentences in general, Lekakou concludes that dispositional generics involve a VP-level GEN, while simple descriptive generalizations (such as habituais) involve an S-level generic operator.<sup>13</sup> To put it differently, VP-level GEN is responsible for the dispositional semantics.

As middles exhibit all the characteristics of dispositional sentences, Lekakou concludes that middles involve a VP-level GEN, too. The special property that distinguishes dispositional middles from other classes of dispositional sentences is that middles involve the assignment of the dispositional property to the theme argument (cf. (22)), which then has to occur in subject position. In the case of Type 2 middles, this is achieved via a passive syntax; in Type 1 middles, the total absence of the agent argument from the syntactic structure leads to the theme argument becoming the structural subject.<sup>14</sup>

If, then, the dispositional semantics in Type 1 and Type 2 middles are contributed by a VP-level operator, does this mean that LMs involve such an operator, too? And if so, what is the function of the matrix predicate *lassen*? In the following, I will sketch a proposal according to which *lassen* in LMs functions as the operator that contributes the dispositional semantics. While the details await further research, I assume that this approach is not unreasonable, as it potentially provides an answer to the question of why *lassen* (and not some other predicate) can be used in the construction of such ‘non-canonical middles’ (compare, for example, the situation in French, where the anticausativization of causative *faire* leads to a passive rather than a modal interpretation (Labelle 2002, 2013)).

One aspect of Lekakou’s analysis I have neglected so far, but which serves as an interesting background for the proposal I am about to sketch, relates to the following question:

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<sup>13</sup> The need to distinguish different types of generic sentences is supported by the observation that habituais differ from dispositional sentences with respect to event implications. While habituais presuppose the existence of the event denoted by the predicate, dispositionals do not. Contrast (ia) and (ib).

(i) a. John walks to school.

b. This machine crushes oranges.

While the habitual in (ia) is false if John has never walked to school, the dispositional sentence in (ib) is true independently of whether the machine has ever crushed oranges or not.

<sup>14</sup> The observation from chapter 4 that DP<sub>NOM</sub> in LMs may stay in situ, but is nevertheless assigned the dispositional property, suggests that subjecthood in the sense relevant for disposition ascriptions does not necessarily involve movement to the subject position. Instead, it seems enough if the relevant DP values the  $\phi$ -features on T.

what determines whether a language has Type 1 or Type 2 middles?<sup>15</sup>

Lekakou argues that the decision is ultimately based on the morphological properties of the language, in particular whether a language has some morphological means to overtly realize the generic operator. Her argumentation is somewhat involved and I refer the interested reader to her work for the details. In general, the idea is that the implicit agent in middles is realized as a generic indefinite, which Lekakou labels ONE\*. She argues that this indefinite needs to be licensed at the level where it is expressed. This entails that the agent argument will only be syntactically active if it/its variable can be bound by an overt generic operator in the syntax. If the language has no means to realize GEN overtly, ONE\* will be bound in the lexicon, giving rise to Type 1 middles. While English has no morphology that is dedicated to the expression of genericity, imperfective morphology (in e.g. Greek) can be considered as overt realization of GEN, since 'genericity may only be expressed by imperfective aspect, never with the perfective verb form' (Lekakou 2005: 111). Consider Lekakou's examples in (24).

- (24) a. O            Janis egrafe                                    ena grama kathe mera.  
          *the.NOM Janis write.PAST.IMPERF.3SG one letter every day*  
          'Janis used to write a letter every day.'  
      b.\*O            Janis egrapse                                    ena grama kathe mera.  
          *the.NOM Janis write.PAST.PERF.3SG one letter every day*  
          'Janis wrote a letter every day.'

In (24), a generic (habitual) interpretation is forced by the addition of *every day*. The fact that the resulting sentence is only acceptable if the verb is marked with imperfective morphology (as in (24a)) suggests that imperfective morphology can encode genericity.

Similarly in French, imperfective morphology is required for generic and habitual statements.

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

(Lekakou 2005: 112)

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<sup>15</sup> The only other study that tries to answer this question is Marelj (2004), who ties the decision to Reinhart and Siloni's (2005) Lexicon-Syntax parameter. According to this view, a language is either classified as a syntax-language (thereby forming a certain set of constructions (e.g. reflexives, middles, etc.) in the syntax) or as a lexicon language (with the operations leading to these constructions being lexical in nature). Apart from the fact that this parametrization has met with criticism in the literature (see e.g. Doron & Rappaport Hovav 2009), Marelj's particular classification of CMs is not unproblematic. Since German CMs pattern with Greek, French, and Serbo-Croatian middles in being morphologically marked, Marelj has to classify them as syntactic. Crucially, German CMs exhibit the same restrictions as English or Dutch middles, which in her system are lexical. As I do not see how this issue can be resolved in her analysis, I restrict myself to the discussion of Lekakou's analysis.

In view of this, Lekakou arrives at the following generalization: Type 2 middles exist in those languages which have some morphological means to express genericity.<sup>16</sup>

According to this generalization, German is expected to pattern with English and Dutch, as it lacks the morphological means to encode genericity. While this seems to be the correct prediction with respect to CMs that classify as Type 1 middles, the question arises as to how LMs fit into this picture, as I have shown that they behave like Type 2 middles? It is unexpected under Lekakou's proposal that a language should have both types of middles, as either the language has the morphological means to overtly realize GEN or it doesn't.

The only way to make LMs compatible with Lekakou's generalization is to assume that GEN is overtly realized in this construction. The sole element that could be attributed this function is the matrix predicate *lassen*. Thus, in terms of the typology of middle constructions developed in Lekakou, the existence of LMs can only be accounted for if it is assumed that the causative predicate is the overt realization of a (VP-level) generic operator (see also Fagan 1992 for the claim that *lassen* is the source of the modal semantics in LMs). Structurally, this view is supported by the fact that LMs involve a restructuring infinitive, which means that the complement of *lassen* in LMs is not propositional but is simply an (extended) verbal projection, i.e. a predicate. This means that, with respect to syntactic position, *lassen* is comparable to VP-level GEN, as both directly modify the verbal domain.

But even outside of Lekakou's particular approach one finds evidence for the claim that *lassen* is responsible for the middle semantics in LMs. First, despite the similarities observed in section 6.3, Type 2 middles and LMs differ with respect to their aspectual properties. Note that the former may be either generic (giving rise to the middle semantics) or episodic (in which case they are simply (reflexive) passives). This is illustrated with the two Serbo-Croatian examples in (26), taken from Marelj (2004).

- (26) a. Tekila se teško pije.                                      generic middle  
      'Tequila drinks with difficulty.'  
      b. Tequila se upravo pije.                                   episodic (reflexive) passive  
      'Tequila is being drunk at the moment.'

LMs, by contrast, are obligatorily generic (Fagan 1992). Recall from chapter 2 the general incompatibility of LMs with specific time adverbials, illustrated here again with the examples in (27).

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<sup>16</sup> As I have mentioned before, I cannot follow Lekakou in modularizing the derivation of Type 1 and Type 2 middles. Both will have to be syntactic in the framework adopted here. Yet, while the former are parasitic on anticausatives, the latter are parasitic on passives. A direct translation of Lekakou's generalization would thus mean that there is a relation between the overt marking of GEN, and the transitivity alternation chosen to express the middle semantics. Whether, and if so, how, such a relation can be motivated will have to be left for future research.

- (27) a. Das Buch lässt sich (\*um 17 Uhr) gut lesen.  
 ‘The book reads well at 5 p.m.’  
 b. Tequila lässt sich (\*gerade) gut trinken.  
 ‘Tequila can be drunk well at the moment.’

This difference is expected if *lassen* is the source of the modal semantics. While the predicate in reflexive passives does not need to be marked with imperfective morphology (i.e. nothing forces the addition of a generic operator), *lassen* is an obligatory part of the syntax of LMs, such that, under the proposed account, LMs are not expected to alternate between a generic and an episodic interpretation.

Second, I showed in chapter 4 that even PCCs in German can get a modal interpretation (28).

- (28) Die Brücke lässt die Inselbewohner das andere Ufer leichter erreichen.  
 ‘The bridge enables the inhabitants of the island to reach the other shore more easily.’

Recall that (28) involves the potentiality familiar from dispositional sentences, which can be seen by the fact that it does not trigger an event implication: the sentence can be truthfully uttered in a context where the bridge has never actually been used. The anticausative use of *lassen*, then, enforces this modal reading, which is arguably due to the fact that in LMs, just as in (28), a non-agentive DP surfaces as the subject.<sup>17</sup>

The hypothesis that *lassen* is responsible for the dispositional semantics becomes even more plausible if dispositionality is taken to involve causation (pace Lekakou 2005; see e.g. McConnell-Ginet 1994 for a semantic derivation of middles involving causation; also Tao 2010). This would potentially allow a fully compositional derivation of the dispositional semantics of LMs. Recall that AAS (2006, 2014) argue that anticausatives do not lack the cause component, and that the reflexive pronoun in marked anticausatives simply blocks the realization of the agent argument. If the theme argument in LMs can be interpreted as the source of the matrix causing event, the situation would be completely identical to (28): a non-agentive DP is understood as the causer of an event it is itself a participant of. While in (28), the relation of the bridge to the embedded event is only implied (i.e. the relevant crossing event necessarily involves the bridge), the relation between the subject and the embedded event in LMs is more direct: as shown in chapter 4, DP<sub>NOM</sub> in LMs is base-generated as the internal argument of the embedded verb.

Independently of whether dispositionality involves causation or not, the claim that it is *lassen* that contributes the dispositional semantics in LMs poses an interesting semantic challenge:

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<sup>17</sup> I paraphrased the meaning of *lassen* in (28) with *enable*, which arguably involves an existential modal force in the terms of Kratzer (1981). In fact, it has been argued that dispositional sentences do not involve universal quantification over possible worlds, but existential quantification (Menéndez-Benito to appear). See Lekakou (2005) for some discussion of this point.

although base-generated as an internal argument and potentially staying in this position, the subject is interpreted as if it has a thematic relation to *lassen*/the modal operator. I will have to leave this issue for future research.<sup>18</sup>

Although the details of a derivation in which *lassen* is the source of the dispositional semantics are not yet fully worked-out, it seems to me to be a position worth exploring, in particular because it potentially make sense of why it is a (causative) predicate like *lassen*, rather than some other verb that is used in the construction of such non-canonical middles.

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<sup>18</sup> The situation that an element appears to have a thematic relation with another element of which it is not an argument is not restricted to middles, as the following example shows (Angelika Kratzer, p.c.).

(i) 50 people can jump in this pool.

(i) can mean that 50 people have the ability to jump in this pool (where there potentially is an argument-of-relation between the subject and the ability modal). (i) can also mean that the pool has the property to provide enough space for 50 people. As *in the pool* is clearly an adjunct, the question arises as to how it could have such a thematic relation to the root modal *can*. Hacquard (2010) and Kratzer (2013) have proposed ways to accommodate the two interpretations of (i), both making use of the notion of modal anchoring.

## CHAPTER 7

### ON UNMARKED PASSIVES AND RESTRUCTURING INFINITIVES

#### 7.1 Introduction

In this chapter, I address two so far ignored theoretical issues which the proposed analyses of *lassen*-passives and LMs face. The first problem relates to the claim that the two constructions involve an embedded passive. Since such argument alternations are typically morphologically marked (e.g. Haspelmath 1990), the absence of passive morphology on the embedded predicate in *lassen*-passives and LMs needs to be accounted for. This will be done in section 7.2, where I argue that the absence of passive morphology is a consequence of the predicate being located inside a restructuring infinitive.

The second issue arises from the proposed size of the restructuring infinitive (RI), in particular the claim that such infinitival complements involve Voice. This is in conflict with the assumption that RIs are bare VPs (Wurmbrand 2001, 2004, 2007). I will show that if RIs are allowed to contain Voice, a number of non-trivial questions arise, in particular with respect to the derivation of long passives (section 7.3.1). In section 7.3.2, I provide further evidence for the claim that RIs must involve Voice. Wurmbrand has recently updated her theory of restructuring in order to cope with this new evidence. I outline her theory in section 7.3.3, and address the question of how well it accounts for *lassen*-passives and LMs in 7.3.4.

#### 7.2 Unmarked Passives in *Lassen*-Passives and *Lassen*-Middles

##### 7.2.1 The Issue

*Lassen*-passives and LMs are characterized by the absence of the embedded external argument (1). The syntax to account for this, which I have proposed for the two constructions in chapter 3 and 4, respectively, is repeated in (2).

- (1) a. Der Lehrer lässt das Buch lesen. (*lassen*-passive)  
*the teacher lets the book read*  
'The teacher makes someone read the book.'
- b. Das Buch lässt sich lesen. (LM)  
*the book lets REFL read*  
'The book is readable.'
- (2) a. **The Syntax of *Lassen*-Passives**  
[VOICEP DP<sub>NOM</sub> [VP [VOICEP [VP DP<sub>ACC</sub> + √ROOT + v] Voice] v-√LASS] Voice]
- b. **The Syntax of LMs**  
[VOICEP REFL [VP [VOICEP [VP DP<sub>NOM</sub> + √ROOT + v] Voice] v-√LASS] Voice<sub>EXPL</sub>]

(2) shows that even though the infinitival complement contains the external argument introducing projection VoiceP, there is no (overt) argument realized in its specifier, thereby accounting for the observed absence of the embedded external argument. Under the assumption that the non-projection of the external argument is the core property of passives (Bruening 2012), and all other properties (such as object promotion, the oblique realization of the agent as *by*-PP and case distribution) are but secondary effects that follow from the suppression of the agent, *lassen*-passives and LMs involve an embedded passive (in fact, I pretheoretically labelled the embedded Voice head as *passive* in earlier chapters).

Despite numerous similarities to verbal passives, however, there is one crucial difference: while in German, verbal passives are marked periphrastically via the auxiliary *werden* ‘become’ and participial morphology on the verb (3b), the embedded predicate in *lassen*-passives and LMs obligatorily surfaces with infinitival morphology (4). Adding passive morphology to the embedded verb instead is infelicitous (5).

- (3) a. Peter putzte die Fensterscheibe. (active)  
*Peter cleaned the window*  
 ‘Peter cleaned the window.’
- b. Die Fensterscheibe wurde geputzt. (passive)  
*the window became cleaned*  
 ‘The window was cleaned.’
- (4) a. Er ließ die Fensterscheibe putzen. (*lassen*-passive)  
*he let the window clean.INF*  
 ‘He made someone clean the window.’
- b. Die Fensterscheibe lässt sich leicht putzen. (LM)  
*the window lets REFL easily clean.INF*  
 ‘The window cleans easily.’
- (5) a.\*Er ließ die Fensterscheibe geputzt (werden).  
*he let the window cleaned become*  
 ‘He made someone clean the window.’
- b.\*Die Fensterscheibe lässt sich leicht geputzt (werden).  
*the window lets REFL easily cleaned become*  
 ‘The window cleans easily.’

Haspelmath (1990) shows that, cross-linguistically, argument alternations such as the passive are morphologically marked (synthetically via a stem affix (as in e.g. Greek) or periphrastically (as in German)): out of the 80 languages Haspelmath investigated in his study, 31 were found to have a passive, and all 31 languages marked their passives in some way. He thus concludes that ‘in general passive constructions without passive morphology do not exist’ (27). In fact, the contrast between verbal passives and *lassen*-passives in terms of the morphological marking has led a number of researchers to reject the idea that an



embedded passive is involved (see e.g. Grewendorf 1983; Gunkel 2003). Instead, these authors argue that *lassen* embeds a bare vP (see chapter 3 for discussion). Clearly, a bare vP analysis of the infinitival complement in *lassen*-passives and LMs cannot easily account for the observed Voice-effects (licensing of a *by*-phrase; DRE; stem allomorphy; a.o.) and has to be rejected.

Lavidas (2012), who discusses the development of passives in Greek, shows that non-active morphology as a passive marker is only a later development. In Classical Greek, passive constructions can be found that are marked with active morphology (6), suggesting that Haspelmath's generalization is possibly too strong.

- (6) a. eis te: n heirkte: n esiptei hypo to: n ephoro: n  
*in the prison throw.ACT.PRES.3SG by the.GEN Ephors.GEN*  
 'He is thrown into prison by the Ephors.'
- b. e: ggelthe: tois to: n Syrakosio: n strate: gois oikothern hoti  
*announced.3SG the.dat the.GEN Syracusan.GEN generals.DAT from.home that*  
*pheugoien hypo tou de: mou.*  
*banish.ACT.PRES.3PL by the.GEN citizens.GEN*  
 'Word came from home to the Syracusan generals that they had been banished by the citizens.'
- (Lavidas 2012: 94, (2))

Similarly, it is well-known that, in English, progressive morphology is ambiguous as to grammatical Voice, as the following examples from Maling (2006) show.

- (7) a. The trunks were carrying down the stairs.  
 b. The men were carrying down the trunks.

While (7a) receives a passive interpretation, (7b) is active. The fact that the same type of morphology can surface in active and passive contexts is again unexpected under Haspelmath's generalization.

It seems, then, that the absence of passive morphology in *lassen*-passives and LMs is not an argument against an embedded passive. The question that I will thus address in the following section is: how can the absence of passive morphology be accounted for?

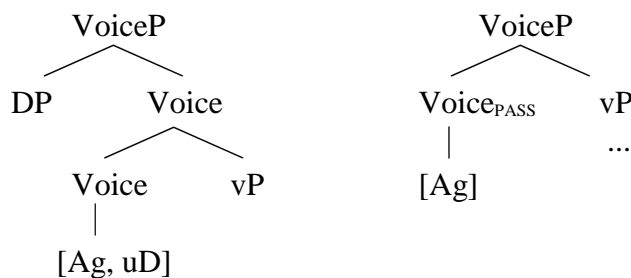
### 7.2.2 The Analysis

It appears from the discussion in the preceding section (as well as that in chapters 3 and 4) that Haspelmath's generalization is too strong. While it seems to hold for root clauses in German, passives can apparently surface without morphological marking (or: with some default marking that is different from that found in passives, see below) in a certain type of infinitival clause. To be more precise, I propose that unmarked passives can arise in RIs. In

this section, I will derive this fact. Since I cannot do justice to the bulk of literature that has been written on passives, I will concentrate on two more recent theories of passivization, Embick (2004) and Bruening (2012), and show how, under these theories (combined with the proposed treatment of RIs as VoicePs) unmarked passives can be derived.

As mentioned above, I assume that the core property of verbal passives is that the external argument cannot be overtly realized (except as an adjunct *by*-phrase). In the framework adopted here, where VoiceP is the projection associated with the introduction of the external argument, this means that somehow Voice in passives must be prevented from projecting an overt DP in its specifier. To this end, Embick (2004) assumes the existence of a dedicated passive Voice head, which differs from active Voice in the way illustrated in (8).<sup>1</sup>

- (8) a. **Active Voice**                      b. **Passive Voice**



The [uD]-feature on active Voice in (8a) functions as an EPP-feature that triggers the projection of a specifier. This specifier is filled by the external argument, which is thematically related to the eventuality denoted by the vP via the semantic feature [Ag], which Embick assumes bears the properties proposed by Kratzer (1996) (compare Kratzer's semantics for Voice in (9)).

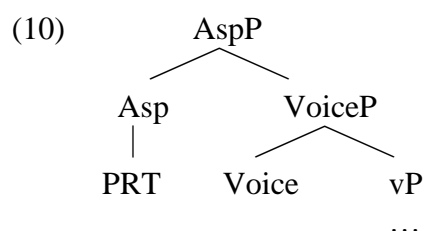
- (9)  $[[\text{Voice}]] = \lambda x \lambda P \lambda e. [P(e) \ \& \ \text{Agent}(x, e)]$

In other words, the feature [Ag] opens an external argument slot which is associated with agentive semantics. Crucially, now, while passive Voice (8b) has interpretable feature content via the presence of [Ag], it lacks a specifier, and so no overt DP can be merged and interpreted as the agent of the event denoted by the vP. The variable introduced by [Ag] in passives will subsequently be bound by existential closure.

Despite his proposal of a specific passive VoiceP, Embick (2004) proposes that the participial morphology that surfaces on the verb in verbal passives is not introduced by Voice, but by the

<sup>1</sup> Embick uses vPs rather than VoicePs and a Case feature instead of [uD]. I adjusted the features on Voice to the terminology and theoretical assumptions adopted in this thesis.

head of an aspectual projection AspP on top of Voice. This is illustrated in (10).<sup>2</sup>



Note that the VoiceP in (10) is not specified as active or passive. This is for a good reason: the claim that participial morphology is dissociated from Voice allows Embick to account for the well-known syncretism between verbs in the perfect, the resultative, and in eventive passives (illustrated in (11) and (12) for English and German respectively; I used *un*-prefixation to disambiguate the (b) examples in favor of the resultative use).<sup>3</sup>

- (11) a. John has **opened** the door. perfect  
 b. The door was **un-opened**. resultative  
 c. The door was **opened** (by John). passive

- (12) a. Hans hat Mark **gekämmt**. perfect  
*Hans has Mark combed*  
 ‘Hans has combed Mark.’  
 b. Mark war **un-gekämmt**. resultative  
*Mark was un-combed*  
 ‘Mark was uncombed.’  
 c. Mark wurde (von Hans) **gekämmt**. passive  
*Mark became by Hans combed*  
 ‘Mark was combed (by Hans).’

This syncretism is straightforwardly accounted for if AspP is the source of participial morphology and can structurally combine with an active VoiceP, a passive VoiceP, or a bare vP - giving rise to perfect participles, passive participles, and resultatives, respectively (see Embick 2004 for evidence that resultatives lack Voice).

Turning now to the issue of unmarked passives, note that Embick's approach in principle allows the absence of passive morphology if, for some reason, AspP cannot be projected. I propose that this is exactly the situation in RIs. Recall that in chapter 4 I argued that RIs are

<sup>2</sup> Pitteroff (2009) proposed that the passive auxiliary realizes a Voice head, while the participial morphology is introduced by a vP-internal AspP (see also Collins 2005 for the assumption that the participial morphology is associated with a projection below Voice). As it turns out, none of these analyses can easily account for the absence of passive morphology in *lassen*-passives or LMs.

<sup>3</sup> The resultative use is a subclass of what has more often been treated as adjectival passive. Embick, however, claims that this latter category is too coarse and should be split into two subclasses: stative and resultative. While the former simply denotes a state, the latter denotes a state that is the result of a grammatically represented event. Even though statives and resultatives are often syncretic, this is not always the case. I thus restrict the discussion in the text to the resultative, passive, and perfect, which are always formally identical. See also Kratzer (2000) for a more fine-grained classification of adjectival passives, in which target and resultant state passives are distinguished.

maximally VoicePs, which means that RIs are restricted to argument introducing projections.<sup>4,5</sup> As a consequence, Embick's AspP lies outside the domain of projections contained in RIs, which are then expected to allow a passive-like argument constellation (i.e. a VoiceP with no overtly realized external argument) without the morphological marking that is canonically associated with passivization in root clauses.

This explanation is supported by Hindi indirect causatives, discussed in Embick & Bhatt (2003). An example of such a causative is provided in (13).

- (13) *zamiindaar-ne (dakaitō-se) makaan jal-vaa diyaa*  
*landlord-ERG bandits-INSTR house.MASC burn-CAUS GIVE-PERF.MASC*  
 'The landlord had the house burned (by the dacoits).'

The embedded agent in (13) is marked with the instrumental case marker *-se*, which also surfaces on the demoted agent in passives (14).

- (14) *tum-se itnaa khaanaa kaise khaayaa jaataa hai?*  
*you-INSTR so.much food.MASC how eat-PERF.MASC PASS-HAB.MASC be.PRS*  
 'How is it that so much food is eaten by you?'

In that regard, then, Hindi indirect causatives are comparable to German *lassen*-passives (or Romance *Faire Par* causatives, for that matter). The syntactic structure Embick & Bhatt propose for this type of causative sentence is given in (15): *v* takes a passive complement (e.g.

<sup>4</sup> See chapter 4, as well as Huber (1980), Enzinger (2010), a.o. for the observation that causative *lassen* disallows any embedded auxiliaries. Following Wurmbrand (2001), I have taken this as an indication of the absence of all aspectual projections as well as TP from the infinitival complement.

<sup>5</sup> It has been argued that this restriction does not hold for restructuring infinitives in general (e.g. ter Beek 2008; Gereon Müller, p.c.) The following examples were provided by Martin Salzmann, p.c.:

- (i) *Gewählt zu werden hoffe ich dafür nicht.*  
*elected to become hope I for.this not*  
 'I hope not to be elected for this.'
- (ii) *weil dafür keiner gewählt zu werden hofft.*  
*because for.this no one elected to become hopes*  
 'because no one hopes to be elected for this.'
- (iii) *weil dem Chef alle vorgestellt zu werden hofften.*  
*because the.DAT boss all introduced to become hoped*  
 'because everyone hoped to be introduced to the boss.'

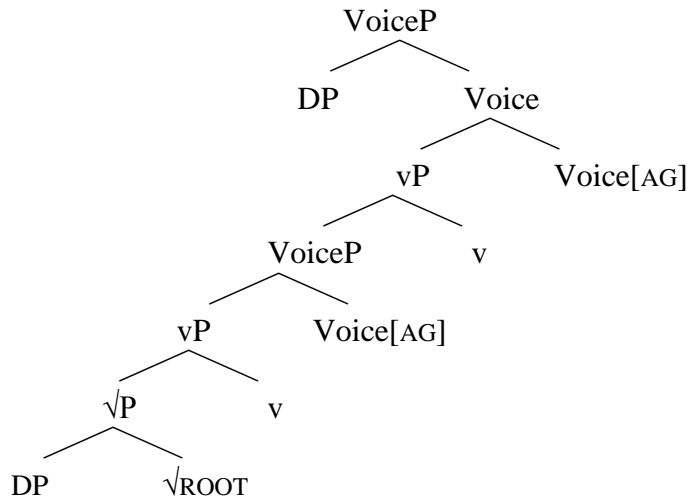
The core challenge for the proposal developed here is that the infinitival complements contain a fully fledged passive, including passive auxiliary and participial morphology on the verb. The question that arises is whether these examples really involve restructuring. The only indication that this is the case is the scrambling of the embedded (optional) PP-argument/dative argument into the matrix clause. Yet, recall from the discussion in chapter 3 that Wurmbrand (2001) argues focus scrambling to be possible from non-restructuring infinitives, such that one first has to prove that the examples above involve non-focus scrambling. Further, if *hoffen* in principle allows a restructuring infinitive that is bigger than Voice and includes passive morphology, the following long passives should be marginally acceptable, contrary to fact.

- (iv) *\*weil der Roman vorgelesen zu werden gehofft wurde.*  
 'because the novel was hoped to be read out aloud.'

If, however, it should turn out that (i)-(iii) involve an RI, this would mean that there is something special about the RI that combines with AcI-predicates (see Lundin 2003:73 for a suggestion along these lines). The obvious question that arises then is how RIs can be defined uniformly.

a VoiceP with an [AG]-feature but no projected external argument) – exactly as I have suggested for *lassen*-passives in chapter 3 (I employ the structure from Embick 2010: 59, as it involves the VoiceP-vP split).

(15) **The syntax of Indirect Causatives in Hindi (Embick & Bhatt 2003; Embick 2010)**



Crucially, Embick & Bhatt show that the morphological form of the embedded predicate in indirect causatives is unexpected. This can be seen when considering verbs that undergo the causative alternation. In Hindi, these verbs fall into two classes: one class shows no morphological distinction between the intransitive and transitive variant (16a),<sup>6</sup> while the transitive variant in the other class is marked with *-aa* (16b) (data from Embick 2010:57).

(16) **Intransitive/Transitive Alternations in Hindi**

	<b>Intransitive</b>	<b>Transitive</b>	<b>Gloss</b>
a.	bāṭ-naa	bāāṭ-naa	‘be divided/divide’
	chhil-naa	chhiil-naa	‘be peeled/peel’
	ḍhal-naa	ḍhaal-naa	‘shape/sculpt’
b.	bach-naa	bach-aa-naa	‘be saved/save’
	chamak-naa	chamak-aa-naa	‘shine’
	chip-naa	chip-aa-naa	‘hide’
	gal-naa	gal-aa-naa	‘melt’

Embick & Bhatt treat the *-aa*-exponent as a spell-out of the Voice head, arguing that in cases like (16a), this head is realized as  $-\emptyset$ .

Passives in Hindi are formed periphrastically, involving the auxiliary ‘go’ and the participial form of the verb, which is signaled by the presence of an *-aa*-suffix. Compare the active-passive pair in (17) (see also the passive in (14)).

<sup>6</sup> Except for certain stem alternations, which can, however, be also observed in *-aa* affixed transitives. See Embick & Bhatt (2003) for details.

- (17) a. Amit        paanii        ubaal rahaa        thaa  
*Amit.MASC water.MASC boil PROG.MASC be.PAST.MASC*  
 ‘Amit was boiling the water.’  
 b. Paanii        ubaal-aa    jaa    rahaa        thaa  
*water.MASC boil-PART PASS PROG.MASC be.PAST.MASC*  
 ‘The water was being boiled.’

(Embick & Bhatt 2003: 19, (38b,c))

If the underlying transitive form is already marked with an *-aa*-suffix (that is, if it belongs to the class of verbs in (16b)), the participial form results in an *V-aa-aa* sequence: *bach-aa; bach-aa-aa*.<sup>7</sup> In other words, for verbs of the  $-\emptyset$  or *-aa*-class, there is no difference between the Voice exponent in the active and the passive (Embick 2010, fn. 13).

Turning back to indirect causatives, it can be seen that the exponent of the embedded Voice is different from the Voice exponent in root context.

- (18) a. Ram-ne    Ramesh-ko    bach-**aa**-yaa.  
*Ram-ERG Ramesh-ACC save-AA-PART*  
 ‘Ram saved Ramesh.’  
 b. Ram-ne    Mahesh-se    Ramsh-ko    bach-**vaa**-yaa  
*Ram-ERG Mahesh-INTR Ramesh-ACC save-VAA-PART*  
 ‘Ram had Ramesh saved by Mahesh.’

Embick & Bhatt propose that *-vaa* in indirect causatives are in fact two morphemes: *-v*, which realizes the embedded (passive) Voice, and *-aa*, which realizes the higher Voice head. Thus, since the exponent of active and passive Voice in root contexts is identical ( $-\emptyset$  / *-aa*, depending on the Root), the embedded Voice in indirect causatives is obviously realized differently. Furthermore, note that, apart from the morphological marking on the verb, passives in root clauses and the embedded passive in indirect causatives differ in terms of the presence/absence of the passive auxiliary. The situation is thus comparable to German *lassen*-passives and LMs: despite the fact that a passive is embedded, the embedded predicate surfaces with some unexpected morphological marking: infinitival morphology in German, the suffix *-v* in Hindi.

How can the special morphology in Hindi indirect causatives be accounted for? Embick & Bhatt (also Embick 2010) propose that the different Voice exponents ( $-\emptyset$ , *-aa*, and *-v*) are contextually triggered allomorphs. While the first two are inward-sensitive to the type of Root involved, the latter is outward-sensitive to the presence of an immediately dominating *v*-head, cf. the Vocabulary Item in (19).

- (19) Voice[AG] → *-v* / \_\_\_ dominated by *v*

<sup>7</sup> The Voice exponent and the participial morphology are ultimately split up by an epenthetic vowel.

For German, one could thus argue that the infinitival morphology in *lassen*-passives and LMs is also a spell-out of a Voice-head in the context of an immediately dominating vP (20).<sup>8</sup>

(20) Voice[AG] → *-en* / \_\_\_ dominated by v

According to (20), infinitival morphology is the exponent of the embedded Voice independently of whether this VoiceP is active or passive, thus deriving the fact that in PCCs, just as in *lassen*-passives, the embedded predicate surfaces as a bare infinitive (see Zwart 2012 for the claim that infinitival morphology in many Indo-European languages is Voice-neutral).

Alternatively, infinitival morphology could be treated as a default marker that is inserted at PF in cases where no other specification (for e.g. Tense, Voice, etc.) is present. I leave the choice between these two possibilities open, as it does not affect the core argument being made here: under Embick's (2004) approach to passives, the existence of unmarked passives in LMs can be accounted for.

Recently, the assumption that there is a single head which is responsible not only for the introduction of the external argument but also the active-passive alternation (cf. Embick's passive Voice head) has been called into doubt. Instead, it has been claimed that there is a separate passive projection above VoiceP (e.g. Collins 2005; Bruening 2012; Kiparsky 2013; Sundaresan 2013; Wurmbrand 2013a,b; AAS 2014; Spathas, Alexiadou & Schäfer to appear). The motivation for such a split approach comes from the observation in Klaiman (1991) that a passive structure is not possible unless a corresponding active exists. This dependency cannot be expressed in a system where an active and a passive projection are structurally in complementary distribution. It readily comes out, however, if passivization is linked to functional material on top of (active) Voice.<sup>9</sup>

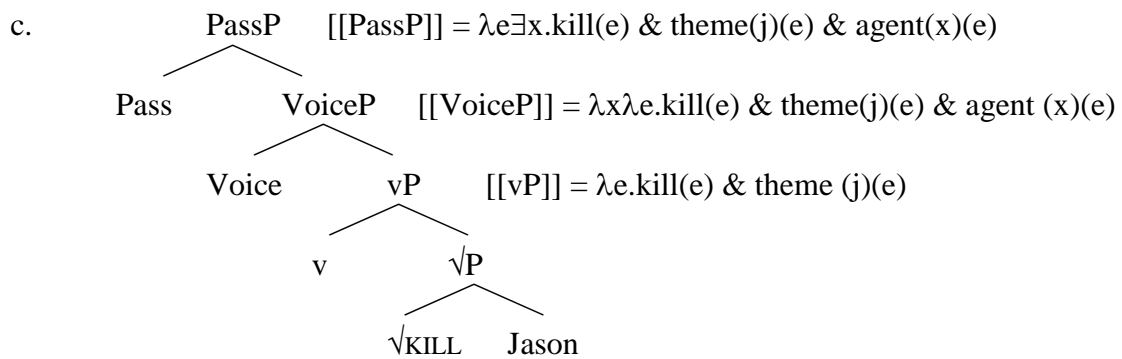
In Bruening (2012), such a system is developed in some detail. He argues that passives involve a functional head Pass that combines with an open predicate (i.e. a VoiceP which opens an external argument slot without providing a DP to fill it) and existentially binds the external argument variable. The semantics of Pass are provided in (21b). The relevant part of the passive sentence in (21a) is given in (21c), together with the semantic derivation.

- (21) a. Jason was killed.  
b.  $[[\text{Pass}]] = \lambda g_{e, \text{st}} \lambda e \exists x. g(x)(e)$

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<sup>8</sup> If one treats the Root  $\sqrt{\text{LASS}}$  as contextual trigger, rather than v, it is possible to derive what has been called *Statusreaktion* (status government) in Bech 1955.

<sup>9</sup> Note that such an approach can straightforwardly account for the observation made above that, in Hindi, the Voice exponent of causative predicates is identical in active and passive contexts.



Bruening assumes that the sequence Pass-Voice-v is spelled out as a passive participle.

The important similarity between Embick's and Bruening's approach to passives is that passive morphology is not (exclusively) associated with the projection that introduces external argument semantics. Thus, Bruening's approach predicts the existence of unmarked passives for the same reason as Embick's analysis does: since RIs embed VoicePs, and are thus restricted to argument introducing heads, PassP will not be part of an RI. If Pass, however, is relevant for the presence of passive morphology, its absence will correlate with the absence of such morphological marking. Instead of passive morphology, then, the embedded predicate in *lassen*-passives and LMs will be marked with (default) infinitival morphology.<sup>10</sup>

In sum, the situation in *lassen*-passives and LMs, i.e. the fact that the embedded clause involves a passive argument configuration (via an agentive VoiceP without a filled specifier) but shows no passive morphology can be accounted for under approaches to passivization that dissociate passive morphology from Voice.<sup>11</sup>

Let me add a final note on the passive auxiliary. The two approaches discussed above were originally designed to capture verbal passives in English, and therefore, no specific attention has been paid to the nature of the auxiliary, which in English is not restricted to verbal passives, but occurs in adjectival ones as well. The situation is different in German, where the auxiliaries in verbal and adjectival passives are distinct (see Rapp 1996, Kratzer 2000).

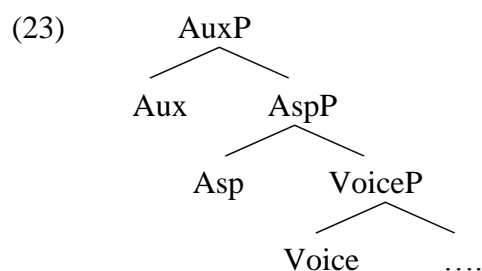
- (22) a. Die Haare wurden gekämmt.  
*the hair became combed*  
 'The hair was combed.'  
 b. Die Haare waren gekämmt.  
*the hair were combed*  
 'The hair was combed.'

<sup>10</sup> Something has to be said about the binding of the external argument variable in *lassen*-passives and LMs. I propose that it is *lassen* that binds the variable. As this issue is tied up with the proper semantic derivation of the two constructions, I will have to leave the details for further research.

<sup>11</sup> A further way of accounting for the absence of passive morphology in these contexts is briefly sketched in section 7.3.4. While the explanation given there is crucially dependent on Wurmbrand's (2013a,b) approach to restructuring, the two explanations discussed in this section are not theory-dependent in that sense.



It could be argued that in German, the actual passive marking is not the participial morphology, but rather the specific auxiliary used (see Haider 1984b, 1986b where the passive auxiliary plays an important role in the non-projection of the external argument; also Pitteroff 2009). This fact is probably difficult to implement in Embick's system. Assume one would propose a projection AuxP on top of AspP which introduces an auxiliary, as abstractly represented in (23).



Recall that the central advantage of Embick's analysis was its capacity to account for the syncretism between passive and perfect participles. In each case, AspP combines with a certain type of VoiceP. If auxiliaries were to be introduced on top of AspP, one would have to ensure that the right type of auxiliary is combined with the right type of Voice, e.g. while the perfect auxiliary *haben* 'have' requires an active VoiceP, *werden* 'become' is only compatible with passive Voice.

- (24) a. Der Mann hat das Buch gelesen.  
*the man has the book read*  
 'The man has read the book.'
- b. Das Buch wurde von dem Mann gelesen.  
*the book becomes by the man read*  
 'The book was read by the man.'
- c.\*Der Mann wurde das Buch gelesen.  
*the man became the book read*
- d.\*Das Buch hat von dem Mann gelesen.  
*the book has by the man read*

It is unclear how auxiliary insertion can be restricted such that only the grammatical examples in (24a,b) are generated. This is so because Aux in (23) is separated from Voice by the projection AspP. It would be necessary for Aux to 'look' past AspP into Voice to make sure that the perfect auxiliary is inserted only if Voice is active. While such a mechanism is not completely unimaginable (one could, for example, assume that AspP has an uninterpretable feature which is valued by an active/passive feature on Voice and which triggers the insertion of the perfect/passive auxiliary, respectively), some additional assumptions are necessary to make the system work.

Bruening's approach, by contrast, can be adjusted more easily. Assume, for example, that Pass is not involved in the spell-out of the passive participle, but introduces the passive auxiliary instead (Tom McFadden, p.c.; see also Wurmbrand 2013a,b). The participial morphology on the verb could then be treated as a case of contextually triggered allomorphy. In other words, Voice, or the sequence v-Voice, in the context of Pass is realized post-syntactically as participial morphology. This adjustment does not change the prediction made concerning the infinitival complement in *lassen*-passives and LMs: if Pass is absent, there would be no contextual trigger for participial morphology. Voice / the v-Voice sequence would therefore be spelled-out by default morphology instead.

### 7.3 Restructuring Infinitives as VoicePs

#### 7.3.1 The Issue

Recall again the syntax I proposed for *lassen*-passives and LMs ((2) repeated as (25)).

(25) a. **The Syntax of *Lassen*-Passives**

[<sub>VOICEP</sub> DP<sub>NOM</sub> [<sub>VP</sub> [<sub>VOICEP</sub> [<sub>VP</sub> DP<sub>ACC</sub> + √<sub>ROOT</sub> + v] Voice] v-√<sub>LASS</sub>] Voice]

b. **The Syntax of LMs**

[<sub>VOICEP</sub> REFL [<sub>VP</sub> [<sub>VOICEP</sub> [<sub>VP</sub> DP<sub>NOM</sub> + √<sub>ROOT</sub> + v] Voice] v-√<sub>LASS</sub>] Voice<sub>EXPL</sub>]

Recall also that the infinitival complement in these constructions qualifies as an RI. (26) exemplifies this, using remnant topicalization.

- (26) a. [lesen lassen] hat der Lehrer den Roman schon öfters.  
*read let has the.NOM teacher the.ACC novel already often*  
 b. [lesen lassen] hat sich der Roman noch nie gut.  
*read let has REFL the.NOM novel yet never well*

The issue I have left uncommented on so far is the topic of this section. It lies in the combination of (25) and (26): the assumption that RIs can be VoicePs. This is in contradiction to Wurmbrand's (2001, 2004) claim that RIs are bare vPs. The evidence for the presence of an embedded VoiceP in *lassen*-passives and LMs, however, is pretty solid. Apart from the licensing of *by*-phrases, the presence of the DRE, the acceptability of agent-oriented modifiers in LMs, as well as the observed parallelism between LMs and Greek or French-type middles in chapter 6, I provided the following morphological evidence.

- (27) a. Der Pate lässt das Schiff von seinen Handlangern versenken / \*versinken.  
*the godfather lets the ship by his henchmen sink<sub>CAUSATIVE</sub> / sink<sub>INCHOATIVE</sub>*  
 'The godfather has his henchmen sink the ship.'  
 b. Ein altes Schiff lässt sich leicht versenken / \*versinken.  
*an old ship lets REFL easily sink<sub>CAUSATIVE</sub> / sink<sub>INCHOATIVE</sub>*  
 'An old ship sinks<sub>CAUSATIVE</sub> easily.'

I adopted the Distributed Morphology perspective, according to which the stem allomorphy illustrated above is a case of contextual allomorphy, and I argued in chapter 4 that the trigger for the causative stem allomorph is Voice. In the absence of this projection, the inchoative stem allomorph surfaces. The fact that *lassen*-passives and LMs obligatorily embed the causative variant strongly points to the conclusion that the infinitival complement contains Voice.

The claim that RIs may involve the external argument introducing projection Voice is not unproblematic. In order to see why this is the case, consider the data in (28).<sup>12</sup>

- (28) a. weil der Bauer die Traktoren zu reparieren versuchte.  
*because the.NOM farmer the.ACC tractors to repair tried*  
 ‘because the farmer tried to repair the tractors.’
- b. weil die Traktoren zu reparieren versucht wurde.  
*because the tractors to repair tried became.3SG*
- c. weil die Traktoren zu reparieren versucht wurden.  
*because the tractors to repair tried became.3PL*  
 ‘because it was tried to repair the tractors.’

As has been observed frequently in the literature (see e.g. Haider 1986a,b; Reis 2001; Wurmbrand 2001, 2004), *to*-infinitives are (often) ambiguous between an RI and a (reduced) non-restructuring infinitive. This ambiguity is illustrated in (28b,c). In (28b), the embedded object does not trigger subject-verb agreement, which indicates that it has not been advanced to subject by matrix passivization. In (28c), by contrast, matrix passivization has affected the status of the embedded theme argument, which functions as the matrix subject, determining agreement on the verb. In other words, while (28c) involves an RI, (28b) does not.

Wurmbrand takes the data in (28) as evidence that RIs lack the external argument introducing projection VoiceP. While in the non-restructuring infinitive in (28b) (at least) an embedded VoiceP is present that introduces an external argument (PRO in the cases above) and triggers accusative Case on the embedded theme argument, the RI in (28c) does not license accusative Case due to the lack of Voice. Since the matrix predicate is passivized, the embedded theme is Case-marked by matrix T, thus functioning as matrix subject. In sum, the existence of long passives as in (28c) is straightforwardly explained in Wurmbrand’s system by the lack of Voice and an accusative licensing head.

If, now, RIs are VoicePs, as proposed in this thesis, two issues arise: first, it is no longer clear how long passives are to be derived since, in principle, Case should be licensed in RIs under this assumption. Second, it is expected that the infinitival complement in (28b) should pattern with the one in (28c) in exhibiting the behavior of RIs, contrary to fact. When an additional

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<sup>12</sup> I am grateful to Elena Anagnostopoulou for making me aware of the relevance of these data.

restructuring diagnostic such as remnant topicalization is applied, an asymmetry shows up in the behavior of the two infinitival complements.

- (29) a. \*[zu reparieren versucht] wurde die Traktoren schon häufiger.  
*to repair tried became.3SG the tractors already more.often*  
 b. [zu reparieren versucht] wurden die Traktoren schon häufiger.  
*to repair tried became.3PL the tractor already more.often*  
 ‘It has often been tried to repair the tractors.’

While the infinitival complement in (28c) is compatible with remnant topicalization (29b), the infinitive in (28b) disallows this process (29a). In other words, even though both infinitival complements are classified as RIs since they involve Voice, they do not behave alike with respect to restructuring diagnostics. The issue can be rephrased as follows: if one allows RIs to contain Voice, how can the class of RIs be restricted in such a way that infinitival complements not exhibiting the canonical restructuring properties be excluded? One way of approaching both issues sketched in this section is to assume that RIs are VoicePs in which Voice does not introduce an argument in its specifier. Under the assumption that the infinitival complement in (28b) involves PRO in the embedded Spec,VoiceP (see Wurmbrand 2001 for argumentation that this is, in fact, the case), the fact that it does not behave like an RI is then predicted. I thus propose the following revision of Wurmbrand’s vP-approach to restructuring.

- (30) Restructuring Infinitives are specifierless VoicePs

Before I turn to Wurmbrand’s (2013a,b) revision of her original theory, I will first provide some further evidence that RIs do in fact involve Voice.

### 7.3.2 Restructuring and Voice

Having so far only provided evidence for a VoiceP in the infinitival complement of *lassen*-passives or LMs, I will in this section discuss evidence in favor of the presence of a VoiceP in RIs in general. This suggests that the proposed analysis of *lassen*-passives and LMs is not in conflict with the theory of restructuring.

First, the argument from stem allomorphy repeated above can be used to investigate the size of RIs in general. Consider (31) (all examples involve long passivization, indicated by the nominative form of the determiner, suggesting the presence of an RI).

- (31) a. Der Frachter wurde zu versenken / \*versinken versucht.  
*the.NOM freighter became to sink<sub>CAUSATIVE</sub> / sink<sub>INCHOATIVE</sub> tried*  
 ‘People tried to sink the freighter.’

- b. Der Baum wurde zu fällen / \*fallen begonnen.  
*the.NOM tree became to fall<sub>CAUSATIVE</sub> / fall<sub>INCHOATIVE</sub> begun*  
 ‘People began to cut down the tree.’
- c. Der Vulkanier wurde einzuschläfern / \*einzuschlafen versucht.  
*the.NOM Vulcan became to.put.to.sleep / fall.sleep tried*  
 ‘People tried to put to sleep the Vulcan.’

(31) illustrates that in ‘classical’ cases of restructuring (i.e. ones involving Wurmbrand’s 2001, 2004 class of lexical restructuring predicates), only the causative stem allomorph is acceptable in the infinitival complement. Under the approach to stem allomorphy adopted here, (31) is thus evidence in favor of the presence of an embedded Voice even in these cases of restructuring. A bare vP approach arguably fails to capture this observation.

Second, if one goes beyond restructuring in European languages, one finds languages which exhibit Voice morphology on the embedded verb in RIs (see also Wurmbrand 2013a,b for discussion). In the Austronesian language Chamorro, for example, passive verbs are formed with the infix *-in-*. The agent is suppressed and can optionally be realized overtly bearing oblique morphological case, corresponding to the English *by*-phrase (Chung 2004). This is illustrated in (32).<sup>13,14</sup>

- (32) **Binisita** i haga-nmami as Manuel. Chamorro  
*NPL.RL.IN.PASS.visit the daughter-IPL OBL Manuel*  
 ‘Our daughter was visited by Manuel.’

Importantly, in long passives, the embedded verb needs to surface with passive morphology (33). (34) illustrates the same point with data from the Austronesian language Isbukun Bunun. ((34) is taken from Wu 2013 as cited in Wurmbrand 2013a,b; PV stands for Patient Voice and is the morphological marking used in passives).

- (33) **Tinituhun** esta si Dolores kinässä as Antonio.  
*NPL.RL.IN.PASS.begin already Dolores NPL.RL.IN.PASS.tease OBL Antonio*  
 ‘Antonio began to tease Dolores.’  
 (Lit. ‘Dolores was begun to be teased by Antonio.’)

- (34) **Iliskinun-ku** bunbun-a tu baliv-un. Isbukun Bunun  
*want.PV-1SG.ACC banana-that.NOM TU buy-PV*  
 ‘The bananas are wanted to be bought by me.’

Wurmbrand (2013a,b) classifies these languages as *Voice matching* languages. As the following Chamorro examples show, active/passive mismatches lead to ungrammaticality.

<sup>13</sup> In fact, there are two passive morphemes whose choice depends on the number feature of the implicit argument. Chung points out that if the latter is plural or unspecified, the passive morpheme is realized as the prefix *ma-*; if it is singular, the infix *-in-* is used.

<sup>14</sup> All the Chamorro data below is taken from Chung (2004).

- (35) a. \*Tinituhun                    ha-lalatdi                    si Dolores i famagu'un  
           *NPL.RL.IN.PASS.begin 3SG.RL.TR-scold Dolores the children*  
           ‘Dolores began to scold the children.’  
 b. \*Ha-hähassu                    si Carmen binisita                    i biha.  
           *3SG.RL.TR-think.PROG Carmen NPL.RL.IN.PASS.visit the old.lady*  
           ‘Carmen is thinking of visiting the old lady.’

If RIs were simply bare vPs, how could the Voice morphology on the embedded predicate in long passives be explained? Based on the ungrammaticality of the examples in (35), one could in principle assume some form of morphological feature spreading leading to a situation where both verbs have the same Voice feature at PF. There are two arguments against this. First, Haider (1993) observed that the phenomenon of long passivization, i.e. the situation in which an argument of the embedded predicate establishes an A-dependency with matrix T, does not require a passivized matrix verb, but arises if the matrix predicate is unaccusative:

- (36) a. weil es mir gelang, den / \*der Brief auf Anhieb zu entziffern.  
           *because it me.DAT managed the.ACC / the.NOM letter straight.away to decipher*  
 b. weil mir der / \*den Brief auf Anhieb zu entziffern gelang.  
           *because me.DAT the.NOM / the.ACC letter straight.away to decipher managed*  
           ‘since I managed straightaway to decipher the letter.’

In (36a), extraposition indicates that the infinitival complement is a non-restructuring infinitive. As a consequence, the embedded object receives accusative within the embedded clause. In (36b), by contrast, the infinitival complement is an RI since the embedded theme agrees with matrix T, as signalled by the nominative form of the determiner. The data in (36b) thus illustrates the same point as 'canonical' long passives: if the matrix predicate cannot trigger accusative case on the theme argument in an RI (because it is passive or unaccusative), the theme surfaces with nominative case instead.

Returning to Chamorro, Chung (2004) provides the following examples involving a matrix unaccusative predicate and an embedded passive verb (see Chung's paper for arguments that the matrix predicates are, in fact, unaccusative).

- (37) a. O'sun                    man-binisita                    i mañe'lu-hu famalao'an ni médiku.  
           *NPL.RL.IN.bored PL.RL.IN.PASS-visit the siblings-1SG female OBL doctor*  
           ‘The doctor is tired of visiting my sisters.’  
 b. Malägu'                    ni-risibi                    katta-nña as Juan.  
           *NPL.RL.IN.want NPL.RL.IN.PASS-receive letter-3SG OBL Juan*  
           ‘Juan wants to receive her letter.’

If the passive morphology on the embedded verb in restructuring contexts was a consequence of morphological feature spreading, the embedded verbs in (37) should not surface with passive morphology, as there is no passive feature on the matrix predicate.

Wurmbrand (2013a,b) provides a second argument against a feature spreading account. She notes that, in addition to the class of languages that exhibit Voice matching in restructuring contexts, a second class exists that employs default morphology. In such languages, the embedded predicate in an RI always surfaces in the active/infinitival form. Consider the following examples of long passives from Mayrinax Atayal (the data comes from Chen 2010 as cited in Wurmbrand 2013a,b).

- (38) a. naqaru.un i t.um.uting ni yumin ku bawaq (Mayrinax Atayal)  
*finish.PV LNK beat.AV.beat GEN Yumin NOM pig*  
 ‘Yumin finished beating/killing the pigs.’  
 (Lit. ‘The pigs were finished to be beaten by Yumin.’)  
 b.\*naqaru.un i tuting.un ni yumin ku bawaq  
*finish.PV LNK beat.PV GEN Yumin NOM pig*

The situation in Mayrinax Atayal is thus the inverse of the situation in Chamorro: the embedded verb in a long passive has to be marked as active (38a), while the passive form is ungrammatical (28b). In that regard, Mayrinax Atayal resembles German. Consider the ungrammaticality of (39) (but see the discussion in footnote 5).

- (39) \*weil der Traktor repariert (zu werden) versucht wurde.  
*because the.NOM tractor repaired to become tried became*  
 ‘because the tractor was tried to be repaired.’

Mayrinax Atayal presents evidence that the embedded AV-morpheme is really a default Voice realization. One of Chen’s arguments involves A'-extraction; while this type of movement in simple clauses is only possible if the verb occurs in the patient voice PV, A'-extraction in long passives is perfectly acceptable, even though the embedded verb is marked as active (40c). Long passives thereby differ from non-restructuring contexts in which A'-extraction is unacceptable (40d). The contrast between (40b,d) on the one hand, and (40c) on the other, strongly suggests that the active inflection on the embedded verb in the long passive in (40c) is a default marker.

- (40) a. nanuan ku tuting.un ni yumin.  
*what NOM beat.PV GEN Yumin*  
 ‘What is Yumin beating/killing?’  
 b.\*nanuan ku t.um.uting i yumin.  
*what NOM beat.AV.beat NOM Yumin*  
 c. nanuan ku naqaru.un i t.um.uting ni yumin  
*what NOM finish.PV LNK beat.AV.beat GEN Yumin*  
 ‘What did Yumin finish beating/killing.’  
 d.\*nauan ku siwal.an ni tali i t.um.uting i Yumin.  
*what NOM allow.LV GEN Tali COMP beat.AV.beat NOM Yumin*  
 ‘What did Tali allow Yumin to beat/kill?’

If the morphological marking of the embedded predicate in RIs really was due to morphological feature spreading, Wurmbrand concludes, it could not account for default voice languages.

In sum, the stem allomorphy facts from German, as well as the presence of Voice morphology in restructuring contexts of certain Austronesian languages, strongly suggests that RIs involve a Voice head. It has to be noted, however, that, in line with (30), all the examples discussed in this section are similar in that the embedded VoiceP must not introduce an overt DP in its specifier, suggesting that this is, indeed, a core property of RIs.<sup>15</sup>

### 7.3.3 Wurmbrand (2013a,b)

To the best of my knowledge, Wurmbrand's (2013a,b) is the only theory of restructuring that incorporates the idea that RIs are specifierless VoicePs. In this and the following section, I will present her analysis and apply it to *lassen*-passives and LMs.<sup>16</sup> Note that I adjust her analysis to the decomposition of the verbal layer adopted in this thesis. I assume that the features she postulates for *v* surface on Voice.<sup>17</sup>

Adopting a valuation-based approach to Agree (e.g. Pesetsky & Torrego 2007, a.o.), in which unvalued features must be valued before Spell-out, Wurmbrand proposes that Voice comes with two features that may either be valued or unvalued: [ $\varphi$ :\_\_/*val*] and [*Voice*:\_\_/*Agent*]. With respect to the process of feature valuation, she adopts the Agree mechanism in (41).

#### (41) Reverse Agree

- A feature *F*:\_\_ on  $\alpha$  is valued by a feature *F*:*val* on  $\beta$ , iff
- i.  $\beta$  c-commands  $\alpha$  AND
  - ii.  $\alpha$  is accessible to  $\beta$ . [*accessible*: not spelled-out]
  - iii.  $\alpha$  does not value {a feature of  $\beta$ }/ {a feature *F* of  $\beta$ }

(Wurmbrand 2013b:7)

For simple active contexts as in (42a), Voice is merged with a valued [*Voice*:*AGENT*]-feature, and an unvalued  $\varphi$ -feature. The latter requires a DP with valued  $\varphi$ -features to be merged in

<sup>15</sup> The claim that RIs are VoicePs that do not project a specifier holds only for cases of lexical restructuring, of course. The complement of functional restructuring predicates, e.g. epistemic/root modals, certain aspectual verbs, etc., are not thus restricted. This is expected, however, since such constructions are monoclausal to begin with, projecting only one verbal domain.

<sup>16</sup> I will not discuss every detail of Wurmbrand's analysis, but instead will focus exclusively on those aspects that are relevant for the derivation of *lassen*-passives and LMs. In other words, I gloss over the Voice incorporation involved in her approach, as I do not see any evidence that this process is required for the constructions in question. The interested reader is referred to Wurmbrand (2013a,b).

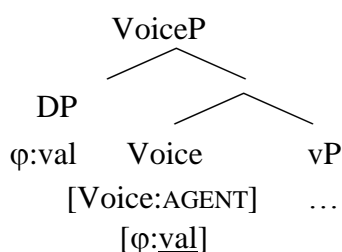
<sup>17</sup> A different way of translating her analysis to a split-*v* system is to distribute the two features across the two heads *v* and Voice. Since the features are concipated in a way such that the function of both of them is Voice-related, I reject this possibility.



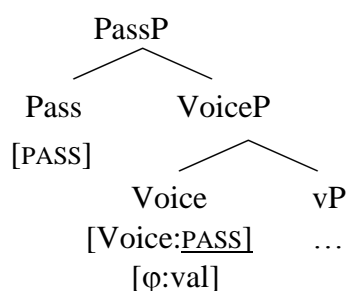
Spec, VoiceP (in this regard functioning similar to the [uD]-feature employed elsewhere in this thesis). This DP then values [ $\phi$ :   ] on Voice via Agree, which is interpreted as an 'argument-of' relation.<sup>18</sup> [Voice: AGENT] translates as an argument introducing head such as Kratzer's (1996) Voice, and identifies the  $\phi$ -features as the agent argument ([Voice: AGENT] also licenses accusative Case; since I adopt a different approach to case assignment, I will not discuss this aspect any further).

For passives (42b), Wurmbrand assumes that the Voice-head is merged with an unvalued Voice-feature and lexically specified [ $\phi$ :val], which correspond to the features of the implicit argument (in the sense of Legate 2010, 2012). The unvalued Voice-feature is valued via Reverse Agree by a c-commanding Pass-head, which harbors the passive auxiliary (cf. the discussion in section 7.2.2) and bears a [Pass] feature. [Voice:Pass] on Voice translates as a head introducing an existentially closed agent argument, and thus identifies the  $\phi$ -features on Voice as the implicit agent of the event.<sup>19</sup>

(42) a. **Active**



b. **Passive**



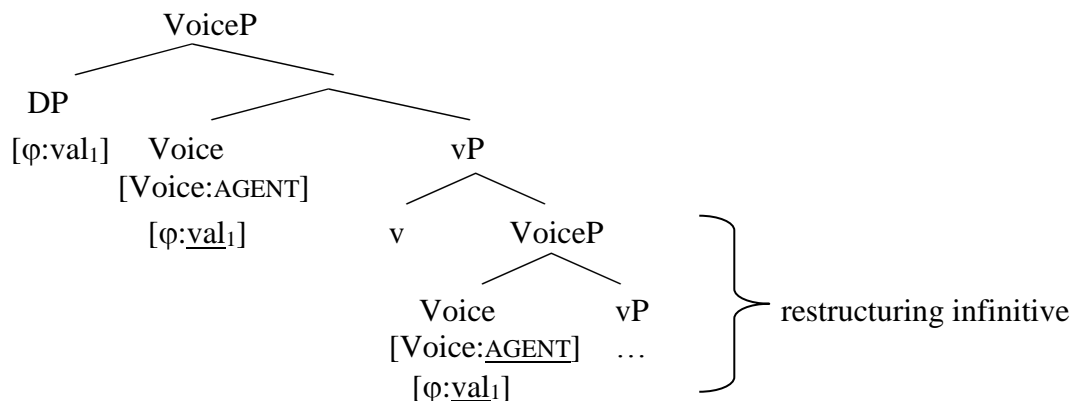
Incorporating the idea that RIs are VoicePs, Wurmbrand proposes a specific type of restructuring Voice. Unlike in (42a) or (42b), both features on RI Voice are unvalued, which entails that both are dependent on external valuation. Crucially, as a consequence of this particular feature combination, no DP can be merged in the specifier of RI Voice (cf. (30)). At the same time, just as I have argued in section 7.2.2, no PassP can be merged on top of restructuring Voice. In other words, the values for the features on this type of Voice must come from the matrix clause. Hence, if a restructuring VoiceP merges with an active matrix restructuring predicate, the DP in the specifier of matrix VoiceP values the  $\phi$ -features of both the matrix and the embedded Voice. Since [ $\phi$ :val] translates as an 'argument-of' relation, this entails that the matrix subject will be interpreted as an argument of the matrix *and* the

<sup>18</sup> In the following I will use underlined values to indicate that a feature has been valued via (Reverse) Agree.

<sup>19</sup> A potential issue arises here. It is well known that the implicit argument in passives is not restricted to an agent, but rather tracks the whole range of theta-roles the external argument receives in an active sentence. This means that the thematic effect of the valued  $\nu$ -feature needs to be loosened somewhat in order to allow, e.g. experiencers as implicit arguments in passives.

embedded predicate.<sup>20</sup> Furthermore, matrix Voice will value the Voice-feature on the embedded Voice as [Voice:AGENT]. As a consequence, the ‘argument-of’ relation between the DP in the specifier of matrix VoiceP and the embedded predicate will be evaluated as an ‘agent-of’ relation. The structure of a restructuring configuration with an active matrix predicate is provided in (43).

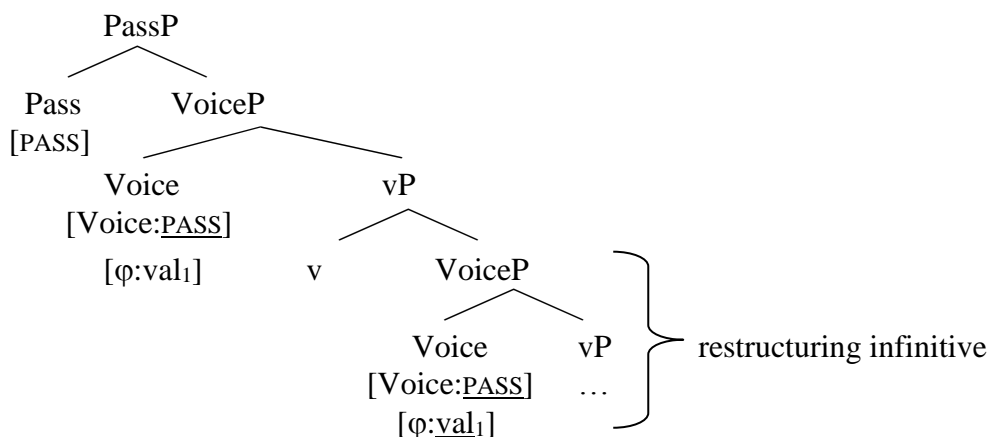
(43) **RI with Active Restructuring Predicate**



As (43) illustrates, Wurmbrand’s approach to restructuring ultimately involves Voice matching: the two Voice heads end up with exactly the same feature value. As a consequence of this, the matrix subject will be interpreted as an argument of the embedded predicate: no raising operation or control configuration is needed to derive this thematic dependency.

Turning to long passives (cf. (28c)), the derivation is as illustrated in (44).

(44) **RI with Passive Restructuring Predicate (long passive)**



Up to the merger of matrix vP, the derivation is identical to the one in (43). The embedded Voice merges with a set of unvalued Voice- and φ-features, which require valuation. Unlike in (43), though, the matrix Voice is merged with a lexically valued φ-feature that values the

<sup>20</sup> This thematic dependency in restructuring constructions was not easily captured in a bare vP-approach (see Wurmbrand 2001 for discussion).

respective feature on RI Voice. As a consequence, the implicit agent of the matrix predicate is understood as an argument of the embedded predicate. Since matrix Voice has an unvalued Voice-feature, it cannot value the same feature on the embedded Voice. This will only happen after Pass is merged, which will agree with both the matrix and the embedded Voice and value the Voice-features on both heads as [Voice:PASS]. The implicit argument is thus interpreted as the agent of both the matrix and the embedded event. Again, the result of the different Agree-relations is Voice matching meaning that both the matrix and the embedded predicate receive a passive interpretation.

Wurmbrand also provides an explanation for why the embedded predicate, despite the [Voice:Pass]-feature, does not surface with passive morphology in long passives in German, but is rather marked by default (infinitival) morphology instead. This explanation involves incorporation of the RI Voice into matrix *v* – a process for which there is no independent evidence, except that it allows her to derive the difference between Voice matching and default languages.<sup>21</sup> Without going into the details of her account, it seems to me that this difference does not necessarily require Voice incorporation. It could be assumed, for example, that in default languages, [Voice:pass] will be spelled out as passive morphology only if Voice is immediately dominated by Pass and as infinitival morphology elsewhere, cf. the Vocabulary Items in (45) (this solution is inspired by Embick & Bhatt’s 2003 treatment of Hindi indirect causatives; see section 7.2.2 for discussion).

- (45) a. [Voice:PASS] → PART / \_\_ dominated by Pass  
 b. [Voice:PASS] → -en / \_\_

In Voice matching languages such as Chamorro, by contrast, passive morphology realizes [Voice:PASS] independently of any contextual restriction, so the embedded predicate in (44) will surface with passive morphology in this type of language.

Having outlined the essentials of Wurmbrand’s account of restructuring, I will now turn to the question how this theory can capture *lassen*-passives or LMs.

### 7.3.4 Voice Matching, *Lassen*-Passives, and *Lassen*-Middles

One aspect of *lassen*-constructions that differs from ‘canonical’ instances of restructuring is the fact that the matrix and the embedded subject (typically) refer to two distinct individuals.

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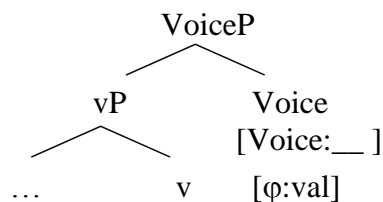
<sup>21</sup> In Bobaljik & Wurmbrand (2005, 2007), incorporation explained the anti-reconstruction effects that are observable in (lexical) restructuring constructions. I have so far not yet been able to replicate these effects in *lassen* constructions. Furthermore, Wurmbrand (2013a,b) develops a different account of these effects that does not rely on incorporation.

Consider the contrast between the lexical restructuring predicate *versuchen* ‘try’ (46a) and the PCC (46b) or *lassen*-passive (46c).

- (46) a. weil Peter den Traktor zu reparieren versucht.  
 ‘because Peter tries to repair the tractor.’  
 b. weil Peter Martin den Traktor reparieren lässt.  
 ‘because Peter makes Martin repair the tractor.’  
 c. weil Peter den Traktor reparieren lässt.  
 ‘because Peter makes someone repair the tractor.’  
 d. weil sich der Traktor leicht reparieren lässt.  
 ‘because the tractor can be repaired easily.’

As the paraphrases indicate, the matrix subject is referentially identical to the embedded external argument in (46a), but not in (46b,c). The same is trivially true for the LM in (46d). As one prominent aspect of Wurmbrand’s (2013a,b) theory of restructuring was its capacity to account for the thematic relation of the subject DP to both the matrix and the embedded predicate, this part of the theory must be adjusted if her approach is to be extended to constructions involving the causative predicate *lassen*. One way of doing this is to assume that the embedded Voice in *lassen*-passives or LMs has an unvalued Voice-feature but a lexically valued  $\phi$ -feature (Wurmbrand 2013a; Susi Wurmbrand, p.c.; I use right-headed structures henceforth in line with my assumptions about German being verb-final).<sup>22</sup>

(47) **RI in *Lassen*-Passives and LMs**

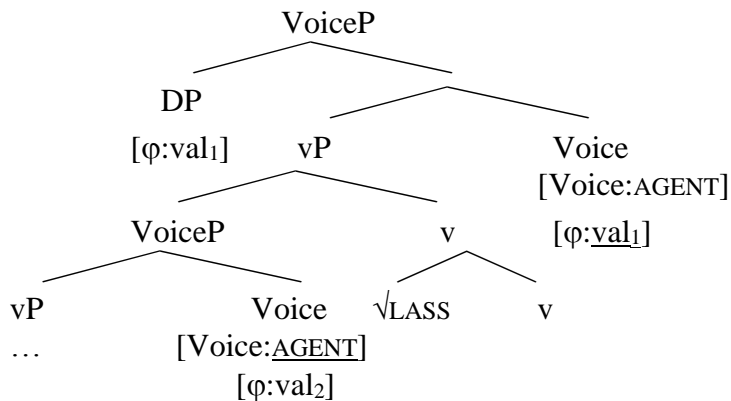


[ $\phi$ :val] on Voice will ensure that no overt argument is merged in the specifier of RI VoiceP, as well as see to the referential disjointness of the matrix subject and the (implicit) embedded subject (recall that referential identity was a consequence of the matrix subject valuing the  $\phi$ -features of both the matrix and the embedded Voice). Note that, at this point of the derivation, the embedded VoiceP in *lassen*-passives and LMs, unlike a ‘canonical’ RI Voice, is identical to the VoiceP in passives (42b): both are merged with an unvalued Voice-feature and a lexically valued  $\phi$ -feature. Yet, unlike in passives, the head immediately dominating the embedded VoiceP in *lassen*-passives and LMs is not Pass, but matrix v.

<sup>22</sup> In what follows, I will not discuss PCCs, as their restructuring status has yet to be determined, cf. the discussion in chapter 3.

Focusing on the derivation of *lassen*-passives first, the embedded Voice-feature receives its value from matrix Voice, which, being active, enters the derivation with the feature [Voice:AGENT]. The unvalued  $\phi$ -feature on matrix Voice will be valued by the DP in its specifier. This is illustrated in (48) (with the different indices on the  $\phi$ -value indicating referential distinctness).

(48) **The Derivation of *Lassen*-Passives**

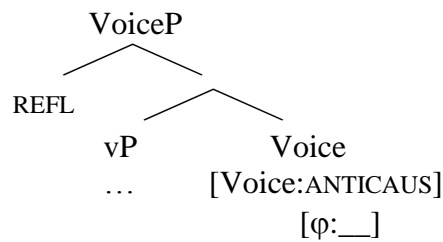


[Voice:AGENT] on the embedded *v* will identify the embedded  $\phi$ -features as the agent argument of the embedded predicate. Interestingly, the Voice matching that results from this particular approach to restructuring does not predict passive morphology to arise, since the embedded Voice-feature is valued as [Voice:AGENT] by the matrix predicate. In other words, the similarities of *lassen*-passives and verbal passives are due to the fact that the embedded Voice head is of the same type as the one that surfaces in passives. The difference in morphological marking, under this account, is a consequence of a difference in the immediate syntactic environment the VoiceP in question appears in.

Wurmbrand's system does not as easily extend to LMs, however, the reason being the fact that LMs involve the combination of an anticausative and a passive. In other words, it is not clear how a Voice-matching account would be able to cope with this. Assume, for the purpose of illustration, that a (reflexively) marked anticausative involves a Voice head that bears the feature [Voice: ANTICAUS], which translates as the syntactic and semantic absence of an agent argument.<sup>23</sup>

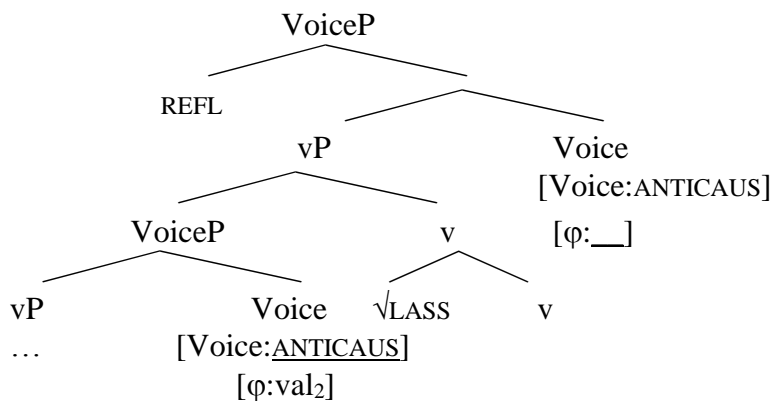
<sup>23</sup> Implementing Schäfer's (2008) expletive Voice is, for the time being, done by assuming that the Voice-head has an unvalued [ $\phi$ :\_] feature which triggers the projection of a specifier. No referential DP is merged in Spec, VoiceP except for a  $\phi$ -deficient reflexive pronoun.

(49) **Marked Anticausatives**



Based on (49), consider the derivation of an LM in (50).

(50) **The Derivation of LMs**



The matrix Voice values the lower Voice-feature as [Voice:ANTICAUS], which translates as the syntactic and semantic absence of an agent argument. This is not only empirically incorrect (as the embedded predicate in LMs clearly involves an agent), but creates a fatal incoherency in the system itself. The embedded Voice in (50) has lexically valued  $\phi$ -features (accounting for the passive-like properties of LMs), which are interpreted as the implicit external argument of the embedded predicate. At the same time, though, the lower Voice-feature indicates that there is no embedded external argument. These conflicting requirements of the two features create an inconsistency in the derivation of LMs that cannot be resolved and should lead the derivation to crash.

The only way to solve this issue is to assume with Schäfer (2008) that expletive Voice is, in fact, a derived Voice. Schäfer discusses the possibility that the VoiceP involved in reflexively marked anticausatives is syntactically an active VoiceP, which means that a DP in its specifier is potentially interpreted as an agent. While, in the case of a transitive/unergative verb, a referential DP is merged in Spec, VoiceP, this position is occupied by the referentially defective reflexive pronoun in marked anticausatives. Schäfer argues that this fact has interpretative consequences and points to the definition of Configurational Theta-Role Assignment in (51).

## (51) Configurational Theta-Role Assignment

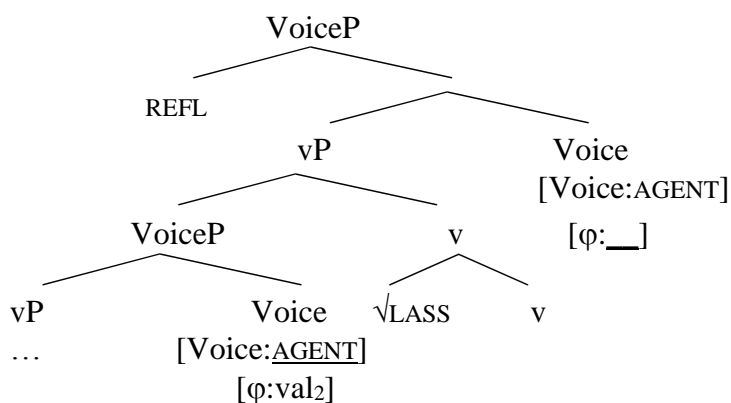
The **denotation** of a DP X bears a specific thematic relation R (R = Agent, Causer, Theme, ...) to an event E due to the specific syntactic relation of X to the syntactic structure expressing or modifying E.

(Schäfer 2008: 255)

Since the reflexive pronoun in Spec, VoiceP of reflexively marked anticausatives lacks a denotation, it cannot bear a theta-role. As a consequence, ‘the thematic impact of Voice cannot be realized. This results in an *expletive Voice projection* which does not introduce an external thematic role.’ (Schäfer 2008: 255).

Translating this idea into Wurmbrand’s system would mean that, unlike in (49), Voice in reflexively marked anticausatives enters the derivation with a [Voice:AGENT] feature. The derivation of an LM would then be as represented in (52).

## (52) The Derivation of LMs #2



The inconsistency that arose in (50) disappears under the assumption that reflexively marked anticausatives are syntactically ‘agentive’, i.e. involve a [Voice:AGENT] feature. Matrix Voice values the lower Voice-feature as [Voice:AGENT], and the lexically valued  $\phi$ -features on the embedded Voice can be interpreted as the (implicit) agent of the embedded predicate, exactly as in *lassen*-passives (compare (52) to (48)).<sup>24</sup>

In summary, an approach to restructuring that essentially involves Voice matching can account for the fact that RIs are VoicePs, without at the same time running into the problem

<sup>24</sup> ter Beek (2008) proposes that it is necessary to define three Voice-heads. A transitive Voice which has the feature specification [+theta, +acc]; another one for unaccusatives and passives, which has neither one of these features; and a third for unergatives that is specified as [+theta]. Without going into the details of her account (e.g. she claims that RI Voice are featurally identical to unergative ones), the assumption of a shared Voice-head for unaccusatives and passives would allow Voice-matching even in LMs. A similar situation arises from the discussion in Alexiadou & Doron 2012, where the same Voice head is involved in anticausatives and passives. At present, it is unclear to me, however, how to derive the difference between unaccusatives and passives with respect to the presence of an implicit agent if both constructing involve the same Voice-head. I have to leave this issue for future research.

discussed in section 7.3.1, i.e. that certain infinitival complements are structurally classified as RIs without exhibiting the canonical restructuring properties. While such an account can straightforwardly derive lexical restructuring configurations, some adjustments are required for *lassen*-passives and LMs. The embedded Voice in both constructions cannot be fully underspecified; it must be identical to the Voice-head that surfaces in verbal passives (thereby accounting for the observed similarities between *lassen*-passives, LMs, and verbal passives). With respect to LMs, the further assumption is required that expletive Voice is a derived Voice, as discussed in Schäfer (2008). Without this further assumption, a Voice matching account would lead to a fatal inconsistency with respect to the presence/absence of an embedded external argument that should lead the derivation to crash.



## CHAPTER 8

### EXPANDING THE SCOPE

#### 8.1 Introduction

In this chapter I expand the scope of the study into two different, unrelated directions, which are, nevertheless unified by constituting direct predictions of the analysis developed in the preceding chapters. The results of these two strands of research are preliminary and deserve further study, but the discussion provided should serve as a starting point.

The two topics I will be concerned with are (i) LMs cross-linguistically and (ii) impersonal LMs. The cross-linguistic perspective is motivated by the fact that the proposed analysis of LMs makes predictions about the properties of those languages that have this construction, i.e. they should have a semantically underspecified AcI-predicate *let*, should form reflexively marked anticausatives, and should permit *lassen*-passives. In section 8.2, I will show that these predictions are largely borne out by looking at Dutch, Swedish, and Danish.

Turning to the second topic, the fact that German has impersonal LMs motivates the question of how well the proposed analysis of personal LMs extends to this type of middle construction. Furthermore, the observed differences between impersonal CMs and LMs with respect to the obligatoriness of the expletive pronoun *es* ‘it’ (see chapter 2) requires an explanation, which, ideally, follows from independently motivated differences between the two impersonal constructions. In order to address these issues, I will first outline the general properties of impersonal LMs in section 8.3.1. The nature and the function of the expletive, as well as the reason for its optionality in LMs, is discussed in section 8.3.2. I will end this chapter with a discussion of a last puzzle that impersonal LMs pose for the discussion of middle constructions in general (8.3.3).

#### 8.2 *Lassen*-Middles Cross-Linguistically

##### 8.2.1 Dutch

The availability of Dutch LMs is well documented (see Everaert 1986; Marelj 2004; Ackema & Schoorlemmer 2006; Broekhuis & Corver in prep, a.o.).

- (1) a. Het truitje laat zich gemakkelijk wassen.  
*the sweater lets REFL easily wash*  
‘The sweater washes easily.’

(Everaert 1986: 57, (31c))

- b. Het hout laat zich gemakkelijk bewerken.  
*the wood lets REFL easily treat*  
 ‘The wood carves easily.’ (Everaert 1986: 57, (32a))
- c. De uitslag laat zich moeilijk voorspellen  
*the score lets REFL with.difficulty predict*  
 ‘The score is hard to predict.’ (Everaert 1986: 57, (32c))
- d. Gezouten vlees laat zich langer bewaren.  
*salted meat lets REFL longer conserve*  
 ‘Salted meat can be kept longer.’ (Loewenthal 2003: 115, (29))

Crucially, Dutch has all the ingredients necessary for the formation of LMs.

The Dutch causative predicate *laten* is comparable to German *lassen* in that it qualifies as an AcI-predicate and is semantically underspecified with respect to the type of causation expressed (see Kemmer & Verhagen 1994, who argue that the meaning of Dutch *laten* can be placed on a continuum of indirectness ranging from enablement/permission to coercion/causation). Consider the examples and paraphrases of the Dutch PCCs in (2).

- (2) a. Marie laat Jan de trui wassen.  
*Marie lets Jan the sweater wash*  
 ‘Marie made Jan wash the sweater.’  
 ‘Marie lets Jan wash the sweater.’
- b. De meester liet de kinderen het schoollied zingen.  
*the schoolmaster let the children the school.anthem sing*  
 ‘The schoolmaster made the children sing the school anthem.’  
 ‘The schoolmaster allowed the children to sing the school anthem.’

Dutch *laten*, depending on the conceptualization of the caused event as being positively or negatively evaluated by the causee, expresses permission or coercive causation, respectively, with a number of in-between cases that cannot be classified in these terms (Kemmer & Verhagen 1994; Loewenthal 2003).

In addition to the PCCs in (2), *lassen*-passives are acceptable in Dutch (Kemmer & Verhagen 1994; Loewenthal 2003; a.o.). As in German, the causee can optionally be expressed via a *by*-PP (Broekhuis and Corver, in prep). This is illustrated in (3).

- (3) a. Marie laat de trui (door Jan) wassen.  
*Marie lets the sweater by Jan wash*  
 ‘Marie made Jan wash the sweater.’
- b. De meester liet het schoollied (door de kinderen) zingen.  
*the schoolmaster let the school.anthem by the children sing*  
 ‘The schoolmaster made the children sing the school anthem.’

Finally, even though the default for Dutch anticausatives is to be morphologically unmarked (e.g. Fagan 1992; Lekakou 2005), some reflexively marked anticausatives do exist, as the following examples taken from Everaert (1986) show.

- (4) a. Hij verspreidde het gerucht.  
*he spread the rumour*  
 ‘He spread the rumour.’  
 b. Het gerucht verspreidde zich.  
*the rumour spread REFL*  
 ‘The rumour spread.’
- (5) a. Hij bood de gelegenheid (met haar kennis te maken).  
*he offered the opportunity with her acquaintance to make*  
 ‘He offered the opportunity (to make her acquaintance).’  
 b. De gelegenheid bood zich (met haar kennis te maken).  
*the opportunity offered REFL with her acquaintance to make*  
 ‘The opportunity offered itself (to make her acquaintance).’
- (6) a. De chemicus verbond de zuurstof met stikstof.  
*the chemist combined the oxygen with nitrogen*  
 ‘The chemist combined the oxygen with nitrogen.’  
 b. De zuurstof heeft zich met stikstof verbonden.  
*the oxygen has REFL with nitrogen combined*  
 ‘The oxygen combined with nitrogen.’
- (7) a. Zij vormde een groep onderzoekers.  
*she formed a group researchers*  
 ‘She constituted a group of researchers.’  
 b. Een groep onderzoekers vormde zich.  
*a group researchers formed REFL*  
 ‘A group of researchers formed.’

(Everaert 1986: 52-53)

In sum, Dutch has all the ingredients that are required under the proposed analysis of LMs to build this type of middle. The fact that Dutch LMs employ the non-productive, rather than the productive way, of forming anticausatives could be either due to an influence of German or be indicative of *zich laten* being a remnant form, just as the anticausatives in (4)-(7).

An interesting fact about Dutch LMs is the absence of an impersonal counterpart (8b), despite the existence of impersonal CMs (8a).

- (8) a. Het danst lekker op die muziek.  
*it dances nicely on that music*  
 b.\*Het laat zich lekker dansen op die muziek.  
*it lets REFL nicely dance on that music*  
 ‘It is nice to dance on that music.’

In that regard, Dutch differs from German, where (8b) is perfectly acceptable.

- (9) Es lässt sich gut auf diese Musik tanzen.  
*it lets REFL well on that music dance*

Why should this difference exist? I will discuss some potential reasons, leaving an ultimate answer for future research.

The absence of impersonal LMs in Dutch has led most researchers to analyze the reflexive pronoun in Dutch LMs as a Case absorber (most recently: Broekhuis & Corver (in prep)). Since intransitive predicates do not assign accusative, it is argued that the reflexive pronoun in (8b) would remain Caseless. Due to this violation of the Case Filter, the absence of impersonal LMs is accounted for. As pointed out in chapter 4, this approach has two shortcomings: First, it cannot explain the existence of impersonal LMs in German. Second, it predicts that in principle impersonal LMs should be well-formed without the reflexive pronoun: if there is no accusative Case to begin with, it should not be necessary to insert a Case absorber. Impersonal LMs without *zich*, however, are ungrammatical as well.

An alternative explanation for the absence of impersonal LMs could be that Dutch in fact has borrowed LMs from German, misanalyzing the construction as a reflexive *lassen*-passive (i.e. a *lassen*-passive with a reflexive pronoun in embedded object position which is bound by the matrix subject; cf. the reflexive analysis discussed in chapter 4). This reanalysis could be due to the restricted nature of reflexively marked anticausatives and the subsequent need to structurally integrate the reflexive pronoun differently.

Lekakou (2005) argues that *zich* in Dutch can be a thematic reflexive in the terminology adopted here, but it cannot function as a non-thematic reflexive, thereby differing from German *sich*, which can fulfill both functions. She proposes that this difference in the organization of the reflexive paradigm accounts for the fact that Dutch CMs, unlike those in German, are not reflexively marked (see also Schäfer 2008 for a discussion of this difference). If Lekakou is right, a reanalysis of the reflexive pronoun in Dutch LMs would require merging it in an argument position where it can be bound by a c-commanding antecedent. In other words, the only syntax that can be assigned to Dutch LMs under her theory is the one of *lassen*-passives.

If LMs in Dutch are *lassen*-passives syntactically, this would explain the absence of impersonal LMs due to the general unacceptability of embedded unergative predicates in Dutch *lassen*-passives (data courtesy Lonneke van der Plas).

- (10) a.\*De koning liet dansen.  
      *the king let dance*  
      Intended: ‘The king made someone dance.’  
      b.\*Hij liet zingen.  
      *he let sing*  
      Intended: ‘He made someone sing.’

Further motivation for this particular approach to LMs in Dutch comes from the fact that Dutch LMs, unlike their German counterparts, are incompatible with human subjects (Gertjan Postma, p.c.; Marcel den Dikken, p.c.). Recall the three-way ambiguity of the German sentence in (11).

- (11) Martin lässt sich hochheben.  
*Martinlets REFL lift*  
(i) ‘Martin makes someone lift him up.’  
(ii) ‘Martin allows someone to lift him up.’  
(iii) ‘Martin can be lifted up.’

While the Dutch variant of (11) allows the readings in (i) and (ii), it cannot have the middle interpretation. This is expected if LMs and *lassen*-passives are syntactically identical. If Dutch lacks a non-thematic reflexive pronoun, as Lekakou suggests, the difference between the causative readings in (i,ii) and the middle reading in (iii) cannot be attributed to the presence of a thematic and non-thematic reflexive pronoun, respectively (see the argumentation in chapter 4 for an explanation of the causative/permisive – middle difference along these lines). It rather has to be the case that the readings are in complementary distribution: a human subject blocks the middle interpretation, while a non-human subject blocks the causative/permisive reading.

A direct consequence of this explanation is the prediction that while in German LMs  $DP_{\text{NOM}}$  is base-generated as the internal argument of the embedded predicate, it is merged in the specifier of matrix VoiceP in Dutch. Furthermore, if this structural contrast between German and Dutch LMs was real, it would, on the one hand, support the claim from chapter 4 that the two occurrences of *lassen* in the causative/permisive and the middle context are syntactically identical, and, on the other hand, provide further evidence for the hypothesis from chapter 6 that the modality involved in LMs is hard-wired into the causative predicate *lassen*. If this wasn't the case, a *lassen*-passive should never be able to express the middle semantics.

So far, however, I have found no way of testing the alleged difference between Dutch and German LMs. Since Dutch requires Spec,TP to be occupied by the structural subject, the configurational tests employed in chapter 4, which rely on the possibility that  $DP_{\text{NOM}}$  stays in situ, cannot be applied. Furthermore, since modern Dutch does not show overt case marking on full DPs, and has conflated accusative and dative in the pronominal system, no evidence involving lexically case-marked arguments exists that could decide this issue. For this reason, I will stick with the assumption that, because Dutch has the relevant properties, Dutch LMs are syntactically identical to German LMs, leaving open the possibility that the difference in

the morphological marking of anticausatives led to a reanalysis of LMs as syntactic reflexive *lassen*-passives.

### 8.2.2 Swedish

Swedish patterns with German and Dutch in allowing LMs. The following data are taken from Klingvall (2012).

- (12) a. Boken låter sig läsas utan svårighet.  
*book.DEF lets REFL read.PASS without difficulty*  
'The book reads easily.'
- b. Kakan låter sig bakas med lätthet.  
*cake.DEF lets REFL bake.PASS with ease*  
'The cake bakes easily.'
- c. Dörren låter sig stängas utan att gnissla.  
*door.DEF lets REFL close.PASS without to squeak*  
'The door can be closed without squeaking.'

Except for the embedded *s*-passive, to which I turn below, Swedish and German LMs are formally identical.

Like Dutch, Swedish has the properties a language with LMs is expected to have. First, Swedish *låta* 'let' is ambiguous between a causative or a permissive interpretation (Lundin 2003; Klingvall 2012; Rawoens 2013).

- (13) Lisa låt Kalle sälja bilen.  
*Lisa let Kalle sell car.DEF*  
'Lisa allowed Kalle to sell the car.'  
'Lisa made Kalle sell the car.'

On the surface, it also appears as if Swedish allows *lassen*-passives, since the embedded agent in a PCC can remain unexpressed.

- (14) a. Kalle lät öppna dörren.  
*Kalle lets open door.DEF*  
'Kalle had the door opened.' (Lundin 2003: 130)
- b. Pappan låter måla om huset.  
*father.DEF lets repaint house.DEF*  
'Father had the house repainted.' (Klingvall 2012: 1)

Swedish, however, differs from German in disallowing a *by*-phrase that introduces the embedded agent.

- (15) \*Han lät undersöka barnen av en läkare.  
*he let examine children by a doctor*  
'He had the children examined by a doctor.' (Lundin 2003: 130)

As a consequence, Lundin treats the Swedish *lassen*-passives in (14) as embedding a bare vP rather than a (passive) VoiceP. Crucially, however, if one compares the LMs in (12) to the sentences in (14), an important difference can be noticed: while LMs involve an embedded morphological passive, the embedded predicate in the examples in (14) surfaces as a bare infinitive. Does this mean that the complements of *låta* in Swedish LMs and *lassen*-passives are different? This would be in conflict with the suggestion I made for German that the infinitival complement in the two constructions is structurally identical.

Yet, as Lundin notes (130, footnote 14; see also Vikner 1987, Wood 2011, a.o.), the acceptability of the *by*-phrase in *lassen*-passives across the Scandinavian languages appears to interact with word order properties. The generalization is represented in (16).

(16) **Acceptability of *By*-Phrases in Scandinavian *Lassen*-Passives**

<b>Word order</b>	<b><i>by</i>-phrase</b>	<b>Language</b>
(i) V <sub>MATRIX</sub> - V <sub>EMBEDDED</sub> - DP <sub>THEME</sub>	*	Swedish, Icelandic
(ii) V <sub>MATRIX</sub> - DP <sub>THEME</sub> - V <sub>EMBEDDED</sub>	✓	Danish

Lundin points out that Swedish allows the word order in (ii), but only if the embedded predicate is morphologically marked as an *s*-passive (Vikner 1987; Haider 1997; Engels & Vikner 2013, a.o.). Consider the contrast in (17).

- (17) a. \*Hon lat sina artiklar skriva.  
*she let her articles write*  
 ‘She had her articles written.’  
 b. Hon lat sina artiklar skriv<sub>S</sub>as.  
*she let her articles write.PASS*  
 ‘She had her articles written.’

As expected from (16), the addition of a *by*-phrase is acceptable in Swedish periphrastic causatives only if a morphological *s*-passive is embedded, with the theme preceding the embedded verb (Vikner 1987; Eva Klingvall, p.c.). Compare (15) to (18).

- (18) Han lät barnen undersökas av en läkare.  
*he let children examine.PASS by a doctor*  
 ‘He had the children examined by a doctor.’

As this is not the place to account for the generalization in (16) (see e.g. Vikner 1987; Haider 1997; Engels & Vikner 2013 for different accounts), I will simply focus on the aspects that are relevant for the analysis of LMs. In this regard, (17b, 18) show that the claim that the infinitival complement in LMs and *lassen*-passives is structurally identical can be upheld: both involve a morphological *s*-passive in Swedish.

Turning to the final ‘ingredient’ of LMs, it has to be noted that Swedish has reflexively marked anticausatives, which means that the reflexive pronoun *sig* can be used non-thematically to delete the agent argument (that is, derive expletive Voice). Compare the causative - inchoative pair in (19), taken from Lundquist (2008: 85); as well as the example of a reflexively marked anticausative in (20) from Lundquist (2010:16).

(19) sprida            -    sprida sig  
       spread<sub>CAUSATIVE</sub>    spread<sub>INCHOATIVE</sub>

(20) Dörrarna öppnade sig.  
       doors.the opened REFL  
       ‘The doors opened.’

Unlike in Dutch, reflexively marked anticausatives constitute the default in Swedish (Lundquist 2008: 85).

In sum, the analysis of German LMs proposed in chapter 4 can be extended to Swedish: Swedish LMs involve the reflexively marked anticausative of the causative predicate *let*, which embeds a passive-like argument configuration. This latter fact is supported by the observation that Swedish LMs involve an embedded *s*-passive.

Before I proceed, let me comment on one aspect of Swedish *lassen*-passives and LMs which appears to be in conflict with my analysis of these constructions in German. Recall that I argued in chapter 6 that the absence of passive morphology from the infinitival complement is due to the truncated structure of restructuring infinitives. In view of this explanation, the question arises as to why passive morphology can surface in Swedish.

One could claim that the acceptability of embedded *s*-passives suggests that the complement of Swedish *låta* is somehow bigger than the complement of German *lassen*. Being stipulative, this is the least interesting explanation.

Another possibility to account for the acceptability of passive morphology in Swedish *lassen*-passives and LMs exploits the fact that Swedish has two different ways to form passives: morphologically via the *s*-morpheme (21a) and periphrastically via a passive auxiliary and the participle (21b; cf. Lundin 2003; Holmes & Hinchliffe 2003; Julien 2007. Engdahl 2006 shows that the *s*-passive in Swedish is the default, compared to the periphrastic *bli*-passive).

(21) a. Äpplena skalas.  
       apples peel.PASS  
       ‘The apples are (being) peeled.’

b. Äpplena blir skalade.  
       apples are peeled  
       ‘The apples are/will be peeled.’

(Holmes & Hinchliffe 2003: 273)



Given my explanation of the absence of passive morphology in German, the acceptability of *s*-passives in Swedish *lassen*-passives and LMs suggests that the passive morpheme in (21a) is located lower than the participial morphology/the auxiliary in (21b). In other words, the syntax of *s*-passives differs from that of periphrastic passives. In fact, it has been argued in Julien (2007) that the *s*-morpheme does not represent a head in the verbal projection line, but rather is a pronoun-like element that is base-generated in an argument position.<sup>1</sup> Unlike pronouns, however, this element never enters agreement relations, which indicates that its features must be defective. Importantly, Julien argues that ‘when it is generated as the highest argument [in Spec, VoiceP, M.P] it gets a default arbitrary interpretation, comparable to arbitrary PRO or the Mainland Scandinavian non-specific pronoun *man* ‘one’ (227). This is exactly the interpretation that has been proposed for the implicit agent in middle constructions. It, therefore, comes as no surprise that Swedish uses the embedded *s*-passive for LMs. It is less clear, however, how this analysis extends to the embedded *s*-passive in *lassen*-passives, where the implicit agent receives an existential interpretation.<sup>2,3</sup>

In contrast to Julien (2007), Björn Lundquist has recently argued that a Lundin-style analysis of *-s* holds for Icelandic (see also Wood 2012), but not for the Mainland Scandinavian languages (Lundquist 2013), in which the *s*-morpheme is better analyzed as a Voice head. Evidence for this view comes from the observation that, while *s(t)*-marked forms in Icelandic disallow the addition of a *by*-phrase (22a), this is not the case in, e.g. Swedish (22b).

- (22) a. Einræðisherrarnir drápu-st (\*af lögreglunni).  
*dictator.DEF.PL.NOM kill.PAST-ST by police.DEF*  
 ‘The dictators got killed / died.’  
 b. Diktatorn dödade-s (av polisen).  
*dictator.DEF kill.PAST-PASS by police.DEF*  
 ‘The dictator was killed (by the police).’

(Lundquist 2013: 7)

Lundquist concludes from the contrast in (22) that if *-s(t)* is an argumental clitic in the external argument position, as Lundin suggests, it should block the addition of a *by*-phrase.

<sup>1</sup> From this position, it cliticizes onto the verb, thereby accounting for the fact that it occurs outside of tense and aspect morphology. See Wood (2012) for arguments that the *s(t)*-morpheme in the Scandinavian languages has to be analyzed as a clitic.

<sup>2</sup> Solstad & Lyngfeld (2006) provide the following example of an *s*-passive, where the implicit agent does not receive an arbitrary interpretation, but instead is more similar to the implicit agent found in periphrastic passives.

(i) Blommorna vattnades igår  
*the.flowers watered.PASS yesterday*  
 ‘The flowers got watered yesterday.’ (Solstad & Lyngfeld 2006: 5, (7b))

This suggests that more needs to be said about the interpretation of argumental *-s* if it occurs in the external argument position.

<sup>3</sup> Note that under Julien's (2007) analysis of *s*-passives, they are not actually passives syntactically, since the *s*-morpheme functions as an argument in Spec, VoiceP. It is only due to its deficient nature that the object-promotion effect (familiar from passives) arises.

While this is indeed the case in (22a), the acceptability of (22b) comes as a surprise under this approach. If, by contrast, the *s*-morpheme realizes a (passive) Voice head in Swedish, the addition of a *by*-phrase is legitimate for the same reasons as it is in periphrastic passives.

Under Lundquist's analysis of *s*-passives, the fact that the embedded predicate in Swedish *lassen*-passives and LMs can surface with passive morphology is expected under the analysis proposed in chapters 3 and 4, respectively, since the infinitival complement of *låta* contains Voice. It also accounts for the difference to German, where passive morphology in the relevant constructions is not acceptable: the structure of *lassen*-passives and LMs allows passive morphology to surface only if this morphology is directly Voice-related, which is the case in Swedish (for morphological passives), but not in German.

### 8.2.3 Danish

I will conclude this review of LMs cross-linguistically with a discussion of Danish LMs (23).

- (23) a. Kødet lod sig spise.  
*meat.the let REFL eat*  
 'The meat was eatable.' (Vikner 1987: 271, (29b))
- b. Bogen lader sig let læse  
*book.the lets REFL easily read*  
 'The book reads easily.' (Vater 1988: 403)
- c. Engelsk lader sig let lære.  
*English lets REFL easily learn*  
 'English is easy to learn.' (Vater 1988: 403)

Like all languages with LMs, Danish has AcI-type causatives involving the causative verb *let*, with both permissive and causative interpretations (24). In line with the generalization in (16ii), Danish allows periphrastic causatives in which the causee is not overtly realized, except as a complement in a *by*-phrase (25).<sup>4,5</sup>

- (24) Jeg har ladet ham støvsuge tæppet.  
*I have let him vacuum.clean carpet.the*  
 'I have made/let him vacuum-clean the carpet.' (Engels & Vikner 2013: 233)

<sup>4</sup> Vikner (1987) argues that the acceptability of the *by*-phrase is pragmatically restricted. I assume that this fact has no consequences for the syntax of these constructions. In other words, I assume that, grammatically, *by*-phrases are fully acceptable and that only pragmatic factors influence the question of whether a *by*-phrase surfaces or not.

<sup>5</sup> Like Swedish, Danish has *s*-passives in addition to periphrastic passives. I cannot address the question here of why LMs in Swedish, but not in Danish, come with an embedded morphological passive. I assume that the answer is related to the fact that Danish, but not Swedish, allows *by*-phrases in *lassen*-passives even if the embedded predicate surfaces as a bare infinitive. Furthermore, Eva Klingvall informs me that while in Swedish, the *s*-passive is the standard passive, it is more marked in Danish (and Norwegian). Whatever the reason, as long as the infinitival complement in *lassen*-passives is morphologically identical to that in LMs, I see my account supported. What I predict should not exist is a language in which the embedded predicate is marked differently in the two constructions.

- (25) a. Hun lader sine artikler skrive (af en veninde).  
*she lets her articles write by a friend*  
 ‘She had her articles written by a friend.’ (Lundin 2003: footnote 14)
- b. Han lod kapellet udsmykke af Matisse.  
*he let chapel.the decorate by Matisse*  
 ‘He had the chapel decorated by Matisse.’ (Vikner 1987; 271)

Finally, Danish has two ways of forming anticausatives: either the verb is morphologically marked with the *s*-suffix, or, as in German, the reflexive pronoun *sig* is added (cf. *abne sig / abne-s* ‘to open<sub>INCHOATIVE</sub>’; Nedjalkov 2007; de Schepper 2007). I assume that the latter case of anticausative formation is employed in Danish LMs. In other words, based on the analysis of LMs developed in chapter 4, Danish LMs can straightforwardly be accounted for.

#### 8.2.4 Summary

Under (26), I summarize the findings of my analysis of LMs cross-linguistically and compare them to German. As can be seen, all languages that allow LMs have an AcI-type causative predicate that is underspecified with respect to the type of causation involved, allow *lassen*-passives, and, except for Dutch, productively form reflexively marked anticausatives. The overview also shows that the claim that *lassen*-passives and LMs are structurally identical except for the argument structural properties of the matrix predicate is well-supported. This is because, in all the languages that have LMs, the embedded predicate in *lassen*-passives and LMs was marked identically: either both surfaced as a bare-infinitive (German, Dutch, Danish) or as a morphological *s*-passive (Swedish).

#### (26) LMs Cross-Linguistically

	under-specified <i>let</i>	<i>lassen</i> -passives	reflexively marked anticausatives	LMs
<b>German</b>	✓	✓ (bare infinitive)	✓	✓ (bare infinitive)
<b>Dutch</b>	✓	✓ (bare infinitive)	(✓)	✓ (bare infinitive)
<b>Swedish</b>	✓	✓ ( <i>s</i> -passive)	✓	✓ ( <i>s</i> -passive)
<b>Danish</b>	✓	✓ (bare infinitive)	✓	✓ (bare infinitive)

### 8.3 Impersonal *Lassen*-Middles

#### 8.3.1 General Properties

In German, LMs can be built from unergative predicates, giving rise to impersonal LMs, as illustrated in (27). As mentioned in chapter 2, impersonal LMs differ from impersonal CMs with respect to the optionality of the expletive. While its presence is optional in the former, it is obligatory in the latter (28).

- (27) a. Dort lässt (es) sich gut tanzen.  
*there lets it REFL well dance*  
'One can dance well there.'
- b. In diesem Restaurant lässt (es) sich gut speisen.  
*in this restaurant lets it REFL well dine*  
'One can dine well in this restaurant.'
- c. In diesem Stuhl lässt (es) sich angenehm sitzen.  
*in this chair lets it REFL comfortably sit*  
'One can sit comfortably in this chair.'
- d. Mit Worten lässt (es) sich trefflich streiten.  
*with words lets it REFL felicitously quarrel*  
'One can quarrel perfectly with words.'

- (28) a. Dort tanzt \*(es) sich gut.  
*there dances it REFL well*
- b. In diesem Restaurant speist \*(es) sich gut.  
*in this restaurant dines it REFL well*
- c. In diesem Stuhl sitzt \*(es) sich gut.  
*in this chair sits it REFL well*
- d. Mit Worten streitet \*(es) sich hervorragend.  
*with words quarrels it REFL perfectly*

In the next sections, I will address the following two questions: (i) What type of expletive is involved in impersonal CMs and LMs and what is its function?, and (ii) How can the optionality of the expletive in impersonal LMs, but not impersonal CMs, be explained?

#### 8.3.2 The Type and the Function of the Expletive

Many languages distinguish two types of expletives: *it*-type and *there*-type expletives, exemplified in (31) for English (see e.g. Bennis 1986; Vikner 1995; Biberauer 2003; Biberauer & Richards 2006 for this split).

- (29) a. It rains.  
b. There sat a dog in the garden.

*There*-type expletives are generally considered to be non-argumental, functioning simply to satisfy an EPP-requirement (in general, the relevant feature is on T; see Rosengren 2002;

Biberauer 2003; Richards & Biberauer 2005; Biberauer & Richards 2006, Alexiadou & Schäfer 2011 for some recent discussion). By contrast, *it*-type expletives are assigned quasi-argumental status, which means they are base-generated in an argument position, and they are often assigned a full set of  $\phi$ -features (e.g. Bennis 1986; Vikner 1995; Ruys 2010).

Turning to the inventory of expletives in German, it has to be pointed out first that German lacks the English *there*-type expletive. This is because T in German, as pointed out in chapter 1, lacks an EPP-feature (see Haider 1993, 2010 for the even stronger claim that German lacks TP altogether). This is shown by the acceptability of the impersonal passive in (30), where, in fact, the addition of an expletive leads to ungrammaticality – impersonal passives obligatorily remain subjectless (but see Mohr 2005 for the claim that in German, the EPP-feature on T is satisfied by VP-movement into Spec,TP).

- (30) Die ganze Nacht wurde (\*es) gelacht.  
*the whole night became it laughed*  
 ‘There was laughing all night long.’

German does have an expletive, however, that potentially qualifies as a *there*-type expletive in that it is inserted to satisfy an EPP-feature: As a consequence of the V-2 requirement of German, the sentence initial position (i.e. Spec,CP) in root declarative clauses has to be filled. If no element is moved to Spec,CP, an expletive is inserted (the so-called Vorfeld-*es*; (31a)). The canonical German *it*-type expletive, by contrast, is illustrated in (31b).

- (31) a. \*(Es) wurde die ganze Nacht gelacht.  
*it became the whole night laughed*  
 ‘There was laughing all night long.’  
 b. Gestern regnete \*(es).  
 Yesterday rained it  
 ‘Yesterday, it rained.’

(31) strongly suggests that German also has two different types of expletives, which are, however, phonologically identical. While the Vorfeld-*es* is restricted to Spec,CP, any expletive that occurs in sentence-internal position in German has the status of a quasi-argument (qualifies as an *it*-type expletive).

The fact that the expletive in impersonal CMs or LMs is not restricted to sentence-initial position (cf. (27) and (28)) indicates that it must be analyzed as quasi-argumental in nature. This treatment of the expletive in impersonal middles as a quasi-argument is supported by Dutch, which patterns with English in the requirement that the structural subject position Spec,TP needs to be filled. As a consequence, Dutch impersonal passives exhibit the presence of the *there*-type expletive *er*.

- (32) Er wordt hier door de jonge lui veel gedanst.  
*there becomes here by the young people much danced*  
 ‘There is danced here a lot by the young people.’

Unlike in German, the Dutch *it*-type expletive is phonologically distinct from the *there*-type expletive, as is illustrated by the following sentence involving a weather verb.

- (33) Het / \*er regende.  
*it/ there rained*  
 ‘It rained.’ (Ruys 2010: 144)

In Dutch impersonal CMs, it is the *it*-type expletive *het* that surfaces, while the *there*-type expletive *er* leads to ungrammaticality (34).

- (34) a. Het/\*er fietst lekker op het fietspad.  
*it/ there cycles nicely on the bikeway*  
 ‘It is nice to cycle on the bikeway.’  
 b. Het/\*er eet niet prettig in een hoog tempo.  
*it/ there eats not pleasantly in a high speed*  
 ‘It is not pleasant to eat at a high speed.’

Having identified the expletive that occurs in impersonal CMs and LMs as a quasi-argumental *it*-type expletive, I will presently turn to its function. Before doing so, however, I should address a potential issue impersonal LMs pose for the theory of *lassen*-middles developed here. Recall from chapter 4, that following Schäfer (2008), I derived non-thematic reflexive pronouns from a split Binding Theory, which required reflexive pronouns to be syntactically bound (i.e. have their  $\phi$ -features valued), but it allowed them to lack a semantic (c-commanding) antecedent. Under this approach, it is reasonable to assume that quasi-argumental *it*, due to its set of valued  $\phi$ -features, can serve as a syntactic antecedent. As a consequence of its unclear referential status, however, I assume that it cannot function as a semantic antecedent, giving rise to the non-thematic status of the reflexive pronoun in impersonal CMs and LMs. Due to the fact that in impersonal LMs the expletive is optional, something has to be said as to how the  $\phi$ -features of the reflexive are valued in the absence of the expletive. As there is no DP that could fulfill this function, the features on the reflexive should remain unvalued, rendering this variant of impersonal LMs ungrammatical, contrary to fact. To explain how such LMs can be explained, I will take a short detour.

Schäfer (2012b; 2013) discusses the fact that it is possible in German to passivize naturally or inherently reflexive predicates (35).

- (35) a. Dann wurde sich gewaschen.  
*then became REFL washed*  
 ‘People washed themselves then.’

- b. Dann wurde sich geschämt.  
*then became REFL shamed*  
 'People were ashamed then.'

Taking a closer look at the data in (35), the same issue arises as in expletiveless impersonal LMs: the reflexive pronoun does not have an antecedent.<sup>6</sup> Schäfer argues that the acceptability of passives of reflexive verbs follows from the existence of a Repair Mechanism in German, which applies to subjectless sentences. This mechanism is Default Agreement (DA), as formulated in (36) (taken from Ruys 2010).

(36) **Default Agreement**

In the absence of any appropriate nominal category, the  $\phi$ -features on an unvalued probe undergo default valuation [3rd person,singular].

DA values [ $u\phi$ :] on T in the absence of any other suitable goal, rendering acceptable sentences without subjects, i.e. impersonal constructions such as the German impersonal passive in (30).

The existence of impersonal passives lacking an expletive is thus a direct indication that DA is available in the language and can therefore be considered a prerequisite for the acceptability of passives of reflexive verbs. But how can DA save a Principle A violation? Schäfer assumes that in cases like (35), the reflexive has formed an Agreement Chain with T (Schäfer 2008, 2012b, 2013; see also the derivation of personal LMs in chapter 4). In the absence of any other potential goal, DA will target the two-membered chain [T-REFL] and value the  $\phi$ -features of both T and the reflexive. As a consequence, the latter has no unvalued features and can be passed on to the interfaces. Since in these cases the reflexive will always lack a c-commanding antecedent, contexts in which DA has applied will necessarily give rise to non-thematic reflexive pronouns.

By now it should be clear how the acceptability of expletiveless impersonal LMs can be accounted for: the reflexive in the specifier of the matrix VoiceP forms an Agreement Chain with T. As there is no potential goal for T, DA applies and values the  $\phi$ -features on T and REFL, thereby preventing a Principle A violation, or, under the valuation-type of approach to Binding adopted here, satisfying Full Interpretation. Note in passing that the case approach adopted in this thesis correctly predicts that the reflexive will be marked with accusative case despite the absence of a nominative marked DP. Recall that accusative will be assigned to a

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<sup>6</sup> The fact that only inherently and naturally reflexive, but not naturally disjoint, verbs can occur in a passive context strongly suggests that the implicit argument cannot be assumed to license the reflexive in the examples in (35). If it could, one would wrongly expect naturally disjoint verbs to be acceptable in this context as well.

(i) \*Es wurde sich geschnitten.  
 Intended: 'People cut themselves.'

DP that has not valued the  $\phi$ -features on T. As this holds true of REFL, which can Agree with T but not value its features, it will be assigned accusative post-syntactically – no matter if an additional DP that values the features of T is present (as in personal LMs) or not (as in impersonal LMs).

I will now turn to the function of the expletive in impersonal CMs and LMs. I start with a discussion of the former and show that this analysis straightforwardly extends to the latter. In order to understand the function of the expletive, it is important to note a further difference between impersonal CMs and their personal counterparts: Apart from the manner adverb, impersonal CMs require the presence of a further modifier. Typically, but not exclusively, this element is a locative PP (see also Abraham 1987; Fagan 1992; Hoekstra & Roberts 1993; Ackema & Schoorlemmer 1994; Lekakou 2005; Broekhuis & Corver in prep for this observation).<sup>7</sup>

- (37) a.\*Es tanzt sich gut.  
       *it dances REFL well*  
       b.\*Es speist sich gut.  
       *it dines REFL well*  
       c.\*Es sitzt sich gut.  
       *it sits REFL well*  
       d.\*Es streitet sich hervorragend.  
       *it quarrels REFL perfectly*

I will follow Lekakou (2005) in assuming that the obligatory presence of the *it*-type expletive in impersonal CMs and the obligatory presence of this additional modifier are related. In particular, recall from chapter 6 that middles qualify as subject-oriented in-virtue-of generalizations, in which properties of the subject restrict the set of accessible worlds the generic operator quantifies over. The immediate question that arises for impersonal middles, then, is how the accessibility relation is determined in the absence of a referential subject.

To this end, let us take a closer look at the interpretation of the impersonal CM in (38).

- (38) In dieser Gegend klettert es sich gut.  
       ‘In this area, one can climb well.’

(38) expresses that in virtue of some inherent property of a certain place/area (e.g. it is very mountainous; has a lot of spots for climbers, etc.), one can climb well there. In other words, it appears that in impersonal CMs, (inherent properties of) the referent of the additional modifier determines the accessibility relation and is attributed the dispositional property. But how can an adjunct have this function if the construction is subject-oriented? To put it

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<sup>7</sup> (37a) is grammatical if *es* is a personal pronoun referring to some type of dance. In this case, however, we are dealing with a personal, not an impersonal middle.



differently, how can the adjunct PP be associated with the subject position if PPs are impossible as grammatical subjects (see e.g. Bennis & Wehrmann 1987; Ackema & Schoorlemmer 1994)?

Lekakou argues that this is done indirectly via the *it*-type expletive, which, as is often assumed (see Bennis 1986; Bennis & Wehrmann 1987; Ruys 2010 a.o.), has the ability to take an adjunct as associate and link it to an argument position. This function of the *it*-type expletive (also *Korrelat 'es'* in German linguistics) is illustrated by the following extraposition data.

- (39) a. Peter hat (es) unterlassen, die Eltern zu informieren.  
*Peter has it omitted the parents to inform*  
 'Peter neglected to inform his parents.'
- b. Peter hat (es) bedauert, den Kollegen beleidigt zu haben.  
*Peter has it regretted the colleague offended to have*  
 'Peter regretted having offended the colleague.'

The sentences in (39) involve both a sentential object and an optional *it*-type expletive. Crucially, as Haider (2010) notes, the embedded CP has a different syntactic status depending on the presence of the expletive (see originally Bennis 1986 for the same observation in Dutch). This can be seen if one tries to A'-move out of the sentential complement.

- (40) a. Wen hat Peter (\*es) unterlassen,  $t_{WH}$  zu informieren?  
*whom has Peter it omitted to inform*  
 Intended: 'Who is it that Peter has neglected to inform?'
- b. Wen hat Peter (\*es) bedauert,  $t_{WH}$  beleidigt zu haben?  
*who has Peter it regretted offended to have*  
 Intended: 'Who is it that Peter has regretted to have offended?'

(40) illustrates that the embedded object can only be A'-moved to the matrix clause if the expletive is absent, while the presence of the expletive blocks movement. This contrast is explained under the assumption that, if the expletive is absent, the embedded sentence occupies an argument position. If the expletive is present, however, the clause functions as an adjunct, thereby constituting an island for movement (but see Vikner 1995 for the claim that the situation is in fact more complicated). Crucially, the embedded sentence is understood as the logical object of the matrix predicate even if it is realized as an adjunct syntactically. It is thus assumed that the internal argument position is occupied by the *it*-type expletive, which takes the adjunct clause as associate and links it to the respective argument position.

A similar function of the *it*-type expletive is illustrated in (41).

- (41) weil es mir in meinem Bett gut gefällt.  
*because it me in my bed good pleases*  
 'because it pleases me in my bed.'

In (41), the expletive is obligatory, just as in CMs. In addition, it is impossible to leave out the locative PP without interpreting *es* as a personal pronoun. It is thus plausible to assume that the adjunct PP is linked to an argument position via the expletive (cf. Bennis & Wehrmann 1987, who reach the same conclusion with respect to similar data in Dutch).

Based on the discussion above, it is thus reasonable to assume that the expletive in impersonal CMs takes the adjunct PP as associate and links it to the subject position. Formally, the link between the expletive and its associate has been expressed via co-indexation (Bennis & Wehrmann 1987; Hoekstra & Roberts 1990; Broekhuis & Corver (in prep.)) or co-superscription (Ruys 2010).<sup>8</sup> The syntax of impersonal CMs thus look as follows (adopting Schäfer's 2008 analysis of personal middles as involving expletive Voice; see chapter 5 for discussion).<sup>9</sup>

(42) **The Syntax of Impersonal CMs**

[TP  $es^i$  [GEN [VoiceP REFL [vP PP<sup>i</sup> [vP adverb [vP  $\sqrt{ROOT} + v$ ]]] Voice]]T]

In sum, following Lekakou (2005), I propose that there is a syntactic motivation for the presence of the expletive in impersonal CMs, namely the need to associate an adjunct with an argument position. The obligatory presence of the adjunct PP, in turn, finds a semantic explanation in the need to assign the dispositional property.

Turning to impersonal LMs, it can be observed that they have exactly the same properties as impersonal CMs. (i) The expletive occurs in sentence-internal position and is thus quasi-argumental in nature. (ii) Even though LMs generally do not require any type of modification (see chapter 2), impersonal LMs require the presence of a modifier (43). (Again, where possible and *es* is interpreted as a personal pronoun, the modifier is optional. In such a case, however, we are dealing with a personal rather than an impersonal LM).

- (43) a.\*Es lässt sich gut tanzen.  
*it lets REFL well dance*  
 b.\*Es lässt sich gut speisen.  
*it lets REFL well dine*  
 c.\*Es lässt sich gut sitzen.  
*it lets REFL well sit*  
 d.\*Es lässt sich hervorragend streiten.  
*it lets REFL perfectly quarrel*

<sup>8</sup> Both processes are incompatible with recent Minimalist assumptions, as they violate Inclusiveness. I will leave open how this process can be formally implemented instead.

<sup>9</sup> I will not address the question whether the subject position is the merge position of the expletive or whether it is merged somewhere else. Clearly, it cannot be base-generated in Spec,VoiceP, which is occupied by the reflexive. It can also not be the subject of a small clause/relator phrase in which the locative PP functions as the predicate. As Marcel den Dikken, p.c. pointed out, such small clauses are typically interpreted as denoting a resultant state. This is clearly not the case in impersonal CMs.

(iii) The dispositional property in impersonal LMs is assigned to the referent of (the DP within the) additional modifier. (44), exactly like (38), means that, due to some inherent properties of a certain place/area, it has the property that one can climb well there.

(44) In dieser Gegend lässt es sich gut klettern.  
'In this area, one can climb well.'

I will thus assume that the presence of the *it*-type expletive in LMs has the same motivation as the presence of the expletive in CMs. That is to say, if the expletive is present, its function is to link an adjunct to the subject position so that the adjunct can be assigned the dispositional property.<sup>10</sup>

This brings me to the second question raised above: why is the expletive optional in impersonal LMs, but not in impersonal CMs? I will propose a solution to this puzzle, although the details have to await further research.

### 8.3.3 On the Optionality of the Expletive in *Lassen*-Middles

Before I turn to my own proposal, let me briefly discuss Kunze's (1996) solution to this problem.

Kunze argues that the optionality is due to the fact that impersonal LMs are not structurally uniform, but vary between an embedded impersonal passive and an embedded impersonal middle. It has been noted above that impersonal passives and impersonal CMs differ with respect to the presence of an expletive. While it is obligatorily absent from the former, it is

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<sup>10</sup> Impersonal LMs provide evidence that it is unlikely that the expletive is merged into the complement position of the embedded predicate (either as subject of a small clause or as an internal argument itself, which requires the intransitive predicate to function as a pseudo-transitive; see e.g. Cabredo Hofherr's 2005 analysis of impersonal passives). This is shown by the following data (thanks to Hubert Haider, p.c., for pointing this out to me).

(i) Dort lässt es sich den Sommer gut verbringen.  
*there lets it REFL the summer well spend*  
'One can spend the summer well there.'

(i) seems to support the claim that the expletive is, in fact, merged in Spec,TP. Apparently, it is in some cases possible to assign the dispositional property to an adjunct PP despite the fact that an internal argument is present. This is done by blocking the Agree relation between T and the internal argument by inserting the expletive in Spec,TP. From this position, the expletive is a closer goal, will value the  $\phi$ -features on T, and thus trigger dependent accusative on the embedded internal argument. Furthermore, it will relate the dispositional property to the adjunct PP, since arguably the expletive cannot be co-indexed with an argument (see section 8.3.4). In that regard, note that (i) differs crucially from the corresponding personal LM in (ii).

(ii) Der Sommer lässt sich dort gut verbringen.  
*the summer lets REFL there well spend*  
'One can spend the summer well there.'

While (i) makes a statement about a location, which has a property in virtue of which it is a nice place to spend the summer, (ii) expresses something about the summer, i.e. in virtue of some property of the summer, this season can be spend nicely in some place. In other words, while the dispositional property in (i) is assigned to the DP-referent within the adjunct PP, it is attributed to the embedded internal argument in (ii). These data thus support the claim that middles are subject-oriented, as well as the proposal made in this Chapter that an expletive can function to link an adjunct to the subject position.

obligatorily present in the latter. Thus, if impersonal LMs involve an embedded impersonal passive, no expletive is expected to surface. By contrast, if an impersonal CM is embedded, the expletive should be present.<sup>11</sup> He claims that the following data provide evidence for his analysis.

- (45) a. Ein Restaurant, in dem es sich recht gut sitzen lässt.  
*a restaurant in which it REFL quite nicely sit lets*  
 ‘A restaurant, in which one can sit nicely’  
 b.\*Ein Restaurant, in dem recht gut gegessen wurde.  
*a restaurant in which quite nicely sat became*  
 ‘A restaurant, in which one sat nicely.’

- (46) Ein Restaurant, in dem es sich recht gut sitzt.  
*a restaurant in which it REFL quite nicely sits*  
 ‘A restaurant, in which one can sit nicely.’

(45) is taken to show that the impersonal LM in the (a.)-example cannot be assumed to structurally embed an impersonal passive, since the impersonal passive of *sitzen* ‘to sit’ is ungrammatical (45b). The acceptability of the impersonal CM in (46) suggests that the impersonal LM must instead embed a middle. Being ‘middle-based’, the presence of the expletive in the LM in (45a) is expected.

Although I disagree with Kunze in terms of the ungrammaticality of an impersonal passive based on *sitzen* (consider the grammatical examples in (47)), this is no argument against his account. In fact, since the expletive in (45a) is optional, not obligatory, it is predicted by his analysis that the impersonal passive should be acceptable.

- (47) a. In dem Restaurant wurde gegessen (...getanzt und gelacht).  
*in the restaurant became sat ... danced and laughed*  
 ‘There was sitting, dancing, and laughing in the restaurant.’  
 b. Der Laden ist sehr schön, auch draußen kann gegessen werden.  
*the place is very nice also outside can sat become*  
 ‘The place is very nice, one can even sit outside.’

Kunze’s analysis, however, cannot be upheld. Note that his account predicts that if the expletive is present, the impersonal LM should exhibit the properties of an impersonal CM. This is not the case. First, impersonal CMs pattern with personal ones in disallowing the addition of a *by*-phrase (48a). Yet, a *by*-phrase is acceptable in impersonal LMs, independently of whether or not the expletive is present (48b).<sup>12</sup>

<sup>11</sup> Kunze (1996) does not discuss why the expletive is required in CMs.

<sup>12</sup> I assume that the *by*-phrase in impersonal LMs is odd for the same reason that impersonal passives only marginally allow *by*-PPs.

- (48) a. \*Auf Teppichboden tanzt es sich nur von geübten Tänzern gut.  
*on carpeted.floor dances it REFL only by experienced dancers well*  
 b. Auf Teppichboden lässt (es) sich nur von geübten Tänzern gut tanzen.  
*on carpeted.floor lets it REFL only by experienced dancers well dance*  
 ‘Only experienced dancers can dance well on carpeted floor.’

Second, the addition of the manner adverb is obligatory in impersonal CMs (49a), while it is optional in impersonal LMs. This is again independent of the presence of the expletive pronoun (49b).

- (49) a. \*Auch mit verletztem Fuß tanzt es sich.  
*also with injured foot dances it REFL*  
 b. Auch mit verletztem Fuß lässt (es) sich tanzen.  
*also with injured foot lets it REFL dance*  
 ‘One can dance even with an injured foot.’

I therefore reject Kunze’s analysis and turn now to my own proposal.

One core difference between LMs and CMs lies in the structural complexity of the two constructions. In particular, while CMs project only one verbal domain, LMs project two. While the lower involves the predicate that denotes the dispositional property, the higher involves *lassen*, and thus, following the discussion in chapter 6, is the source of the dispositional semantics. In other words, there are two different adjunction sites for the additional modifier in impersonal LMs, represented in bold in (50):

- (50) [VoiceP REFL [**vP Pos2** [<sub>VP</sub> [VoiceP [**vP Pos1** [<sub>VP</sub> √ROOT + v]]] Voice] √LASS-v]] Voice<sub>EXPL</sub>]

I propose that if the additional modifier adjoins low (*Pos 1*), it is below the modal operator and some mechanism is required to associate it with the subject position and an *it*-type expletive is inserted. If, however, the modifier adjoins high (*Pos 2*), it directly modifies the modal operator which, I assume, is enough to make it the target for the disposition ascription. Evidence for the two different adjunction sites is provided by the data in (51) and (52).

- (51) a. Am See muss (es) sich wohl gut feiern lassen, ...  
*at.the lake must it REFL apparently well celebrate let*  
 b. Am See feiern muss \*(es) sich wohl gut lassen, ...  
*at.the lake celebrate must it REFL apparently well let*  
 (...warum sonst sollten all die Jugendlichen dorthin wollen?)  
 ‘The lake must be a good place to celebrate (why else should all the teenagers want to go there?)’
- (52) a. Im Meer hat (es) sich schon immer gut schwimmen lassen.  
*in.the sea has it REFL already always well swim let*  
 b. Im Meer schwimmen hat \*(es) sich schon immer gut lassen.  
*in.the sea swim has it REFL already always well let*  
 ‘It has always been nice to swim in the sea.’

While the expletive in the impersonal LMs in (51a) and (52a) is optional, its absence in (51b) and (52b) results in ungrammaticality. Why should this be the case? The sentences in (51b) and (52b) involve topicalization of the embedded predicate and the locative PP. The fact that the matrix predicate *lassen* (which stays in situ due to the presence of the modal / auxiliary) is not topicalized suggests that only the embedded VoiceP/vP has been moved to sentence initial position. This, however, means that the locative PP in (51b) and (52b) must be adjoined low, which, according to the proposed analysis, correctly predicts the expletive to be obligatory. (51) and (52) thus show that the optionality of the expletive in LMs finds a clear structural explanation and is independent from any semantic considerations.

### 8.3.4 Loose Ends

The impersonal LMs that have been considered so far were based exclusively on unergative predicates. Crucially, however, verbs that combine with lexically case-marked or prepositional objects also occur in impersonal LMs in German ((53) and (54) respectively; the data are taken from Höhle 1978 as are the judgements concerning the acceptability of the expletive; the paraphrases are mine).

- (53) a. Dieser Drohung lässt (\*es) sich unschwer mit Sanktionen begegnen.  
*this.DAT threat lets it REFL easily with sanctions counter*  
 ‘This threat can easily be countered with sanctions.’
- b. Einem so verbohrten Kerl lässt (\*es) sich schwer helfen.  
*a.DAT so bullheaded person lets it REFL with.difficulty help*  
 ‘Such a bullheaded person can only be helped with difficulty.’
- c. Vorbestraften lässt (\*es) sich unmöglich vertrauen.  
*people.with.a.criminal.record.DAT lets it REFL impossibly trust*  
 ‘It is impossible to trust people who have a criminal record.’
- d. Diesem Argument lässt (\*es) sich nicht widersprechen.  
*this.DAT argument lets it REFL not answer back.*  
 ‘One cannot contradict this argument.’
- e. Dem letzten Angebot lässt (\*es) sich zustimmen.  
*the.DAT last.DAT offer lets it REFL agree*  
 ‘One can accept the last offer.’
- (54) a. Von den Folterungen lässt (\*es) sich nicht einfach absehen.  
*from the torture lets it REFL not easily ignore*  
 ‘The torturing cannot be easily ignored.’
- b. Auf eine solche Gelegenheit lässt (\*es) sich wirklich einmal anstoßen.  
*on a such opportunity lets it REFL really once clink.glasses*  
 ‘On such an opportunity one should really clink glasses.’
- c. Nur gegen Tierquälerei lässt (\*es) sich nachhaltig einschreiten.  
*only against animal.abuse lets it REFL effectively interfere*  
 ‘One can effectively interfere only with animal abuse.’

- d. Darauf lässt (\*es) sich leicht verzichten.  
*from.this lets it REFL easily abstain*  
 ‘One can easily abstain from this.’
- e. Darüber lässt (\*es) sich streiten.  
*over.this lets it REFL fight*  
 ‘One can fight over this.’
- f. An ihrer Sittsamkeit lässt (\*es) sich schwerlich zweifeln.  
*at her chastity lets it REFL hardly doubt*  
 ‘One can hardly doubt her chastity.’

Höhle's data and judgments suggest that if the embedded predicate combines with a lexically case-marked DP or a prepositional object, rather than an additional modifier as in the LMs we have seen so far, the presence of the expletive is no longer optional. It is rather the case that its presence leads to ungrammaticality (or, at least, to a markedly degraded result in comparison with the expletiveless variant). This argument-adjunct asymmetry was largely corroborated by a small, informal questionnaire study I carried out at the University of Stuttgart. Ten participants were asked to judge the grammaticality of different middles on a scale from 1 to 5, where 1 corresponded to perfectly grammatical, and 5 meant ungrammatical. All participants judged impersonal LMs with lexical datives or prepositional objects and without an expletive as markedly better than the corresponding variants with an expletive. At the same time, the presence or absence of an expletive in the context of impersonal LMs based on unergative predicates did not have an effect on the grammaticality judgment (if at all, the variants including an expletive were judged as slightly more acceptable than the ones without an expletive). This opens up two questions: first, why is it that the expletive cannot surface in this type of impersonal LM? Second, how is the dispositional property assigned in these cases?

With respect to the first question, it seems to be the case that expletive *es* can take adjuncts but not arguments as associate. One fact showing that this might be correct involves impersonal CMs with lexical datives or prepositional objects (55).

- (55) a. <sup>??</sup>weil (es) sich einem Alkoholiker damit leicht hilft.  
 ‘because an alcoholic can be helped easily this way.’
- b. <sup>??</sup>Über Stuttgart 21 streitet (es) sich bekanntlich gut.  
 ‘One can debate well about Stuttgart 21.’
- c. <sup>??</sup>weil (es) sich einem hochverschuldeten Land leicht droht.  
 ‘because one can easily threaten a debt-ridden country.’

The questionnaire study showed a clear tendency for speakers to dislike impersonal CMs of the type illustrated in (55) (see also Fagan 1992 for the same observation). This is expected if

impersonal CMs require the presence of an expletive but the expletive cannot take arguments as associate.<sup>13</sup>

With respect to the second question, it has to be noted that since German lacks quirky subjects, the dative arguments in (53) or the argumental PPs in (54) cannot be assumed to occupy the subject position. Furthermore, in view of the discussion of impersonal LMs based on unergative predicates in the preceding section, it is impossible to extend the high-adjunction analysis to these examples, as the PPs and dative DPs are clearly arguments of the embedded verb.

It seems that a complex predicate approach to restructuring, as proposed in e.g. Haider (1986a,b, 1993, 2003, 2010) could solve this issue. As under such an account, all arguments in a restructuring infinitive are arguments of the complex predicate, the dative DPs and prepositional objects in the examples above would not only be arguments of the embedded predicate but of the *lassen-infinitive* complex. Under the assumption that *lassen* is the source of the dispositional semantics, one could assume that this ‘argument-of’ relation suffices to assign the dispositional property. It is less clear how to approach this problem under a Wurmbrand-type account of restructuring, as adopted here.

One could potentially assume that even though the dispositional property is canonically assigned to the structural subject, some default mechanism applies in cases where there is no subject. This mechanism picks out an argument and turns it into the target of the disposition ascription (e.g. defines the accessibility relation over inherent properties of this argument). Such a mechanism could explain why impersonal CMs are judged as degraded rather than as fully ungrammatical. Yet, it could not explain why there is a difference in acceptability between impersonal LMs and impersonal CMs of the relevant type. Furthermore, as long as there is no independent evidence for such a mechanism, this solution remains purely speculative. The last puzzle that I will have to leave for future research can thus be stated as the research question in (56). The fact that the impersonal CMs in (55) are not completely ungrammatical indicates that (56) is not just a question that arises in the context of LMs, but is relevant for middle constructions in general.

(56) How can the dispositional property be assigned to a lexically case-marked or a PP-argument which (a) does not occupy the subject position itself, (b) cannot be associated with T via an Agree-relation, and (c) cannot be associated with this position via a mediating quasi-argumental *es* ‘it’?

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<sup>13</sup> For some speakers, the examples were somewhat better if the expletive was left out; for others, the presence of the expletive led to a better result. In the face of this high degree of speaker variation, I draw no conclusions here, and prefer to stick to the clear result that middles of the type in (55) are judged considerably worse than the other impersonal CMs discussed in this chapter.



## CHAPTER 9

### CONCLUSIONS

This study has focused on a little studied construction in German – the so-called *lassen*-middle – and outlined its impact on the domain of middle constructions in general. A comparison to the better studied ‘canonical’ middles in chapter 2 showed that *lassen*-middles qualify as middles proper since this construction exhibits all the syntactic and semantic properties that have been identified as characteristic of canonical middles: *lassen*-middles are generic statements that attribute a property to the structural subject. This property ascription, as most explicitly pointed out in Lekakou’s (2005) analysis of the middle semantics, holds in virtue of some inherent property of the subject DP. Syntactically, *lassen*-middles involve a subject that thematically corresponds to an internal argument, feature a suppressed external argument, and, at least in German, exhibit the same morphological marking as canonical middles in the form of the reflexive pronoun *sich*. Despite these similarities, a number of differences between the two types of middles were identified: *lassen*-middles additionally involve a verbal element *lassen*, allow the introduction of the suppressed external argument in a *by*-phrase, exhibit less severe restrictions in terms of the class of verbs that can occur in this construction, and render the manner adverb, which is obligatory in canonical middles, optional. Finally, a difference between the impersonal variants of the two types of middles was shown to involve the presence of expletive *es* – while it is required in canonical middles, it is optional in *lassen*-middles.

The fact that *lassen*-middles contain the verbal element *lassen*, which in its more common use surfaces in periphrastic causatives, motivated the investigation of periphrastic causatives in chapter 3. I showed that German causative *lassen* is underspecified with respect to the type of causation expressed, the particular interpretation ranging from obligation or directive causation to permission and enabling causation, depending on factors such as the animacy of the matrix subject and the evaluation of the caused event as positive or negative from the causee’s point of view. With respect to the syntax of periphrastic causatives, I argued that *lassen* combines with a truncated infinitival complement, i.e. a VoiceP, which accounts for certain transparency phenomena that suggest a monoclausal syntax. It also accounts for the binding properties that often have been advanced in favor of a biclausal structure.

Crucially, I argued that a VoiceP is not only present in periphrastic causatives in which the embedded external argument is overtly realized (what I called the periphrastic causative

construction), but also in *lassen*-passives, where the causee is suppressed. Since the infinitival complement in *lassen*-passives passes all of the applicable restructuring diagnostics in Wurmbrand (2001), the presence of an embedded VoiceP entails that restructuring infinitives must not be bare vPs/VPs, as proposed in Wurmbrand (2001, 2004), but rather involve the projection that introduces the external argument. The absence of the causee in *lassen*-passives, despite the presence of Voice, implies that the embedded VoiceP in this type of construction must not introduce an argument in its specifier, in parallel to the VoiceP involved in verbal passives.

In chapter 4, I provided a detailed discussion of the syntax of *lassen*-middles, for which I ultimately argued that they involve the combination of the anticausative variant of causative *lassen* and a (truncated) passive. In particular, I showed that the occurrence of *lassen* in *lassen*-middles is syntactically and semantically identical to *lassen* in periphrastic causatives. This parallelism between *lassen*-middles and periphrastic causatives extends to the infinitival complement, which was shown to be identical in its structural make-up: *lassen* in *lassen*-middles embeds a specifierless VoiceP, exactly like *lassen* in *lassen*-passives. Despite these structural similarities between periphrastic causatives and *lassen*-middles, I also showed that the structural subject in *lassen*-middles must not be base-generated as the external argument of the matrix predicate *lassen*, but must enter the derivation as the internal argument of the embedded predicate. Furthermore, the reflexive pronoun in *lassen*-middles cannot be located in the infinitival complement; it has to be associated with the matrix predicate *lassen*. A comparison of *sich lassen* and other reflexively marked argument alternations showed that *sich lassen* has to be treated as the reflexively marked anticausative variant of causative *lassen*. Building on the analysis of reflexively marked anticausatives in Schäfer (2008, 2012a), the reflexive pronoun in *lassen*-middles blocks the introduction of an external argument in matrix Spec, VoiceP, which ultimately allows the embedded theme argument to function as the structural subject.

Chapter 5 addressed the differences between the *lassen*-middles and canonical middles identified in chapter 2. I argued that all of them follow from a structural difference between the two types of middles: while in canonical middles the external argument is syntactically absent, it is present implicitly in *lassen*-middles in the form of the embedded passive VoiceP. I showed how the presence of such a VoiceP in *lassen*-middles accounts for the acceptability of *by*-phrases, the optionality of the manner adverb, as well as the less severe verb-class restriction.

The fact that *lassen*-middles involve only argument alternations that are independently motivated (i.e. anticausatives and passives), but nevertheless qualify as middles, strongly supports the claim originally formulated in Condoravdi (1989) that the middle is a notional, rather than a grammatical category. In other words, *lassen*-middles provide evidence that the middle is a particular interpretation that certain argument alternations may give rise to – no middle specific process or syntactic structure is required. Crucially, the main argument that led Condoravdi (1989), Marelj (2004) and Lekakou (2005) to adopt this view of the middle (namely the existence of two types of middles cross-linguistically which can only be uniformly defined in semantic, but not in structural terms) can be made language internally in German. I showed in chapter 6 that the two types of middles identified in the works mentioned above directly correlate with canonical and *lassen*-middles in German: while the former have the properties of English or Dutch-type middles, *lassen*-middles behave like French or Greek-type middles. The fact, then, that French and Greek-type middles are argued to be parasitic on a (reflexive) passive syntax further supports the analysis of *lassen*-middles as involving an embedded (truncated) passive. I furthermore addressed the question of how middle semantics arise in *lassen*-middles and proposed that the particular modality involved is not contributed by a VP-level generic operator, as was postulated in Lekakou (2005) for canonical middles. Modality, however, is hard-wired into the lexical semantics of the causative predicate *lassen*.

In chapter 7, I explained how the claim that *lassen*-passives and *lassen*-middles involve an embedded passive can be reconciled with the absence of passive morphology. Under an analysis of verbal passives such as in Embick (2004) or Bruening (2012), where passive morphology is tied to a functional projection external to Voice, the existence of unmarked passives can be accounted for in the following way: since restructuring infinitives only project up to Voice, the functional projection introducing passive morphology is absent in exactly these contexts, such that a passive argument constellation without the corresponding morphological marking is expected to arise.

In the second half of chapter 7, I provided evidence that not only the infinitival complement of *lassen*-passives and *lassen*-middles involves Voice, but that this is also the case with restructuring infinitives in general. I discussed the issue this fact raises for the proper delimitation of restructuring infinitives, concluding that the VoiceP in restructuring infinitives must be of a specific type: it must not project a specifier. I discussed the analysis of restructuring infinitives provided in Wurmbrand (2013a,b), where this particular aspect is

taken into consideration, and showed how *lassen*-passives and *lassen*-middles can be captured under her theory.

In chapter 8, I showed that languages that have *lassen*-middles also have reflexively marked anticausatives, *lassen*-passives, as well as a semantically underspecified causative predicate comparable to German *lassen*, thereby confirming the prediction inherent in the proposed analysis of *lassen*-middles that this type of middle should only exist in languages that have these building blocks.

I also discussed how the proposed analysis fares with impersonal *lassen*-middles. Since in middles, the dispositional property is assigned to the structural subject, impersonal middles, which lack a referential subject, seem problematic. In fact, since in impersonal middles, the dispositional property is assigned to a modifier whose presence is required in addition to the manner adverb, the question arises how this modifier can possibly be associated with the subject position. I argued that it is the expletive in impersonal middles that links this modifier to the relevant position, thereby allowing the disposition ascription to target an element that does not function as the structural subject. The fact that impersonal *lassen*-middles, unlike impersonal canonical middles, render the expletive optional was accounted for by making reference to the structural complexity of *lassen*-middles. In particular, the presence of two verbal domains allows for two adjunction sites for the additional modifier. If it adjoins to the matrix vP, it directly modifies the projection that is associated with the dispositional semantics. I argued that this is enough to be assigned the dispositional property since, whenever the modifier adjoins high, no expletive must be present.

In conclusion, the study of ‘non-canonical’ *lassen*-middles in this thesis revealed important consequences for a number of different, theoretically unrelated, domains. In addition to its impact on the discussion of the grammatical status of the middle, it affects the theory of restructuring. Not only will Wurmbrand’s (2001) approach to restructuring as VP-complementation have to be updated in order to incorporate the observation that restructuring infinitives involve Voice, but any approach to restructuring that involves the base-generation of a complex predicate is rendered untenable, since the infinitive in such analyses will never be associated with its own verbal domain. Furthermore, this study of *lassen*-middles showed that passives do not necessarily have to be morphologically marked. Independent of the question of whether the explanation given in this thesis is correct, this fact has to be taken into account under every theory of passivization. Finally, *lassen*-middles have consequences for Binding Theory. Since the reflexive pronoun was shown to occupy a position in the matrix clause, while its antecedent is base-generated as the internal argument of the embedded

predicate (and optionally stays there), the requirement that reflexive pronouns need a c-commanding antecedent as formulated in Principle A is too strong. It is rather the case, as suggested in Schäfer (2008) in the context of reflexively marked anticausatives and canonical middles, that as long as the  $\phi$ -features of the reflexive are valued, it does not matter whether a c-commanding antecedent exists. If it does, the reflexive will be semantically bound; if not, it will surface as a non-thematic reflexive pronoun.

In the course of this study, I have also pointed to a number of issues which I had to leave for future research, the most pressing of which I would like to repeat at this point.

First, the syntactic analysis of *lassen*-middles as involving a reflexively marked anticausative and a truncated passive requires a detailed compositional semantic analysis. To this end, the semantics of causation appear to be relevant, along with the question of whether dispositional sentences do in fact involve universal quantification. This latter aspect has been recently called into question in Menéndez-Benito (to appear), who argues that dispositionals involve existential quantification. Furthermore, since I have shown that the nominative DP in *lassen*-middles may stay in situ, a compositional semantics of *lassen*-middles also faces the issue how this DP is interpreted as being ‘responsible’ for the dispositional property to hold, i.e. how the ‘in virtue of’ property arises in such cases. If, as alluded to in chapter 6, dispositional statements semantically involve causation, this question can be rephrased: how can the internal argument of the embedded predicate be related to the causing event introduced by matrix  $v$ - $\sqrt{LASS}$ ?

Second, an adjustment of the theory of restructuring is required. While Wurmbrand’s (2013a,b) analysis accounts for canonical cases of restructuring, the adjustments that had to be made for the derivation of *lassen*-middles in particular are non-trivial. It is not clear that expletive Voice is really derived from active Voice in the way outlined in Schäfer (2008). If expletive Voice is an independent Voice-projection, however, the Voice mismatch in *lassen*-middles cannot be resolved under Wurmbrand’s theory. This, however, is not a problem for the analysis of *lassen*-middles, but rather for the theory of restructuring. Since restructuring infinitives may combine with matrix unaccusative predicates outside of *lassen*-middles, it is an empirical fact that not every restructuring configuration involves matching VoicePs. Any theory of restructuring has to account for this.

Third, an answer is required to the question of how the dispositional property is assigned in impersonal *lassen*-middles with embedded lexical datives or prepositional objects. As has been shown in chapter 8, no expletive can surface in these contexts since, arguably, an expletive cannot take an argument as associate. But how, then, can the lexically case-marked

DP be associated with the subject position? Furthermore, since such an element is clearly an argument of the embedded predicate, the claim that adjunction to the matrix vP suffices for the assignment of the dispositional property does not extend to these cases. It could be that the notion of topichood plays a role here, but then the question arises why, in the presence of a structural subject, topichood cannot affect the disposition ascription, which necessarily has to target the nominative DP in these cases.

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## **EIDESSTATTLICHE ERKLÄRUNG**

Hiermit versichere ich, dass ich diese Arbeit selbständig und nur mit den angegebenen Hilfsmitteln angefertigt habe. Alle Passagen, die dem Wortlaut oder dem Sinn nach anderen Werken entnommen sind, habe ich durch Angabe der Quelle als Entlehnung kenntlich gemacht.

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Marcel Pitteroff