A Typology of Shifting Coordinators

and what they can tell us about clitics and their formal modelling

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Abbreviations

A	agent	CONS	consecutive
ABL	ablative	CONT	continuous
ACC	accusative	CONTR	contrastive
AD	adessive	COP	copula
ADD	additive	CVB	converb
ADJ	adjective	DAT	dative
ADVS	adversative	DEM	demonstrative
ALL	allative	DEF	definite
ALLO	allocentric referent	DECL	declarative
AMB	ambulative	DIR	directional
ANTR	anterior	DISJ	disjunction
AOR	aorist	DIST	distant
APPL	applicative	DS	different subject
APUD	apudlative	DST	distributive
AQ	alternative question	DT	delimiter
ASSOC	associational	DVB	deverbalizer
AUX	auxiliary verb	EGO	egocentric referent
BEN	benefactive	EMPH	emphatic
CAUS	causative	EQUAT	equative
CL	classifier	ESS	essive
CLS	clause	EZ	ezafe
COLL	collective	FEM	feminine gender
COMP	complementizer	FUT	future
COMPL	completive	GEN	genitive
COND	conditional	GNT	general tense
CONJ	conjunction	HAB	habitual

HUM	human	PASS	passive
IMP	imperative	PERF	perfect
IN	inessive	PL	plural
INC	incompletive	POSS	possessive
INDEF	indefinite	PRES	present
INESS	inessive	PRO	pronoun
INF	infinitive	PROX	proximate
INC	incompletive	PROG	progressive
IND	indicative	PROH	prohibitive
INS	instrumental	PRF	perfective
INT	intensifier	PRT	partitive
INTR	intransitive	PST	past
INTER	interessive	PTCP	participial
IPFV	imperfective	PURP	purposive
ITR	iterative	Q	question
LAT	lative	QUOT	quotative
LNK	linker	REFL	reflexive
LOC	locative	REP	repetetive
MASC	masculine	RES	resultative
NARR	narrative	SBEL	subelative
NEG	negation	SBJ	subjunctive
NOM	nominative	SBST	substantive
NPST	non-past	SRESS	superessive
NSIT	new situation	SUBJ	subject
O	object	SUBL	sublative
OPT	optative	SG	singular
OS	oblique stem	T/A	tense/aspect
OBL	oblique	TEMP	temporal

TOD.PST	today's past	VERS	versative
TOP	topic		
UW	unwitnessed		

Abstract

The contribution of this book is threefold:

First, I provide a crosslinguistic typology of the empirical phenomenon of what I call shifting coordinators, i.e. coordinators, which appear linearly inside of their conjuncts (like Latin *-que*) – a phenomenon that has largely been neglected in both the descriptive as well as in theoretical literature. Based on twelve in-depth case studies, it provides a detailed description of the observed empirical variation of coordinator placement patterns and a discussion of the morphosyntactic, phonological and semantic variables that have an impact on the placement options.

Second, I show that the variation observed with shifting coordinators closely mirrors the variation that we find with other types of clause-level clitics. In particular, it can be shown that shifting coordinators exhibit the full range of second position effects described in the literature. As will be shown, we find coordinators in second position which are defined in terms of phonological or prosodic phrasing as well as those sensitive to syntactic constituency. Neither of these placement patterns can be reanalyzed as the other or subsumed under the other as they are characterized by different clusters of properties. It can be shown, for example, that phonologically determined second position clitics freely appear inside of syntactic islands whereas morphosyntactically determined second position clitics obey syntactic islands throughout. Against the background, I argue that the properties of shifting coordinators can, at least as a guiding hypothesis, be generalized to other second position effects and inform us about the grammatical behavior of second position elements and other clause-level clitics. This book is the first crosslinguistic work on clitics that keeps the morphosyntactic category of the element under investigation constant and in doing so, it allows us to control for many variables that have an impact on clitic placement. The study at hand thus enables us to test a much wider range of hypotheses than previous studies.

Third, I provide a formal theoretical model that derives the full variation of shifting coordinators and clitic placement more generally. I will review a number of the most influential attempts in the literature to describe and model the variation in second position placement and point out their respective advantages and disadvantages and I will point out how shifting coordinators can help us identify the most principled and restrictive model. Going from there, I will put forward my own theoretical model called the Distributed Integration account, which has the following properties: It is (a) transformational, (b) cyclic, (c) distributed and (d) subcategorization-based. The approach treats second position effects, as well as clause-level clitic placement more generally, as an interface phenomenon, and that the unusual placement patterns arise as a result of the mapping procedure either from the syntax to the morphology or from the morphology to the phonology, both of which will lead to a distinct cluster of properties. I further show how the approach can be extended to cover clause-level clitics that do not fall under the rubric of second position elements.

Part I.

A typology of shifting coordinators

1. Introduction

1.1. Introductory remarks

Scientific research on the linguistic phenomenon of clitics promises invaluable insights on the workings of language and human language faculty. It is quite evident that we find extremely robust, recurring patterns in the grammatical behavior of clitics crosslinguistically. We can easily provide countless examples in unrelated languages from all corners of the earth that have a peculiar closed class of small grammatical elements that cluster in some sort of second position. In many cases, researchers often share the intuition that these elements also seem to defy otherwise fairly established syntactic rules of the language in that they seem to appear in positions that are not available for other elements outside of this small class.

Observations of this sort strongly suggest that the study of clitics can inform us about the workings of language and cognition. If so many areally and genealogically unrelated languages seem to resort to very similar strategies to organize the grammatical properties expressed by the clitics, then it seems like there must be a reason for that. That becomes even more apparent in light of the fact that minimally different systems such as third position clitic systems or second-to-last position clitic systems are extremely rare to the point where most people actually doubt their existence altogether (see e.g. Anderson 2005 for discussion).

However, despite the clear parallels between languages and the recurring intuitions that there is something special about the small closed class of items we call

1. Introduction

'clitics', research on what characterizes this class of elements or what rules they follow has made fairly little progress. We have elaborate descriptions and models about clitic systems in specific languages but so far, attempts of generalizing these systems to a crosslinguistic perspective have not been particularly successful.

One of the core problems is that the term *clitic* is a notoriously vague one and seems to evade any sort of non-trivial definition. In some cases, this even leads to a situation where both in the descriptive and in the theoretical literature, the term is sometimes used to refer to all items that fall outside of simple classifications as affixes vs words. The literature contains various attempts to find a set of reliable diagnostics for whether a given element qualifies or not but none of these attempts have, in the mind of many linguists, succeeded. The result is that even within one language, it is often very hard or even impossible to give a coherent definition of what it means to be a clitic. Any attempts to do so from a crosslinguistic, typological point are often viewed as futile.

The question is of course, how to approach the topic of clitics given everything we have said above about their evasive nature. In his work "On Clitics", Arnold Zwicky (1977) proposes to approach the phenomenon by comparing a clitic-like element to its non-clitic counterpart. He shows, for example, that object clitics in French obey different syntactic rules as full noun phrases with respect to their placement and their ability to be shared across conjuncts. He coined the well-known but much criticized classification of simple vs special clitics, the latter referring to clitics that do not follow the same syntactic rules as their non-clitic counterparts.

As has been noted by various people including Zwicky himself (Zwicky 1977; Klavans 1985; Macaulay 1987; Anderson 1992, 2005), this methodology however comes with a major problem. Some elements, such as the English possessive *'s*, do not alternate with a non-clitic counterpart and therefore their status as simple or special lies outside of that classification. And, as people like Klavans (1985); Macaulay (1987) noted, crosslinguistically speaking, such clitics are rather the rule than the

exception. And even though Zwicky (1977) added the category of *bound words* to re-fer to these elements, that step does nothing to solve the methodological problem. Without the possibility to compare a clitic to its non-clitic counterpart, we lose our tertium comparationis and therefore we cannot really attempt to describe in what sense the clitic obeys or disobeys the relevant syntactic rules of a given language or not.

Many subsequent studies have attempted to overcome this problem by study-ing the placement of a given clitic in reference to its so-called clitic domain (see amongst many others, Klavans (1985, 1995); Marantz (1988); Miller (1992); Ander-son (1992); Embick & Noyer (2001); Anderson (2005)). However, this approach sim-ilarly comes with two major problems itself.

The first of these problems was that, for most of these approaches, the process of how to arrive at the notion of clitic domain. In more syntactically oriented ap-proaches (e.g. Marantz 1988; Miller 1992; Embick & Noyer 2001), the notion of the clitic domain was related to the scope of the clitic within the syntactic phrase struc-ture but in many if not most case studies, it remained quite unclear how the domain for a given clitic was determined. For many clitics (e.g. for pronominal clitics), the syntacto-semantic scope is arguably extremely hard to determine and therefore, the concept of the clitic domain remains relatively meaningless. For Anderson (1992), for example, the clitic domain of pronominal clitics in Romance is the clause but for Anderson (2005), the clitic domain of the very same elements is only the verb. Hence, I would submit that without a concrete notion of the concept of clitic do-main, we arrive again at the problem that we cannot really determine the place-ment properties of clitics as such and any attempt of a crosslinguistic comparison is impossible.

The second, and maybe even more serious problem is that all of the studies men-tioned above are based on a very heterogeneous set of case studies. The typology in Klavans (1985) for example compares pronominal clitics in Nganhcara, case mark-

ers in Kwakwala, negation in Classical Greek as well as Nahuatl, with Ngiyambaa pronominal clitics as well as auxiliaries. Embick & Noyer (2001) compare a Bulgarian determiner with Lithuanian reflexive, a Huave reflexive and a Latin conjunction. However, such samples limit the explanatory power of these investigations substantially because there are no guarantees that all clitics, regardless of their morphosyntactic category and their semantics will have the same placement possibilities. In fact, we have reason to believe that they do not. Some patterns that are well-established for clause-level clitics (like attachment to the first syntactic or prosodic phrase or attachment to the highest verb etc.) are completely unattested for clitics of smaller domains such as determiners or case markers and also seem quite unlikely to exist if you think about what that would look like. In fact, one important contribution of this book will be to show that the available clitic placement patterns of correlate with their syntactic position and/or category. So, in a sense, the explanatory power of previous typologies of clitic placement patterns was limited because they compared apples and oranges and in many cases, it necessarily remained unclear whether a given difference between two clitic patterns was due to inherent differences of the clitics such as phonological form, morphological subcategorization or morphosyntactic category or due to the syntactic configuration or a combination of all of these factors.

The present study makes an attempt to solve these two above-mentioned problems at the same time. This study is a first attempt to propose a systematic typology of clitic placement patterns that keeps the syntactic category of the element under investigation constant. We will look non-canonical placement patterns of coordinators crosslinguistically and ultimately arrive at a typology of patterns as to how their placement can diverge from what we take to be their canonical position. By keeping the morphosyntactic category and syntactic position constant, we can control for many independent variables that can potentially have an impact on the available clitic placement patterns.

As I will outline in more detail below, choosing coordinators as the element under investigation has some immediate advantages. The one that is important here is that unlike, with pronominal arguments, for example, it is quite straightforward to determine their syntacto-semantic scope and therefore their canonical positions. Coordinators also are not well-known to show a large amount of syntactically conditioned placement variation. As researchers like Ross (1967) and Dik (1968) observed, coordinators are typically unaffected by reordering rules. In generative terms, coordinators do not undergo movement transformations and are not crossed my movement transformations.[1] This property of coordinators helps us solve the first problem identified above. Specifically because we have such a clear idea where coordinators belong syntactically and semantically, it is very straightforward to determine what Klavans (1985) called the clitic domain. What that means is that, in a sense, we are back to having a tertium comparationis inasmuch as we can systematically compare the surface positions of coordinators with the position where it syntacto-semantically belongs.

The advantages of coordinators for this kind of study becomes apparent with the famous example of the non-canonical position of the Latin conjunction *que*. This example was already discussed in Zwicky (1977) and continues to be reproduced in virtually every paper and book on the topic (see Zwicky (1977); Marantz (1988); Anderson (1992); Embick & Noyer (2001); Anderson (2005); Embick & Noyer (2007))

It is precisely the clearly measurable divergence between the assumed syntacto-semantic position between the conjuncts and the surface position that makes this such a convincing example. The distributional generalization about *que* is that it linearly occurs exactly one prosodic word to the right of where we would expect it to be syntacto-semantically. This generalization cannot really be argued with and as such this example often features as a poster child of cases of clitic displacement.

Against that background, it is, in a sense, more than surprising that there is to

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[1]The one notable exception of course is Across-the-board movement, which, however, due to its specific syntactic profile, can fairly easily be controlled for.

date no study that looks at the crosslinguistic variation of shifting coordinators because this configuration allows us to map out the differences between the underlying syntactic structure and the actual surface structure in an extremely systematic way. The present book intends to fill this gap and, in doing so, provides the first ever crosslinguistic study of the clitic placement patterns of a constant morphosyntactic element.

1.2. Aim of this work

The aim of this work is threefold: First, I want to provide a description of the empirical phenomenon of what I call shifting coordinators, a phenomenon that has largely been neglected in both the descriptive as well as in theoretical literature. This description includes a definition of the phenomenon and a discussion of the crucial categorical distinctions. It further includes a detailed typology of the observed empirical variation of coordinator placement patterns and a discussion of the morphosyntactic, phonological and semantic variables that have an impact on the placement options.

The second aim of this work is to show that the variation observed with shifting coordinators closely mirrors the variation that we find with other types of clause-level clitics. In particular, it can be shown that shifting coordinators exhibit the full range of second position effects that is occasionally described in the literature. As will be shown, we find coordinators in second position which are defined in terms of phonological or prosodic phrasing as well as those sensitive to syntactic constituency. It will be shown that these different placement patterns cannot be equated and one cannot be subsumed under the other as they are characterized by different clusters of properties. It can be shown, for example, that phonologically determined second position clitics freely appear inside of syntactic islands whereas morphosyntactically determined second position clitics obey syntactic islands through-

out. Against the background of this argumentation, I will make the claim that the properties of shifting coordinators can, at least as a guiding hypothesis, be generalized to other second position effects and as such can greatly inform us about the grammatical behavior of second position elements and other clause-level clitics.

The third and final aim of this work is to provide a formal theoretical model that derives the full variation of shifting coordinators and clitic placement more generally. I will review a number of the most influential attempts in the literature that attempt to describe and model the variation in second position placement and point out their respective advantages and disadvantages and I will point out how shifting coordinators can help us identify the most principled and restrictive model. Going from there, I will put forward my own theoretical model called the Distributed Integration account, which has the following properties: It is (a) transformational, (b) cyclic, (c) distributed and (d) subcategorization-based. The approach treats second position effects, as well as clause-level clitic placement more generally, as an interface phenomenon, and that the unusual placement patterns arise as a result of the mapping procedure either from the syntax to the morphology or from the morphology to the phonology, both of which will lead to a distinct cluster of properties.

1.3. Methodology and sample

The empirical methodology used in this work to provide the typology is a qualitative one. I conduct twelve in-depth case studies of the phenomenon in a diverse set of languages studying the possible range of non-canonical coordinator placement. Throughout the case studies, I keep the methodology constant trying to approach the crucial research questions in the same way across languages.

The qualitative nature of the investigation is, in a sense, already dictated by the overall rarity of the phenomenon itself. As will become clear in the next chapter, shifting coordinators are, from a crosslinguistic point of view, not very common and

coordinators are not known to participate in word order variation very frequently. This has some straightforward benefits (see discussion in Section 1.4) but of course, it also limits our object of investigation to a relatively small sample of languages.

I also conducted a non-systematic search through grammars as well as the relevant literature on coordination patterns as well as clitic patterns to see if the phenomenon is robustly attested beyond the core sample. At this point, I found 48 languages from 36 genera and 21 language families that exhibit the phenomenon. Unlike in the core sample, where every pattern was studied in detail to determine whether we are dealing with a coordinator or not, the inclusion of a language in the broad sample was mainly based on the relevant statements in the descriptive literature. I decided to include the language if the source that I consulted stated that the element in question was a coordinator or a linker/conjunction (or similar term) with a coordinative function as long as it was clear that the configuration described was sufficiently different from subordinating configurations. As for languages in the broad sample, it may turn out that a few of these are not instances of coordinators at all but as noted above, the purpose of this search is not to make any quantitative statements but to find suggestive evidence that the phenomenon is attested in a diverse set of languages. Appendix 1 gives a list of all languages in the broad sample including the relevant sources and Appendix 2 gives some examples for the languages that have not been discussed in the core sample.

As for the core sample I chose twelve languages trying to find a balance that varied both in terms of the areal and genealogical distribution of languages within the sample as well as in terms of the properties that the phenomenon exhibits in the language in question. Of course, the choice of languages in the core sample was also influenced by the accessibility of (a) detailed sources about the languages or (b) language experts or native speakers.

(1)   Core Sample:

Language	Genus[2]	Language Family
Latin	Italic	Indo-European
Cherokee	Southern Iroquioan	Iroquioan
Kalaallisut	Inuit	Eskimo-Aleut
Polish	Slavic	Indo-European
German	Germanic	Indo-European
Yoruba	Defoid	Niger-Congo
Yavapai	Yuman	Yuman
Udihe	Udegheic	Tungusic
Lezgian	Lezgic	Nakh-Dagestanian
Khwarshi	Didoic	Nakh-Dagestanian
Tsez	Didoic	Nakh-Dagestanian
Sinhala	Indic	Indo-European

Both the core sample and the extended sample show a bias towards Nakh-Dagestanian and Indo-European languages. The only languages in the core sample that are immediately related and belong to the same genus are Khwarshi and Tsez but I decided to include both of them nonetheless since the placement patterns of the respective coordinators in the languages show an interesting variation that is informative both in a diachronic as well as synchronic way.

Both the small set of languages as well as the areally and genealogically biased sample prevent us of course from making any substantial claims about the relative frequency or distributions of the individual types identified in this study. More generally, a qualitative investigation such as this one cannot provide us with any sort of quantitative information by its very nature. Nonetheless the approach allows us a quite informed view on what range of logically possible patterns is actually attested in the world's languages and to what extent certain patterns or prop-

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[2]Language Family and Genera have been taken from Glottolog (Hammarström et al. 2024) – 07/2024

erties actually correlate with certain other grammatical properties of the elements in question. And unlike a quantitative approach that compares several hundreds of languages, the qualitative approach also allows us to dig deeper in a single language and to consider language-internal diagnostics or language-internal arguments for a given hypothesis. In order to describe a phenomenon like clitic placement, which touches upon issues relating to syntax, morphology and phrasal as well as word-level phonology, we need to have a good grasp of the behavior of the individual languages in all of these areas. In this sense, I would want to argue that a qualitative approach is the best method for the phenomenon at hand.[3] This, of course, does not mean that future research involving some more quantitatively-oriented methods could not unearth interesting findings and corroborate or falsify hypotheses drawn here.

1.4. Why coordinators?

There are several reasons why coordination structures are, in my view, particularly fruitful areas of investigation, both in terms of crosslinguistic comparison as well as from a language-internal point of view. First and foremost, coordination structures seem to be present in the vast majority of the world's languages - to the extent that it is sometimes speculated whether it is a universal property of language as such. In any case, coordination of nominal and/or clausal constituents seems to be a useful and - semantically speaking - simple concept that spreads relatively fast. Many grammars of endangered languages note that the coordinators of the dominant languages are frequently used replacing the indigenous ones (if they had coordinators in the first place).

The second reason is that, possibly because coordination is a relatively simple and basic concept, we find relatively little semantic and pragmatic differences across

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[3]The methodological choice and the line of argumentation is essentially parallel to Baker & McCloskey (2007), where this approach is branded as *Generative Typology*.

languages - at least compared to other grammatical concepts. The grammatical concept of tense often shows intricate interaction patterns with negation, finiteness, aspect, mood, evidentiality, etc in a given language but the concept of coordination is comparably well-behaved. As is well-known, we do see interactions with negation (especially of course in the case of disjunction structures) and it is known that the majority of languages shows different coordinators for different relations between the coordinands. Languages typically distinguish disjunctions from conjunctions and the latter are often further distinguished into neutral conjunctions as well as adversative conjunctions which express some kind of contrast. It is also well-known that, in many languages, the coordinator is sensitive to the category of its coordinands. In many languages, a different conjunction is used for clauses compared to nominal categories of verb phrases. But despite these interactions, I think it is fairly uncontroversial to say that, in comparison to other grammatical categories, there is only a small, crosslinguistically relatively well-defined set of semantic and pragmatic factors that interact with the concept of coordination - both in terms of lexical realization as well as syntactic structure. This is, in my view, a huge advantage for anyone interested in crosslinguistic comparison. A crosslinguistic study that seeks to compare tense systems across languages is much more complicated than a study that compares coordination structures.

The third reason why coordination structures are a good subject of study is that they are extremely flexible in terms of what they combine with. Most languages can coordinate full clauses as well as noun phrases and many can also coordinate verb phrases and apposition phrases. This means that we can study the properties of coordinators in various configurations in comparison to other clause-level clitics, which often only occur in one specific configuration. We will see in Part II of this book how the combinatorial flexibility actually allows us to track which part of the coordinator placement pattern is actually due to the syntactic configuration and which part is an inherent property of the element in question.

Finally, we note that despite the combinatorial flexibility of coordinators, they prove to be relatively inflexible when it comes to the application of syntactic transformations. While we can coordinate various syntactic categories such as nominal phrases, verbal phrases or (parts of) clauses we typically have a good grasp of what the respective categories are and where they begin and end. For one thing, coordination structures are typically not complicated by the possibility of syntactic movement as they are subject to Ross' (1967) Coordinate Structure Constraint which bans movement out of coordinate structures. This constraint on movement is generally assumed to be one of the crosslinguistically most stable ones and its exceptions, such as parallel movement out of all conjuncts alike (a.k.a. ATB-movement) or asymmetric extraction are well-studied and can be controlled for.

For all of these reasons, we can conclude that coordinators make for an ideal testing ground for our typologies and theories of clitic placement.

1.5. Structure of this work

This book consists of two major parts. The first part, which contains the typology of shifting coordinators, is intended as a largely theory-neutral discussion of the phenomenon under investigation. I begin with some methodological considerations that include definitions of the subject of study and of the empirical diagnostics that distinguish coordinate structures from subordinate structures as well as coordinators from other categories. It further introduces the basic syntactic, semantic and phonological variables that the survey controls for.

I then go on to introduce the individual case studies grouped into four distinct categories. Chapter 3 discusses coordinators appearing after the first phonological word of the respective coordinands. These include the well-known case from Latin but also two lesser known cases from Oklahoma Cherokee as well as Kalaallisut, which are shown to essentially behave the same as Latin. Chapter 4 discusses

three case studies of coordinators appearing after the first phonological phrase from Yorùbá, German and Polish. Since this pattern is not as well-established in the literature, the respective case studies go into more detail providing as many arguments as possible to convince the reader that the pattern was identified correctly. Chapter 5 then goes on to discuss three case studies about coordinators that appear after the first morphosyntactic constituent of their respective coordinand (Lezgian, Yavapai and Udihe). Finally, Chapter 6 discusses three case studies, which cannot be grouped under the label second position effects. In these case studies the respective clausal coordinators appear attached to a specific category within the respective conjuncts. In Khwarshi, the coordinators appear attached to the absolutive noun phrase of the coordinand regardless of its position. In the related language Tsez, it appears attached to the immediately preverbal noun phrase and in Sinhala, the coordinators appear attached to the lexical verb if it appears in a nominalized form. Chapter 7 then concludes the first part of this book by highlighting and discussing some of the most interesting emerging generalizations of the survey.

The second part of this book, which of course crucially builds on the typology in Part I, aims to evaluate the implications of the findings for theories of second position effects and clitic placement more generally. In Chapter 1, I will argue that the patterns we find with shifted clausal coordinators are the exact same ones as with other types of clause-level clitics and that the model that derives the properties of shifting coordinators is the same one that derives the properties of other clause-level clitics. In Chapter 2, I go on to discuss some of the most influential approaches to either propose a typology or a model of clitic placement. Chapter 3 then goes on to review some of the proposed concepts in these works and building on the findings about shifting coordinators, it advocates for a specific model in which shifting coordinators (and second position elements more generally) are derived by means of a model that is (i) cyclic, (ii) subcategorization-based, (iii) transformational and (iv) distributed. Chapter 4 then proposes a specific model of second position ele-

ments and shows how it derives the empirical patterns as well as the crucial correlations between different variables. Chapter 5 then returns to the coordinators that do not show second position placement as they attach to a specific category within the relevant conjunct and discusses the theoretical implications for the theory. Chapter 6 concludes.

1.6. A note on the notion of 'clitic'

Before I start with the methodological background, I want to address a recurring objection to any study about clitics, namely that the term cannot be properly defined, at least not in a crosslinguistic sense. And if we cannot define the object of study properly, so the objection goes, then such a study is bound to be pointless or at least severely limited in its explanatory scope. And while I do not necessarily disagree with the statement as such (or with the premise that we cannot define what a clitic is), I want to point out that, before jumping to conclusions, we need to make the distinction as to whether the term 'clitic' plays an actual role in the research design or whether it is merely used as a somewhat vague term that is simply used to point to a rough area that the study in question relates to. It is in the latter sense, I use the term 'clitic' in the title of this book as it is a crucial pointer for people interested in the study of elements often referred to as such. However, I will refrain from using the term 'clitic' in the discussion of the research design or the theoretical model.

The main reason for this choice is that the term 'clitic', depending on one's analytical preconceptions, might come with all kinds of undesirable implications. Some might think that the term implies that the element in question is "promiscuous" (Zwicky & Pullum 1986) in the sense that it can attach to various morphosyntactic categories. And while that holds for many of the shifting coordinators studied in this work, it does not hold for all of them. As will be shown, some shifting coordinators need to attach to a specific category. Similarly, one might think that being a clitic en-

tails that the element in question is phonologically reduced. But some elements, in particular those following the first phonological phrase of their conjunct in Yorùbá or German do not seem to be reduced or dependent in any meaningful way. Such unwanted implications can for example be avoided by talking about second position elements rather than second position clitics.

I thus want to stress that the above-mentioned objections to works on 'clitics' do not hold for the work at hand as the concept does not play any role in the research design whatsoever. The object of study of this book are not 'clitics' but shifting coordinators. This is a notion that can be, I would submit, properly defined as a coordinator that does not appear in its canonical definition. Once the terms *coordinator* and *canonical position* are defined in a sufficiently concrete way, this may serve as enough of a definition to justify the non-pointlessness of this study.

In other words, the perspective of this book is an entirely data-oriented one. It does not start with a definition of what a clitic is but starts with a (hopefully exhaustive) typology of a concrete phenomenon, namely shifting coordinators. Once this typology is established it becomes apparent, I argue, that the different types within the typology mirror very closely the existing types of what previous research has called clitics, in particular so-called second-position clitics. This step within the research design is purely inductive and does not require a concrete definition either. Calling the elements in question 'clitics' mainly serves as a point of reference for other researchers to understand more quickly what my study relates to.

2. Methodological Background

The empirical goal of this work is to propose a formal typology of the possible placement patterns of coordinators. As noted above, the methodological approach is a qualitative one. I will discuss 12 case studies of non-canonical placement patterns from a range of different languages. However, before I can begin to introduce these case studies, we first need to define the subject of investigation, clarify many of the methodological choices as to how we distinguish the subject of investigation from other elements, introduce some of the relevant concepts that will play a role throughout this work and introduce the variables that the study at hand controls for. I will begin by giving a definition of coordination and introducing some of the basic terms.

2.1. Defining coordination

The literature contains a fair amount of different definitions of the term *coordination*. I will use the following one from Dik's (1968) work:

> A coordination is a construction consisting of two or more members
> which are equivalent as to grammatical function and bound together
> (...) by means of some linking device.   Dik (1968, 25)

Many bits and pieces of this definition can be (and have been) discussed in great detail. At this point, I simply want to highlight some aspects. First, this definition

is intended as a definition of the empirical phenomenon of a coordination construction, which is not necessarily identical to the theoretical concept used in some formal models of grammar. In some frameworks, most notably in many theories couched within Minimalism, coordinate constructions have been analyzed as obligatorily binary, i.e. containing only two members. Cases of three or more conjuncts have then been modelled as multiple nested coordination structures.[1] So, regardless of whether the correct formal modelling of coordination constructions employs binary branching structures or not, the definition above includes cases with more than two members. For this reason, I also took out the phrase *'at the same structural height'* from the original definition in Dik (1968) as this phrase amounts to an analytical choice and does not immediately help us for an empirical definition.

Secondly, the definition refers to configurations where the coordinands have the same grammatical function (as opposed to other definitions that e.g. refer to the same syntactic category). As many people have observed (see e.g. Dik (1968); Sag et al. (1985); Haspelmath (2007a); Munn (1993); Zhang (2010)), coordinands can differ with respect to syntactic categories and therefore defining coordination over syntactic phrases is either problematic or it employs a notion of syntactic phrase that is significantly more abstract (see e.g. Bruening & Khalaf (2020)) and therefore of no immediate help us at this point.[2]

The linking device in the above-mentioned definition will from now on be called the coordinator. According to the above-mentioned definition, the presence of this linking device is a necessary condition for a coordination construction. However, in practice, we observe that a wide range of languages often also allow the combi-

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[1]See Munn (1987, 1993); Johannessen (1998); Progovac (1998a,b); Zhang (2010); Weisser (2015a). See also Borsley (2005); Neeleman et al. (2023); Ke et al. (2023); Schwarzer & Weisser (2023) for a critical assessment of the arguments for binary branching.).

[2]Finally, I want to note that the reference to same grammatical functions also excludes certain cases where a coordinator is employed to join elements in a way that is somewhat different from prototypical coordination. These include cases of what is sometimes called heterofunctional coordination (Gribanova 2009; Przepiórkowski 2022 as in (1) or various asymmetric coordination configurations (see e.g. Ross (1967); Culicover (1970); Lakoff (1986); Na & Huck (1992); Culicover & Jackendoff (1997); Weisser (2015a,b, 2019a)).

nation of clauses without the overt presence of such a linking device, a situation typically referred to as juxtaposition. The following example from Sinhala shows the coordination of verb phrases without an overt linking device.

(1)   Ranjit [gedərə e-nəwa]   [bat ka-nəwa] [ʈiiwee balə-nəwa]
        Ranjit home   come-IND rice eat-IND   TV   watch-IND
        'Ranjit comes home, has a meal and watches TV.'

Chandralal (2010, 181)

However, for the purposes of this study, we can afford to largely stay agnostic as to whether these cases should be included under the definition above or not. Since we are interested in non-canonical placement patterns of coordinators, cases of juxtaposition will not be too informative anyway. They will, in some case studies, however, be helpful to determine the whether a given element is a coordinator in a non-canonical position as opposed to an adverb etc.

Having introduced the definition above as a working definition, I want to emphasize however that this definition can only serve as a rough point of orientation and not as an ultimate criterion of what counts as a coordination construction in the world's languages. I assume that a given construction is defined by its abstract grammatical properties, which can be identified independently from the language we work on. I will introduce some of these abstract grammatical properties of coordination constructions and coordinators below in the next subsection.

Before, we look at these diagnostics, I briefly want to introduce some terminology as there is quite a substantial amount of confusion concerning the terms *coordination* and *conjunction*.

The term *coordination* was discussed and defined in the first part of this chapter. Proper diagnostics of what counts as a coordinate structure from a morphosyntactic point of view will be given below in Section 2.2. I take the term *coordination* as a cover term including various semantic relations such as conjunction, i.e. semantically neutral *and*-like as well as adversative, i.e. *but*-like conjunction as well as

disjunction, i.e. an *or*-like relation. Most importantly, the term *coordination* is used to distinguish a relation from so-called subordination (in the wide sense, i.e. in the clausal and nominal domain), which exhibit a fundamentally distinct set of properties.

In some cases, in particular, in the older literature and quite a substantial amount of grammars, the term *conjunction* is used to refer to all kinds of combinations of clauses regardless of their actual relation.[3] Crucially, for me, *conjunction* is a subtype of coordination and thus falls under the definition given above, i.e. implying that the members are equivalent as to grammatical function.

The term *coordinator* then refers to the element that expresses a coordinate relation between the two coordinate clauses. Again, this term is intended as a cover term for more specialized instances of these elements such as *conjunctions* or *disjunctions*.

Following Haspelmath (2004), I will use the term *coordinand* to refer to the constituents that are coordinated by the coordinator. As with the discussion above, a depending on whether we are dealing with conjunction or disjunction, a coordinand can be a *conjunct* or a *disjunct*.

Some other terms, such as *monosyndetic* or *polysyndetic* coordinators as well as the term *shifted* coordinator and will be introduced in the course of the discussion in the respective sections.

2.2. Identifying coordination configurations

There is a large amount of literature on how to diagnose coordinate structures and, in particular, how to distinguish them from superficially similar constructions, especially in less familiar languages. In the case of clausal coordination, it often proves tricky to distinguish them from subordinate constructions while nominal coordina-

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[3]Cf. the use of the term *subordinating conjunction*, which in my use of these terms, is contradictory.

tion constructions are often quite similar to comitative constructions. Coordination of complex subclausal constituents such as verb phrases are often hard to distinguish from converb constructions or clause chaining constructions (if such a distinction even exists in a given language). At least since Dik (1968), researchers have tried to collect a relatively coherent set of diagnostics to identify coordinate constructions. In this short section, I will introduce some of the diagnostics for the coordination of clauses.[4] Most of these properties will be illustrated with data from one of the case studies in the second part of this work.

2.2.1. Diagnostics for coordination of clauses

First, I would like to discuss the diagnostics that can help us decide whether two clauses stand in a coordinate or subordinate relation. We start with what we can call the **Morphosyntactic Asymmetry Test**.[5] Compared to the others below, this test is presumably the easiest one as it can simply be read off the morphological surface structure of the construction in question. In many languages, we find various asymmetries concerning the morphosyntactic categories or the morphological shape between subordinate and non-subordinated clauses. This asymmetry can be in both directions: In many cases for example, subordinate clauses do not exhibit the full range of morphosyntactic category distinctions compared to main clauses. It may be that only main clauses can express features like tense, aspect or subject agreement. The subordinate clause then either does not express these features or they appear in some sort of semantically empty dummy form. The subordinate clause is then interpreted as having the same morphosyntactic specification as the main clause. In other words, if one of the clauses in question is morphosyntactically dependent, then we can assume that it is subordinate on the other clause. In the example in (2), the second clause does not show tense or agreement but rather an

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[4]For diagnostics concerning coordination of noun phrases, see e.g.Haspelmath (2007a).

[5]This is quite similar to what Stassen (1985); Yuasa (2005); Weisser (2015a) refer to as the *Deranking Test* but it is supposed to be more general as it includes asymmetries in both directions.

2. Methodological Background

infinitive form.

(2)   The ruthless knightess demanded that she be allowed to marry the prince.

But of course the same conclusion can of course be drawn when there are any other kind of morphosyntactic asymmetries between the two clauses in question. Sometimes subordination is marked with a change of word order as in German where subordinate clauses typically diverge from the standard V2-order or with a special morphosyntactic markings for subordinate clauses such as subjunctive in many European as well as some Semitic languages. An example comes from Hungarian in (3).

(3)   Az otthoni címem-re   kérem, hogy küldjétek   a
        the home   address.POSS.1SG-SUBL ask.1SG that   send.SUBJ.2PL the
        levelet.
        letter.ACC
        'I ask for the letter to be sent to my home address.'

<div align="right">Hungarian, É. Kiss (2021, 276)</div>

As the definition in Section 2.1 already indicated, coordinands in a coordinate structure are supposed to be equivalent in various respects and thus we expect them to be morphosyntactically parallel. Any sort of morphosyntactic asymmetry that does not arise from categorial distinctions of the conjuncts themselves can thus be taken as evidence for subordination.

The next diagnostic has to do with the relative position of the clauses in question. In subordinate constructions, the relative position of the main clause and the subordinate clause are more flexible. The most obvious difference is the possibility of **center embedding** with some subordinate clauses. In some cases, subordinate clauses appear embedded inside the matrix clause. With coordination, it is not possible to have one coordinand appear linearly inside the other.

Of course though that the impossibility of center embedding does not automati-

cally indicate a coordinate relation. In many cases, independent syntactic or prosodic reasons can rule out a structure involving center embedding. In addition, the heavier the center embedded subordinate clause, the more degraded it generally becomes. Furthermore, we find sometimes that non-finite subordinate clauses can be center-embedded while finite ones cannot (see e.g. Hale (1976, 1983) for Warlpiri).

A related point concerns the possibility to change the order of clauses in clausal subordination without immediate semantic effect. With coordinate clauses, the order of conjuncts is typically fixed based on the underlying sequence of events. Furthermore, even if we ignored the change of the semantics for a second, we see that reversing the order of conjuncts leaves the connector (i.e. the coordinator or subordinator) in a central position while with subordinate constructions, the subordinator changes its position alongside the subordinate clause. In (4), the semantic relation of the two clauses does not change but in (5), it does. While, in (5a), the relation can be interpreted as a sequence of related events, it cannot in (5b). The order of the conjuncts suggests that these are completely unrelated events.

(4)   a.   Jean has bought a new shirt because they want to make a good impression tomorrow.

        b.   Because Jean wants to make a good impression tomorrow, they have bought a new shirt

(5)   a.   Jean has bought a new shirt and they want to make a good impression tomorrow.

        b.   Jean wants to make a good impression tomorrow and they have bought a new shirt.

Below we see two nice minimal pairs from Amele, a Papuan language, which illustrate the difference between coordinating conjunctions and subordinating conjunctions with respect to clausal order. In (6), we see that the subordinating conditional

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complementizer *fi* which follows the clause it attaches to allows for a reversal of the order of the clauses involved. The clause headed by *fi* can be initial or final. With the adversative conjunction *qa*, which superficially is in the same position, such a reversal is impossible. A clause headed by *qa* cannot appear in final position. Note that this diagnostic nicely patterns with the morphosyntactic dependency diagnostic discussed above as we see in the minimal pairs that the subordinated conditional is marked for switch-reference marking while the coordinated ones are not.[6]

(6)   a.   [Ija ja hudo-co-min fi] [uqa sab man-igi-an].
           1SG fire open-DS-1SG if 3SG food cook-3SG-FUT
           'If I light the fire, she will cook the food.'

       b.   [Uqa sab man-igi-an] [ija ja hudo-co-min fi].
           3SG food cook-3SG-FUT 1SG fire open-DS-1SG if
           'She will cook the food if I light the fire."   Roberts (1987, 98f)

(7)   a.   [Ija ja hud-ig-a   **qa**] [uqa sab mane-i-a].
           1SG fire open-1SG-TOD.PST but 3SG food cook-3SG-TOD.PST
           'I lit the fire but she cooked the food.'

       b.   *[Uqa sab mane-i-a]   [ija ja hud-ig-a   **qa**].
           3SG food cook-3SG-TOD.PST 1SG fire open-1SG-TOD.PST but
           'But she cooked the food I lit the fire.'   Roberts (1987, 99)

Another diagnostic that often helps to distinguish subordinate from coordinate constructions is **extraction**. Due to the Coordinate Structure Constraint extraction (out) of coordinate constructions is usually impossible unless it applies to all coordinands simultaneously. In (8), we see the possibility of parallel extraction out of both conjuncts simultaneously. We can move the objects of both conjuncts at the same time but as we see in (9), we cannot move the wh-elements out of only one of the conjuncts while leaving the other conjunct intact.

(8)   a.   Which toy did Sammi build and Remi play with?

       b.   *Which toy did Sammi build and Remi play with legos?

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[6]Throughout this work, I will always give the respective coordinands in brackets and the coordinators in bold.

With subordinate constructions, the pattern is very different. In these constructions, asymmetric extraction from the main clause is unproblematic (9). The possibility of asymmetric coordination from the subordinate clause often depends on the status of whether the subordinate clause is an adjunct clause or an argument clause (see (10a) vs (10b)).

(9)   Which toy did Sammi build while Remi played with legos?

(10)   a.   What did Sammi say that Remi should build?

         b.   *What did Sammi build a lego cable car while Remi played with?

Again, these patterns can be replicated in various languages around the world (see e.g. Broadwell (1997) on Choctaw).

The Coordinate Structure Constraint is generally taken to be one of the most robust constraints on syntactic movement and thus the test can generally taken to be relatively reliable.[7]

The final diagnostic that I want to mention briefly is the difference in scope. In the case of conjunction of two finite clauses, we do not expect scope taking elements embedded inside one of the clauses to take scope over the other clause. Consider first the example (11a) from Bhatt & Pancheva (2007). Here, one possible reading is negation taking scope over the conditional clause (i.e. the one with the continuation *'But she yells at him if she is sleepy'*). This reading is not possible with proper coordination of clauses (11b). There is no reading in (11b) where it is not the case that Mary is hungry.

(11)   a.   Mary doesn't yell at Bill if she is hungry.

                                                                          Bhatt & Pancheva (2007)

         b.   Mary doesn't yell at Bill and she is hungry.

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[7]In some cases, it seems that at least movement out of a conjunct (as opposed to movement of a conjunct) is grammatical if repaired with a resumptive pronoun; so resumption is a process that needs to be controlled for.

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Given this difference in terms of different readings, we can possibly use this test as a diagnostic for the distinction between subordination and coordination. Consider the example from Kalaallisut from Fortescue (1997) who states that under coordination with the conjunction *lu*, each clause must bear a negation if it is supposed to have a negative interpretation:

(12)   [Tului(t)-nunaan-nuka-nngil-aq] [ikinngun-ni=**lu**
        England-go.to-not-3SG.IND   friend.3SG.REFL-and
        tikiraar-nagu]
        visit-(4SG)-3SG-NEG-CONT
        'He didn't go to England and he visit his friend.'   Fortescue (1997, 141)

With the so-called contemporative subordinate clauses, this is not the case. We find at least some cases where the interpretation of the main clause negation scopes over the contemporary subordinate clause:[8]

(13)   tikil-lugu   taku-nngin-nakku
        come.to-(1SG).3SG-CONT see-not-1SG>3SG.CAUS
        'because I didn't come up and see him.'   Fortescue (1997, 141)

The literature contains a number of other tests to distinguish coordinate from subordinate clauses, many of which have their confounds. Another diagnostic that is sometimes mentioned is the **possibility of having cataphoric pronouns**, which tends to be possible only with subordinate constructions but not with coordinate constructions. However, the use of cataphoric pronouns is a tricky diagnostic because these restrictions often interact with pro-drop and other phenomena. As such it is often hard to establish the baseline as to whether the test is even applicable in a given language. In Weisser (2016), I have argued that switch-reference marking systems which strictly track the subject (non-)identity are not attested in clear cases of clausal coordination but it should be noted that we do find cases of morphology

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[8]Contemporary subordinate clauses also seem to be more flexible with respect to their order as the can precede the matrix clause (as shown in (13)) and as opposed to the conjunction *lu* (see (12)), the contemporary subordinate marker *lugu* seems to attach only to verbs.

tracking identity of situations or events which can look similar upon first glance. If that is correct, the properties of switch-reference systems can like cataphoric pronouns be used as a diagnostic for the coordination. However, as with cataphoric pronouns, the judgements are often subtle and the baselines are hard to establish, which is why these diagnostics are, in practice, of limited help.

2.2.2. Diagnostics for coordinators

In the previous section, I have discussed some diagnostics to identify coordinate structures and, in particular, distinguish them from subordinate structures. But while this is helpful at first, in order to actually propose a typology of coordinators, it does not always suffice to show whether a given structure is coordinate or not. In many cases, it is not clear whether a given element is a coordinator or simply some kind of adverb. This is particularly striking in languages that do allow for juxtaposition of clauses in order to express coordination. Consider the English example below:

(14)   Remi never wants to go to the playground, however as soon as he gets there, he enjoys himself very much.

The question is whether *however* is a conjunction. After all it can be replaced by *but* without any (fundamental) change in semantics. The issue becomes even more pressing in cases where a potential coordinator is not in the position between the two clauses. I will argue at length that some coordinators can shift into its second conjunct and a crucial piece of the argument will be that they are not just some sort of clause-internal adverb. In the German example in (15), we see that the conjunction *aber* which is usually translated to *but* appears embedded inside the second conjunct:

(15)   [Sammi baut   eine Murmelbahn], [er ist **aber** nicht zufrieden damit].
        Sammi builds a   marble race   he is but   not   satisfied with.it
        'Sammi builds a marble race but he is not satisfied with it'

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In order to figure out whether *aber* is a conjunction, we need some reliable diagnostics that help us distinguish these elements from adverbs of various kinds, modal particles, etc. In this section, I will discuss some candidates for potential diagnostics but since the literature on diagnostics of coordinators is much smaller, we will often be forced to resort to language-specific ones. Also, it should be mentioned that since identifying coordinators is much more specific issue than identifying coordinate structures as such, the diagnostics that I propose below are naturally not tested in as many languages. It will be a question for future research which of these diagnostics prove crosslinguistically robust and which ones do not.

The first diagnostic that I want to propose already goes back to discussion in Sledd (1959) and Dik (1968) and concerns the complementary distribution of different coordinators. For example the above-mentioned *however* is not in complementary distribution with canonical coordinators like *and* or *but*. The same logic is applied for Mandarin Chinese by Zhang (2006, 2010). She uses this test to argue that the elements *keshi* and *yushi* are conjunctions even though they can follow the topic of the second conjunct. None of them can cooccur with the proper conjunctions *danshi* or *erqie*. This is in contrast to what she calls the conjunctive adverb *que* in (16b)

(16)   a. *Baoyu yao   tiaowu, danshi/erqie wo keshi yao   hui-jia.
            Baoyu want dance   but/and   I   but   want return-home
            'Baoyu wants to dance but I want to go home.'   Zhang (2006)

        b. Baoyu yao   tiaowu, danshi/erqie wo que   yao   hui-jia.
            Baoyu want dance   but/and   I   however want return-home
            'Baoyu wants to dance but I want to go home.'   Zhang (2006)

Anticipating the discussion of German *aber*, we find that clause-internal *aber* cannot cooccur with the regular conjunctions *und* or *aber* (see Büring & Hartmann 2015):

(17) Samson baut eine Murmelbahn (*und/*aber) er ist aber nicht zufrieden
      Samson builds a marble race (*and/*but) he is but not satisfied
      damit.
      with.it
      'Samson builds a marble race but he is not satisfied with it'

Following Sledd (1959), Dik (1968) and Zhang (2006), I would like to suggest that complementary distribution of a given element and a proper conjunction suggests that the element itself is a conjunction rather than some kind of adverb, modal particle or anything else.[9]

The second diagnostic is more of an observation about the distribution of juxtaposition as a means of coordination. As far as I can tell, the vast majority of languages allows for juxtaposition of fully finite independent clauses simply because it is per se hard to tell whether they are one conjoined construction or two independent sentences. However, in many languages, morphologically unmarked juxtaposition of the coordinands is restricted in one way or another. Many languages require some means of coordination either between verb phrases or noun phrases or some other syntactic constituents. In Malayalam for example, juxtaposition of verb phrases or clauses is grammatical but juxtaposition is not possible with noun phrases which must be coordinated by attaching *-um* to each conjunct.

(18) acchann-um   ammakk-um   kuṭṭikk-um   vastraŋŋaḷ
      father-DAT-COORD mother-DAT-COORD child-DAT-COORD cloth-PL
      koṭuttu
      give-PST
      '(I) gave clothes to father, mother and child.'   Asher & Kumari (1997, 143)

The same is found in many European languages. Juxtaposition of full clauses is grammatical but juxtaposition of subclausal constituents or NPs is usually not. Coming back to the case of shifted *aber* discussed above, we find that we cannot juxta-

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[9]In Section 2.3.2 it will be shown that monosyndetic coordinators are usually only in complementary distribution with other monosyndetic coordinators while they frequently co-occur with polysyndetic ones. So, this must be factored in when applying this diagnostic.

pose subclausal constituents without any coordinator. The example in (19), which involves coordination of a constituent (here called XP) including the so-called German middle field and the clause-final verb, is ungrammatical without the coordinator *und*.

(19) Sie haben [$_{XP}$ alleine Papierflieger   gebastelt] *(und) [$_{XP}$ sich lange
      they have   alone paper airplanes build   and   self long
      damit beschäftigt]
      with.it occupied
      'They build paper airplanes on their own and worked on them for quite
      some time.'

Note that, in case we want to use *aber* instead of *und*, the same configuration becomes perfectly grammatical even if *aber* occurs linearly inside the second conjunct:

(20) Sie haben [$_{XP}$ alleine Papierflieger   gebastelt] [$_{XP}$ sich *(aber) lange
      they have   alone paper airplanes build   self but   long
      damit beschäftigt]
      with.it occupied
      'They build paper airplanes on their own but worked on them for quite some
      time.'

This suggests that *aber* is a conjunction even when it occurs inside the second conjunct. Taking one step back, the logic of the diagnostic is very simple. In many languages, we observe that only a subset of syntactic coordination configurations allow for unmarked juxtaposition. If we then look at those contexts which do not allow for juxtaposition, then we can test whether a given element can function as a coordinator in these configurations. And if it does, then by extension, we can plausibly conclude that it can also function as a coordinator in other configurations.

The third diagnostic the identifies a coordinator is what I would like to call **the licensing property of the coordinator** itself. In many cases, coordination-specific

properties such as ATB-movement or Right Node Raising require the presence of an overt coordinator. In the English ATB-example below, we see that in the baseline example in (21a), no overt coordinator is necessary but when we relativize the direct object in both conjuncts via ATB-movement, we need a coordinator.

(21)   a.   Remi got a lego spaceship for his birthday (and) Sammi played with it.

      b.   The lego spaceship, Remi got for his birthday *(and) Sammi played with.

The same can be shown for Right Node Raising. In the German example in (22) the clause-final verb cluster has undergone Right Node Raising and is only overtly realized in the second conjunct.[10] Crucially such a process requires the presence of an overt coordinator such as *und* in (22a). And again, we see that *aber* functions as a proper coordinator even when it is embedded into the second conjunct.

(22)   a.   ... weil   Sammi eine Schatzkarte   *(und) Remi eine Haifamilie
           because Sammi a   treasure.map and   Remi a   shark.family
           gemalt hat.
           drawn has
           'because Sammi has drawn a treasure map and Remi a family of sharks.'

      b.   ... weil   Sammi eine Schatzkarte   Remi *(aber) eine Haifamilie
           because Sammi a   treasure.map Remi but   a   shark.family
           gemalt hat.
           drawn has
           'because Sammi has drawn a treasure map but Remi a family of sharks.'

The logic of this test is also quite simple. If we find that some processes that are specific to coordination configurations depend on the presence of a given element, then it seems plausible to assume that this element is a coordinator rather than an adverb or a modal particle. It would be very unusual if the presence of an adverb licensed syntactic processes such as ATB-movement or Right Node Raising.[11]

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[10]The term Right Node Raising is intended to be a purely descriptive one here. As the diagnostic at hand relies only on the descriptive asymmetry, there is no need to commit to a specific analysis of Right Node Raising.

[11]Another potential candidate for a coordination specific process might be *Gapping* but from the very small set of languages that I have tested, my very preliminary conclusion is that gapping

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The final point that I want to mention in this section is that in some languages word order restrictions can potentially serve as an indicator of whether a given element is an adverb or a coordinator. In many cases, morphosyntactic restrictions treat adverbs differently from coordinators and this may indicate the properties of a given element. As is well-known for example, German allows exactly one syntactic constituent before the finite verb, which can be an adverb as in (23a). Notably however, coordinators do not count for this restriction (23b). They can precede the finite verb together with another constituent. Finally, we see that *aber* does not count for the V2-restriction either (23c). Even shifted *aber* can co-occur with another phrase in the preverbal position.

(23) a. Wahrscheinlich ist er müde.
          probably   is he tired
          'He is probably tired.'

      b. ... und er ist wahrscheinlich müde.
          ... and he is probably   tired.

      c. ... er aber ist wahrscheinlich müde.
          ... he but   is probably   tired
          '... but he is probably tired.'

A similar difference has been noted by Zhang (2007) for Mandarin Chinese. She observes that adverbs cannot precede a subject but coordinators can. Building on this simple difference, she concludes that *keshi* is a conjunction but *que* is a conjunctional adverb like English *however*.

(24) Akiu mingtian qu Shanghai (keshi) (*que)   wo xia-xingqi cai qu.
      Akiu tomorrow go Shanghai but   however I   next-week only go
      'Akiu will go to Shanghai tomorrow but I shall go there next week.'

                                                        Zhang (2007, 183)

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often seems to be less dependent on the presence of a coordinator but rather dependent on the parallel prosodic intonation that is typically found in coordination structures. But if we find that, in a given language, Gapping is dependent on the presence of an overt coordinator, then of course, we can use it as a diagnostic.

Using word order, or syntactic restrictions more generally, as a diagnostic for coordinators can be tricky especially, if we allow for the existence of (optionally) shifting coordinators, a phenomenon that I will argue for at length in Section 4.2. One needs to pay attention to make sure that the argumentation does not become circular. But if we use well-established syntactic facts about a given language (such as the V2-property of German or the impossibility of adverbs to precede subjects in Mandarin) then we can use this as a relatively simple diagnostic.

Before we proceed, I would like to mention briefly that many language-specific properties can potentially serve as a possible diagnostic to differentiate between coordinators and conjunctional adverbs or other syntactic categories. My impression is that, in many cases, coordinators do not interact with clause-internal syntactic processes as often compared to adverbs or modal categories. This is even true for cases in which the conjunction is, linearly speaking, part of the clause in question. For a more detailed discussion, the reader is referred to the sections discussing the shifting coordinators, especially the case studies from Yorùbá, German and Polish.

This section introduced some of the diagnostics to identify the subject of investigation of this work. The next section will continue this methodological discussion by introducing the individual variables that the typology controls for.

2.3. Variables controlled for

2.3.1. Semantic type: conjunction, disjunction, and adversatives

In this section, I will briefly introduce the different semantic subtypes of coordination that are usually distinguished. As I mentioned above, the focus of this study here lies on the morphosyntactic properties of coordinators and coordination structures but it nonetheless proves helpful to discuss the relevant subtypes in order to properly evaluate whether there are correlations between the respective semantics

and their morphosyntactic and prosodic behavior.

The most basic distinction of different types of coordinators is the one between conjunctions (i.e. *and*-like coordinators) and disjunctions (*or*-like coordinators). These two types are reminiscent of the respective logical operators and often correspond to those in terms of their truth-values (at least for clausal coordination). While a disjunction of two syntactic elements presents them as two potential alternatives, conjunction of two elements typically presents them as in some way combined or equally relevant for the rest of the sentence.[12] Importantly, it must be mentioned that the relation in which the two elements stand is typically not explicitly specified with simple conjunction. Two conjoined nominal elements in an example like (25a) can be understood as two people who do not know each other but for both of which it is true that they play a board game. Alternatively, it is possible that they participate in the same playing event together. As for conjoined verb phrases as in (25b) or even conjoined clauses, it is typically not specified whether these stand in causal relation, a temporal sequence relation or whether they are simply two independent statements about the world both of which hold.

(25)   a.   Sammi and Remi play a board game.

         b.   Sammi got a new set of crayons and drew a treasure map.

Even though there is a large amount of literature on the different semantic and pragmatic properties of both conjunctions and disjunctions, morphosyntactically speaking, they behave very much alike. Most languages distinguish these two types of coordinators using different lexical material but in terms of morphosyntactic properties, they nonetheless behave similarly. Furthermore, it is striking that even though the lexical material is usually different between conjunctions and disjunctions, a

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[12]cf. Dik (1968, 271) for a very similar formulation and a discussion beyond this simple characterization. Also see Dik (1968, 259ff) for a elaborate discussion of why the difference between *and*-like coordinators and *or*-like coordinators in natural language does not always necessarily reflect the precise distinctions between the respective logical operators.

given language typically uses the same number of coordinators in both types. Both conjunctions and disjunctions occur in monosyndetic (one coordinator in between the coordinands) as well as polysyndetic (one coordinator per coordinand) fashion (see Section 2.3.2) and a language often employs the same strategy for both types. The following minimal pair shows two polysyndetic examples of conjunction (26a) and disjunction (26b) from the Dravidian language Malayalam:

(26)   a.   raaman vari-kay-um   kɪʂɳan   pooku-kay-um ceytu
              Raman come-INF-CONJ Krishnan go-INF-CONJ   do-PST
              'Raman came and Krishnan went.'   Asher & Kumari (1997, 135)

    b.   avan vari-kay-oo   aareyeŋkil-um ayakku-kay-oo ceyyum
              he   come-INF-DISJ someone-ACC send-INF-DISJ do-FUT
              'Either he will come or he will send someone.'

                                          Asher & Kumari (1997, 140)

As mentioned above, conjunctions and disjunctions have very similar morphosyntactic properties and as far as I can tell, they also behave alike with respect to all of the coordination diagnostics introduced in the previous section. I am not aware of any claims saying e.g. that disjunctions allow for symmetric ATB-movement while conjunctions do not. What we do find sometimes however is that, in some languages, disjunctions are more restricted in their distribution in the sense that disjunction is only allowed with full finite clauses whereas conjunctions are more flexible in terms of the categories they conjoin. Such restrictions are, however, frequent in the world's languages in general. Many coordinators seem to have some sort of lexical restriction to appear only with a given set of morphosyntactic categories.

To my knowledge, the only somewhat robust morphosyntactic difference between conjunctions and disjunctions concerns the resulting agreement with argument coordination. Conjoined subjects typically result in plural agreement (e.g. on the verb) whereas disjoined subjects often result in singular agreement. Consider the differ-

ence in verbal agreement in Iraqw, a Cushitic language discussed by Mous (2004).[13]

Similar facts hold for most European languages as for English in (27):

(27)   a. kitaangw nee mesa i   gwaranggwarimiit-iyá' asmá   kunseli
            chair   and table S.3 shake-3PL   because earthquake
            'The chair and the table shake because of the earthquake.'

        b. baabúu-w-ós   laqáa aayo-r-ós   'i-n
            father-MASC-POSS.3SG or   mother-FEM-POSS.3SG S.3-PROG
            daqáy
            go-3.SG.MASC
            'Its father or its mother will be going.'   Mous (2004, 117ff)

(28)   a. Sammi and Remi are playing a game.

        b. Sammi or Remi is/*are good at chess.

Conjunctions can be further differentiated into neutral combinatorical *and*-like ones and adversative *but*-like ones. The latter indicate some sort of opposition between the two coordinated elements. This opposition can either be a some sort of un-expectedness/mirativity or a contrast of participants.[14] The example in (29a) illustrates the unexpectedness reading of English *but* where the second clause is some-what of a suprising continuation given the expectations raised by the first conjunct. (29b) however, illustrates the contrast of participants.

(29)   a. This girl is tall but no good at basketball.

                                        Vicente (2010)

        b. This girl is good at basketball but that girl is good at softball.

In many cases, the same coordinator captures both types of adversative conjunction

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[13]According to Mous (2004), with disjunctions, it is always the first disjunct which triggers subject agreement on the verb but the last disjunct in the case of object agreement. Unfortunately, he only gives two examples, in which the resulting agreement is always third person singular masculine.

[14]Many definitions and characterizations have been given for this notion of unexpected consequence. It is also sometimes referred to as concession or denial of expectation. I will not attempt to give a concrete definition here but rather refer the reader to Lakoff (1971); Lang (1984); Blakemore (1989); Sæbø (2003); Umbach (2004, 2005) as well as Malchukov (2004) for a crosslinguistic perspective.

but in some cases we find that some coordinator only covers one meaning. Polish *zaś*, which will be the topic of Section 3.3.2, is for example restricted to contrast of participants. The standard adversative coordinator *ale*, however, covers both functions (31).

(30)   a. *?Tom jest wysoki, jest on zaś złym   koszykarzem.
            Tom is   tall   is   he but bad.INS basketball.player.INS
            Intended: 'Tom is tall but he is bad at basketball.'

        b. Piotr chce zostać na imprezie ja zaś chcę juz   iść do domu
            Piotr wants stay   at party   I but want already go to home
            'Piotr wants to stay at the party but I want to leave.'

(31)   a. Tom jest wysoki ale jest on złym   koszykarzem.
            Tom is   tall   but is   he bad.INS basketball.player.INS
            'Tom is tall but he is bad at basketball.'

        b. Piotr chce zostać na imprezie ale ja chcę juz   iść do domu
            Piotr wants stay   at party   but I want already go to home
            'Piotr wants to stay at the party but I want to leave.'

Examples of adversative coordination exhibit some morphosyntactic peculiarities that should briefly be mentioned. First, it seems to be a relatively robust feature of adversative coordination that it is restricted to two coordinands. Even though semantically, an examples like (32) could be plausible, they seem relatively strange. Similar restrictions seem to apply to adversative constructions in other languages.

(32)   *The mountain climbers were tired but happy but bankrupt.

                                                           Haspelmath (2007b)

Also, it seems that at least as a tendency the expression of adversative conjunction is more common with monosyndetic coordinators than other coordinate relations. Even in languages where neutral conjunction and disjunction can be expressed with polysyndetic coordinators, the adversative constructions still often use a monosyndetic one. Above we saw examples of polysyndetic conjunction and disjunction in

the Dravidian language Malayalam but looking at adversative conjunction, we find that they must use one of the monosyndetic coordinators *pakṣe* or *eŋkilum.*

(33)   avan kuḷḷan   eŋkilum sundaran   aaṇə
         he   short.MASC but   handsome.MASC be.PRES
         'He is short but handsome.'   Asher & Kumari (1997, 146)

Finally, another thing that distinguishes adversative coordination from other types of coordination is that it is very often restricted to a subset of syntactic coordinands, with clausal coordinands as well as adjectival ones being the most frequent. Wali & Koul (1997) for example, report for the Kashmiri adversative conjunction *magar* that it is usually only used in exactly these two contexts. They note however that it can also be used for VPs if one of them is negated.

    Before I proceed, I want to briefly mention some potential subtypes of coordination that I excluded from this study for various reasons. The first type that is sometimes mentioned in the literature is one called causal coordination exemplified by the English coordinator *for* (34) or the German coordinator *denn* (35).

(34)   a.   John stayed at home, for he was ill.

         b.   John blieb   zu hause, denn er war krank.
             John stayed at home for   he was ill

As Dik (1968) has shown, *for* really patterns with coordinators in English rather than with subordinators as it is in complementary distribution with other coordinators, does not allow for cataphoric pronouns or center embedding. Also, *for* patterns with coordinators with respect to scope. The same holds for German *denn.* Instances of this sort show that languages can develop other coordinators for very specialized semantic relations. When describing understudied languages, we should be careful not to draw conclusions about the syntactic status of a grammatical element purely on the basis of its semantics. And maybe there are many languages apart from English and German out there, which have causal coordinators available but overall it

seems that causal relations are much more commonly expressed by means of subordination (see also Haspelmath 2004 for the same assessment). For this reason, I have decided to exclude elements expressing causal relations from this study. Note, however, that if a given element can be shown to be a coordinator by means of the diagnostics above, then we would, a priori, expect it to behave like the ones discussed in this work.

The second kind of coordination structure that I exclude from this study for purely practical reasons is what Haspelmath (2004, 2007a) calls emphatic coordination. Many languages have some special lexical material used to emphasize the logical relation. In many cases, the languages then resort to what looks on the surface like polysyndetic coordination with one coordinator per conjunct. Examples of this type are English constructions involving *both...and* as well as *either..or/neither... nor*.

(35)   a.   John neither texted nor called.

        b.   Both John and Mary came to the party.

As we will see in the next section, a typical polysyndetic coordination pattern such as the Malayalam NP-coordination above (26) involves the same lexical item attached to each conjunct in question. This is a first indication that the pattern above is possibly special in some sort. Second, we find that in many cases, the emphatic pattern builds on the typical monosyndetic coordinators (*and* and *or*) and thus, it is maybe not clear that the elements *neither* and *both* count as proper coordinators.

Further, we have syntactic reasons to believe that the alleged element introducing the first conjunct does not behave like a proper (English) conjunction in other respects as well. As shown by den Dikken (2006), elements like *either* behave idiosyncratically inasmuch as they can either be inside the first conjunct (what den Dikken calls *low either*) or dissociated from it (so-called *high either*). Consider the minimal pairs in (36):

(36)   a.   John ate either rice or beans.

       b.   John either ate rice or beans.   *high either*

       c.   John either ate rice or he ate beans.   *low either*

<div align="right">den Dikken (2006, 690)</div>

In (36a), the pattern is as expected (for a polysyndetic coordinator): *either* intro-duced the first conjunct (i.e. *rice*), while *or* introduces the second one (i.e. *beans*). In (36b), we see that *either* precedes the verb, which is, judging simply on the basis of the surface structure, not part of the first conjunct.[15] Finally, in (36c) we have con-joined what looks like two fully finite clauses (*'John ate rice'* and *'he ate beans'*) but this time, it seems that *either* is located inside the first conjunct.

   Without trying to give an explanation for these facts, we can conclude that the be-havior of *either*, *neither* and *both* are very unexpected if they were actual coordina-tors. Also, it should be mentioned that this behavior is also found with emphatic co-ordinators in French (see Kayne (1975) on *tous...tous*) or German *sowohl... als auch* or *weder...noch*. Against this background, I have decided to exclude patterns of this sort from the study at hand as we should be careful to classify these elements as co-ordinators. But still, it will be interesting to see how emphatic coordination behaves in a more diverse set of languages and whether the English/German/French pattern is typologically unusual.

2.3.2. Syntactic type: monosyndetic and polysyndetic coordinators

This subsection deals with the most important morphosyntactic distinction of co-ordinators, namely the distinction between monosyndetic and polysyndetic coor-dinators.

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[15]On possible analysis of this is of course to assume that (36b) is in fact a coordination of VPs ('*John either ate rice or ate beans*') plus ellipsis of the second verb. Note however that an ellipsis ap-proach is not available to explain the weird behavior of (36c). See den Dikken (2006) and refer-ences therein for discussion.

2.3.2.1. Basic morphosyntactic properties of monosyndetic and polysyndetic coordinators

During the previous sections, I have already hinted at the fact that, morphosyntactically speaking, coordinators come in two different shapes. If we restrict ourselves to coordination structures with two coordinands, then we find that coordination is marked either with a coordinator on both coordinands or with is one coordinator for the whole coordination structure. Abstractly, we could thus represent the patterns as follows (with & representing the coordinator and A and B the coordinands):[16]

(37) a. Polysyndetic Coordination: [[A-&] [B-&]]

      b. Monosyndetic Coordination: [[A] & [B]]

Both patterns can be illustrated with two different conjunction strategies from the Finno-Ugric language Udmurt. In (38a) we see a polysyndetic example illustrating the pattern in (37a). Here, every conjunct is marked by the morpheme *-en* or its phonologically conditioned allomorph *-jen*.[17]

(38) a. Petyr-en Maša-jen
          Peter-INS Masha-INS

      b. Petyr no   Maša
          Peter and Masha
          'Peter and Masha'   Weisser (2017)

The difference between monosyndetic and polysyndetic coordinators is briefly addressed in Haspelmath (2004, 2007a) but was recently studied in more detail by

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[16]This representation abstracts away from the different patterns of ordering which we will discuss in the next section. Polysyndetic coordinators can, for example, also appear prefixed to their respective conjuncts. Similarly, all examples of shifting coordinators, discussed in detail in Section 4 are abstracted away from. In some cases, the respective coordinators appear inside one of the conjuncts.

[17]This morpheme is also used as a comitative and an instrumental in the language. Note however that we can be sure that in the symmetric use of instrumental on both connected elements, we can be sure that we are dealing with conjunction which differs from comitative structures in various respects (see Weisser (2017) for details)

Szabolcsi et al. (2014); Szabolcsi (2015) and Mitrović (2014); Mitrović & Sauerland (2014). Both Szabolcsi (2015) and Mitrović (2014); Mitrović & Sauerland (2014) emphasize that languages which do entertain both strategies typically allow them to co-occur. This can be illustrated for example with the Udmurt pattern discussed above. In the example in (39), the instrumental affix attached to every conjunct co-occurs with the conjunction marker *no*.

(39)   Petyr-en no Maša-jen
       Peter-INS and Masha-INS
       'Peter and Masha'

Similar patterns are reported for many other languages such as the Caucasian language Avar:

(40)   keto gi   va   hve gi
       cat   ADD and dog ADD
       'cat and dog'   Mitrović & Sauerland (2014, 483)

Against the background of what we said in the previous section, this observation has important consequences. One of the diagnostics for coordinators listed in Section 2.2.2 was the complementary distribution with other coordinators. But given examples such as (39) and (40), we must now restrict this test to coordinators of the same type. Monosyndetic coordinators seem to be in complementary distribution with monosyndetic coordinators and polysyndetic coordinators are in complementary distribution with polysyndetic ones.

Another important observation is that many languages allow for configurations in which polysyndetic coordinators do not have to appear on all coordinands. Consider examples from Latin as well as Tsakhur below. In both (41a) and (42a), the patterns look like standard instances of polysyndetic coordinators as each conjunct is nicely marked as such by its own coordinator. In examples (41b) and (42b), we see however, that it is just as well possible to have only one occurrence of the coordina-

tor.

(41) a. [noct-es=**que**] [die-s=**que**]
          night-PL=COORD day.PL=COORD
          'nights and days'   Cicero De Finibus, 1,16,51

    b. [puer-i], [sen-es], [mulier-es=**que**]
          boy.NOM.PL, old.man.NOM.PL woman.NOM.PL=COORD
          'the boys, the old men and the women'

                              Latin, Caesar, De Bello Gallico 1.29

(42) a. dak-**ij** jed[j]-**ij**
          father.ABS-COORD mother.ABS-COORD
          'Father and Mother'   Schulze (1997, 66), gloss adapted

    b. dak-**ij** jed[j] Mask'aw-qa habk'in.
          father.ABS-COORD mother.ABS Moscow-ALL go.PST
          'Father and mother went to Moscow.'

              Tsakhur, Ibragimov (1990) via van den Berg (2004), gloss adapted

In some cases, double use of polysyndetic coordinators seems to convey some sort of a emphatic use. This is for example reported for Lezgian (Haspelmath 1993).

What we see from these examples is that we cannot necessarily distinguish a polysyndetic from a monosyndetic coordinator based on the occurrence in a single example. If we find the use of two coordinators for a conjunction of two elements, then we can conclude that this coordinator is indeed polysynthetic. If we find only one coordinator, then we cannot immediately draw conclusions from that. The crucial question is whether a given coordinator *can* occur with both conjuncts, not whether it always does.

For the purposes of this study, I thus want to classify coordinators according to whether they can appear on all conjuncts or whether they cannot. If a given coordinator can appear on both conjuncts, then it will always be classified as a polysynthetic coordinator. This is of course not the only possible choice. One might classify the construction in (42a) as a polysynthetic construction and the one in (42b)

as a monosyndetic one.[18] However, as we will see in the second part of this book, the classification at hand allows us to make clear-cut predictions about the non-canonical placement patterns of coordinators that other classifications do not. In other words, if we use the classification that I suggest, then we find that there is a strong correlation between the syntactic type (i.e. monosyndetic and polysyndetic) and the possible placement patterns. With any other classification, this correlation will break down. I take this to support the view that I am adopting here.

Before we proceed, I want to note that we have, for now only looked at configurations with two coordinands. When we look at examples with more than two conjuncts, the polysyndetic pattern usually extends straightforwardly, as simply every conjunct receives marking as indicated in (43a) and illustrated with an example from Malayalam in (43b). Here, three adverbial participles are coordinated by means of the polysyndetic marker *-um* and each bears the marker in question.

(43)   a.   Polysyndetic Coordination: [[A-&] [B-&] [C-&]]

      b.   avar [paʈh-icc-**um**]   [paʈhipp-icc-**um**]   [jooli ceyt-**um**]
           they study-PTCP-COORD teach-PTCP-COORD work do-PTCP-COORD
           jiivikkunnu
           live-PRES
           'They live studying, teaching and working.' Asher & Kumari (1997, 144)

Nonetheless it should be mentioned that of course we also find cases where some instances of the polysynthetic markers are dropped. In Oklahoma Cherokee, we see that, the polysyndetic coordinator *hno* is usually only present on the last conjunct.

(44)   [wili] [dami] [sami=**hno**] dunihnogisvʔi
       Bill   Tom   Sam=and   they.sang
       'Bill, Tom and Sam sang.'

On the other hand, consider the following minimal pair from Tabarasan, a close

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[18]This is for example done in van den Berg (2004) in her classification of coordinating constructions in Daghestanian languages.

relative of Lezgian. In (45a), we see a prototypical polysyndetic pattern and in (45b), we see a pattern where the all conjuncts but the final one are marked for being a coordinand.

(45)   a.   [gagaj-**ra**]   [dadaj-**ra**]   [baw-**ra**]   šahurdi-s uš-nu
              father-COORD mother-COORD grandmother-COORD town-DAT go-PST
              'Father, mother and grandmother went to the city.'

       b.   [gagaj-**na**]   [dadaj-**na**]   [baw]   šahurdi-s uš-nu
              father-COORD mother-COORD grandmother town-DAT go-PST
              'Father, mother and grandmother went to the city.'

                                                  Tabarasan, Magometov (1965) via van den Berg (2004)

So, we do find at least three different patterns with more than two conjuncts, which can abstractly be represented as in (46). It remains to be seen whether that is an exhaustive list of possibilities:

(46)   a.   [[A-&] [B-&] [C-&]]

       b.   [[A] [B] [C -&]]

       c.   [[A-&] [B-&] [C]]

With monosyndetic coordination, patterns with three conjuncts also exhibit a fair amount of variation. Descriptively speaking, we either find coordinators in all non-peripheral positions as in (47a) or we find still only one coordinator. If we find only one coordinator, then it is usually located between the second-to-last and the last conjunct as abstractly illustrated in (47b). In rare cases, we find that patterns in which the only coordinator is located in between the first and the second conjunct, regardless of how many conjuncts there are.

(47)   a.   [[A] & [B] & [C]]

       b.   [[A] [B] & [C]]

       c.   [[A] & [B] [C]]

2. Methodological Background

The respective patterns are illustrated with real examples below. The pattern in (47a) is illustrated with data from Ponapean and Syrian Arabic. Crucially here, none of the coordinators can be deleted. In the example from Korean in (50), we see the pattern illustrated in (47b), with a coordinator only in between the last and the second-to-last coordinand. Finally, the example from Classical Tibetan in (51) instantiates the unusual pattern where there is a coordinator only after the first coordinand (47c).

(48)   [Souli] **oh**   [Ewalt] **oh**   [Casiano] **oh**   [Damian] pahn doadoahk lakapw
        Soulik and Ewalt   and Casiano   and Damian FUT work   tomorrow
        'Soulik, Ewalt, Casiano and Damian will work tomorrow'

                                                 Ponapean, Rehg (1981, 333)

(49)   l-walad   [ma raħ   ʕa t-taxt] **w** [ʕajatˤ   kil l-lel]
        the-child NEG go.PAST.3SG to the-bed and scream.PAST.3SG all the-night
        w   [ma ħeda].
        and NEG calm down.PAST.3SG
        'The child didn't go to bed, screamed all night and didn't calm down.'

                                         Syrian Arabic, A. Al-Ghanem (p.c.)

(50)   [haksayng], [hakpwumo], **kuliko** [kyosa-tul]-i   chamsek
        student   parent   and   teacher-PL-NOM attendance
        ha-yess-ta
        do-PAST-DECL
        'Students, parents and teachers attended.'

                                         Korean, Kim (2016, 205)

(51)   [sa]-**dañ**   [tšhu] [me] [rlun]
        earth-and water fire   air
        'Earth, water, fire and air'   Classical Tibetan, Beyer (1992, 241)

That said, many languages which allow for some omission of a subset of coordinators also allow for a coordinator in between the coordinand in some circumstances as illustrated in (52a) but such patterns are usually perceived as marked and often seem to indicate a recursive structure as in (52b) or (52c) where the two conjuncts form a conjunction structure on their own which, in turn, then functions as the first

coordinand of a higher coordination. At least for the languages in which this has been studied, the underlying structures are often disambiguated by pauses or other intonational cues (see Wagner 2005 for German and English).

(52)   a.   Peter and Paul and Mary

      b.   [[Peter and Paul] and Mary]   *or*

      c.   [Peter and [Paul and Mary]]

Patterns with three conjuncts certainly need more investigation. It is an interesting question whether the availability of coordinator omission and the emerging pattern correlates with any other properties of a given language. But for the purposes of this study, I will mainly look at coordination structures with two conjuncts and act on the assumption that there is an additional parameter that decides what patterns emerge with more than two conjuncts leaving open the possibility that future work reveals than this parameter correlates with other properties of a given language.

In the next section, I will briefly discuss another factor that interacts with the placement patterns in way to be discussed, namely the different degrees of morphophonological dependence. In most, if not all, languages, we find that coordinators show some sort of morphophonological dependence with (part of) one of their respective coordinands. So, in order to discuss the different placement patterns of coordinators, we first need to clarify the role that dependencies of this sort play.

2.3.2.2. Morphophonological properties

A striking morphophonological difference between monosyndetic and polysyndetic coordinators is that polysyndetic ones have a much stronger tendency to be affixal than monosyndetic ones.[19] In the example from Udmurt (38) (repeated below), we

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[19]In a lot of cases, we do not have data on distinct phonological diagnostics available that tell us whether a coordinator is morphophonologically dependent or whether it is not but the authors of the respective grammars write polysyndetic coordinators as affixes or clitics whereas monosyndetic coordinators are written as independent words. Of course, this is no proof of the claim that polysyndetic coordinators have a higher tendency to be morphophonologically dependent but it

saw that the polysyndetic coordinator is syncretic with a case marker and is closely bound to the head noun of each conjunct. We see that its surface form is dependent on the phonological shape (vowel vs consonant) of the head noun. Also, the polysyndetic affix participates in template effects. Since the affix is an instantiation of the instrumental marker and instrumental case markers occupy a templatic slot closer to the stem as structural cases such as ablative, we find that the coordinate affix is inside the respective case marker (54).[20]

(53)   a. Petyr-en Maša-jen
             Peter-INS Masha-INS

        b. Petyr no   Maša
             Peter and Masha
             'Peter and Masha'   Weisser (2017)

(54)   Mon Petyr-en-les' (no) Maša-jen-les'   mözm-is'ko.
        1SG Peter-INS-ABL and Masha-INS-ABL miss.1SG.PRES
        'I miss Peter and Masha.'

In Tundra Nenets, we see a fairly similar picture. Here, the so-called double dual coordinate construction marks both conjuncts with a morpheme also used to indicate dual number (see Nikolaeva (2014, 417) for discussion). And again, we see that that this morpheme undergoes various phonological alternations (55) and, in some cases, can also be followed by other NP-internal affixes such as possessor agreement in (56). Note also that the dual morpheme is sensitive for whether it follows a possessive affix or not. In the former case it is realized as *xᵒh* (with ᵒ indicating an extra-short ə), and in the latter case as *xǝyu*.

(55)   tolǝ-xᵒh   ŋamt'orc'ǝŋ-kᵒh temtaǝ-dᵒm ...
        table-ACC.DUAL chair-ACC.DUAL buy-1SG
        'I bought a table and a chair (together)...'   Nikolaeva (2014, 419)

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still is suggestive.

[20]This is the only instance of overt stacking of case markers in Udmurt (or any Finnic language) that I am aware of, suggesting that the instrumental case marker is sufficiently different from other, regular case markers and instead counts as a coordinative morpheme instead. See however Assmann et al. (2014) for discussion of covert case stacking in Udmurt.

(56) yir'i-xəyu-nᵒ   xadake-x°yu-nᵒ   m'adoncey°-m xana-q
      grandfather-DUAL-1SG grandmother-DUAL-1SG present-ACC   take-IMP
      'Take the present to my grandfather and my grandmother.'

                                                        Nikolaeva (2014, 418)

In contrast, the two available monosyndetic coordinators of Tundra Nenets *təd'ekəxətᵒ*
and *n'ab'i* are consistently written as independent words and neither of them seems
to trigger or undergo any morphophonological changes according to the data we
see.

As far as I can tell, data of this sort are very much the rule rather than the ex-
ception. In Malayalam (Asher & Kumari 1997), the above-mentioned polysyndetic
coordinator *-um*, which attaches to every conjunct, can trigger phonological pro-
cesses such as deletion or insertion of a glide in case the base it attaches to ends
in a vowel whereas the none of the monosyndetic adversative coordinators seem to
trigger any morphophonological processes.

That said, however, while it is true that monosyndetic coordinators show less mor-
phophonological interactions with their adjacent elements, it is not universally true
to say that they never do. In Classical Tibetan, the monosyndetic adversative coor-
dinator has various phonologically conditioned allomorphs depending on the final
sound of the preceding conjunct: *-kyan* after *g,d,b,s*; *-yan* after *n̄,n,m,r,l* and open
stressed syllables and *an* after preceding open unstressed syllables (Beyer 1992).

In Makalero, a Papuan Trans-New-Guinean language of the Timor-Alor-Pantar
branch, Huber (2011), the two monosyndetic clausal coordinators *ini* and *isi* both
lose the initial vowels when they follow a vowel.[21].

(57) a. [Ani Loospalos-isi']=**ini** [ni-pada   hai   rata'].
          1SG Lospalos-at=LNK   REFL-friend NSIT meet
          literally: 'I am in Lospalos and I meet my friend.'

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[21]The difference between *ini* and *isi* encodes a feature that is known as tight vs loose coordination
or non-canonical switch-reference, a feature that is particularly widespread in Austronesian lan-
guages. For a discussion of the properties of tight and loose coordination, see Bril 2004; Moyse-
Faurie & Lynch 2004; Weisser 2016) or non-canonical switch-reference marking (see Stirling 1993;
McKenzie 2007, 2011)

'I met my friend in Lospalos'

b. [Ani ni-pada   hai mei]=**ni** [Loospalos-isi-rata].
1SG REFL-friend NSIT take=LNK Lospalos-at=LNK-meet
literally: 'I take my friend and meet him in Lospalos.'

'I met my friend in Lospalos'   Huber (2011)

Thus, we can conclude that there are counterexamples to the claim that monosyndetic coordinators never show morphophonological interactions with their host. However, it is still to be kept in mind that they rarely do whereas for polysyndetic coordinators, it seems to be the general rule.

But apart from that even in languages in which monosyndetic coordinators are demonstrably not part of the phonological word of one of its coordinands, speakers still have the intuition that, on some prosodic level, they coordinator is more closely associated with one of its conjuncts. In languages like English or German, monosyndetic coordinators such as *and* or *und* are clearly part of the intonation phrase of the second coordinand. The curly braces in (58) and (59) indicate the prosodic association. We can see this as pauses or parentheticals are strongly preferred before the conjunction than after it.

(58)   { Sammi went to school } { and Remi went to preschool }.

(59)   { Sammi ging in die Schule } {und Remi in die Vorschule }.
       Sammi went in the school   and Remi in the preschool

In some cases, we also find that the first conjunct can appear non-adjacent from the coordinator but the second one never can. In the German example in (60), we see an example with two conjoined complement clauses. Interestingly, the complex consisting of the conjunction and the second conjunct (in brackets) appears to be extraposed in a position after the clause-final verb. Such patterns are never found with a first conjunct (60b).

(60)   a.   Dass er sich freute,   konnte man sehen [und dass er glücklich war]
              That he REFL enjoyed, could   one see   and that he happy   was
              'You could see that he was enjoying himself and that he was happy.'

        b.   *Dass er glücklich war, konnte man sehen [dass er sich freute   und]
              that he happy   was could   one see   that he REFL enjoyed and

Note however that these examples do not necessarily inform us about the prosodic association, but presumably rather about the syntactic constituency as already argued for by Ross (1967). We can see this if we look at the mirror image pattern which can, for example, be observed with the monosyndetic coordinator *o* in Persian, which also appears in the central position in between the two conjuncts but is generally cliticized to its left conjunct:

(61)   maerdom-án-e xoda-šenas=**o**   motædæyyen
        people-PL-EZ   god-knowing=and religious
        'God-fearing and religious people'

<div align="right">Colloquial Persian, Stilo (2004, 285)</div>

The crucial point here is that if we extrapose the second conjunct to a postverbal position as in the German example in (60a), then we find the curious pattern that the conjunction accompanies the second conjunct (as it did in the German example) but still cliticizes to the left, which, in this case, means to the verb.

(62)   be in   do nahie pænir mí-foruš-ænd=**o** pæšm
        to this two region cheese T/A-sell-3PL=and wool
        'They sell cheese to these two regions and wool.'

<div align="right">Colloquial Persian, Stilo (2004, 281)</div>

As Stilo (2004) points out, this indicates quite clearly that morphophonological dependence is to be distinguished from syntactic constituency. The Persian coordinator *o* cliticizes to the left but nonetheless forms a syntactic constituent with the elements to its right. And since extraposition is a syntactic process, the coordinator accompanies the second conjunct to its clause-final position and subsequently it

leans to whatever has ended up on its left.

Two things are to be concluded from this discussion: First, morphophonological dependence does not necessarily indicate syntactic constituency and even though prosodic phrasing may in many cases reflect underlying syntactic constituency to a certain extent, it clearly does not always do so. And second, different types of coordinators exhibit different degrees of morphophonological dependencies. As mentioned above, there is a clear tendency that polysyndetic coordinators are more affix-like as they often show more morphophonological interaction with the stems they attach to. However, these are, as far as I can tell, strong tendencies and we do find exceptions here and there. Monosyndetic coordinators, however, still show some signs of prosodic attachment on a higher level of prosodic phrasing as they typically exhibit some preferences for pauses or parenthetical material. Haspelmath (2004) notes that he knows of no language in which coordinators seem to be dependent on both conjuncts in equal fashion and even claims that monosyndetic coordinators seem "to be universally asymmetric." Haspelmath (2007a, 9). I will come back to this observation in the second part of this study. There are various ways in which systems of different degrees of morphophonological dependence have been described. Typically, grammars refer to the distinction as affixed conjunctions as opposed to clitic conjunctions or independent conjunctions but this distinction refers largely to the language-specific diagnostics of what counts as a clitic or an affix. In the second part of this study, I will act on the assumption that these patterns are most adequately described by saying that coordinators can attach to their base at different levels on the prosodic hierarchy and that polysyndetic ones tend to attach on a lower level of prosodic phrasing than monosyndetic ones. This, in turn, correctly predicts that they tend to participate in more processes inside phonological words. Having discussed these issues, we can now go on to discuss the more concrete ordering patterns of both types of coordinators.

2.3.2.3. Semantic differences

The final property distinguishing monosyndetic and polysyndetic coordinators that I would like to discuss in this section is the fact that polysyndetic coordinators are usually polyfunctional whereas monosyndetic ones are not. It has been noted in various places that polysyndetic coordinators often function as focus-related elements or elements that play a role in quantification.

Mitrović (2014); Mitrović & Sauerland (2014); Szabolcsi (2015) all emphasize that the polysyndetic coordinators are often identical to markers used in quantification. This is illustrated with the nice minimal pairs from Japanese:[22]

(63)   a.   dare-mo
            who-Q
            'Everyone'

       b.   Mary-mo John-mo
            Mary-ADD John-ADD
            'Mary and John'

(64)   a.   dare-ka
            who-Q
            'someone'

       b.   Mary-ka   John-ka
            Mary-COORD John-COORD
            'Mary or John'   Mitrović (2014, 2)

They go on to propose a unifying semantic analysis of the elements and, in the case of Mitrović (2014); Mitrović & Sauerland (2014), they also suggest a more complex syntactic structure which I will come back to in the second part of this book. For now, it is important to note that this seems to be a crosslinguistically common pattern, which has some important consequences for the study of possible placement patterns.

In her comprehensive typological survey, Forker (2016) takes a closer look at these

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[22]Examples taken from Mitrović (2014); Mitrović & Sauerland (2014) have adapted glosses as they gloss them as μ (for polysyndetic) and J (for monosyndetic) conjunctions in order to relate them with the abstract syntacto-semantic heads they postulate.

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elements, which she calls additive markers. She summarizes a number of different uses including scalar additivity, the formation of indefinite pronouns and cardinal numbers, the use in concessives, the use for contrastive topics and the use as coordinators. She mainly highlights the use of these markers in constituent coordination but also notes that in quite a number of languages these markers have extended their use to coordination of clauses as well. Some of her examples illustrating the different uses are given below.

In their use as additive markers, these elements encode that the element that is marked is construed as an alternative focus to something present in the discourse context. In the example in (65), from Karbi, a Sino-Tibetan language, the scope of the additive marker is restricted to the phrase *tigers* indicating that tigers also celebrated 'Rongker' just like the obvious alternative (humans) do today.

(65)　hakó arnì=ke tekè a-tūm=ta　　rongkèr pu　dō　tàngho.
　　　　then day=TOP tiger POSS-PL=ADD Rongker QUOT exist HEARSAY
　　　　'At the time (in the old days), tigers also (like humans) celebrated the Rongker.'

<div align="right">Karbi, Konnerth (2012, 209)</div>

The use in concessives can be illustrated with the Tibetan example below; here the entire clause is marked as a concessive via the additive marker *yang*

(66)　khrom-la　phyin-na-yang nyo-bya　rgyab-ma-song
　　　　bazar-LOC went-SBJ-ADD　shopping do-NEG-AUX
　　　　'Although he went to the bazar, he didn't do any shopping.' Denwood (1999)

The use in indefinite pronouns is related to the above-mentioned use in quantification and is fairly common as well as, according to Forker (2016), the majority of languages in her sample make use of additive particles for the formation of indefinite pronouns. Examples from Kham and Armenian are given below. In both cases, we see a common pattern of negative indefinites with a case-marked wh-word with an additive marker indicating the indefinite reading.

(67)   kata-e   bə ta-woĭ-si-u-kə
        what-ERG ADD PROH-stop-1PL-3SG-OPT
        'May nothing hinder us!'   Kham, Watters (2009, 173)

(68)   Ararat-i   patker-ě yurakʻančʼyur hayord   kr-um   ē   ir
        Ararat-DAT image-DEF each   Armenian bear-PTCP COP.3SG his
        hog-um orteɫ ēl   na aprel-is lini
        soul-LOC where ADD it live-PTCP be.SBJ.FUT.3SG
        'Each Armenian bears the picture of the Ararat in this soul, wherever he shall

        be living.'   Dum-Tragut (2009, 247)

In principle, it seems that focus-related uses of additives could potentially be viewed as a confound as we need to be able to distinguish them from their coordinative use but in practice, it seems that this is not so much of an issue. It seems that languages also tend to keep these two strategies formally apart inasmuch the focus-related use of an additive marker is confined to different positions compared to the use as a coordination marker. Focus-related uses are often immediately preverbal, which, in many head-final languages, is the typical position for focused elements, whereas the coordinative use of an additive marker in many cases appears in more peripheral positions. Consider the examples from Lezgian below:

(69)   a. Insan q'e-ji-la   ada-n   ged-ni   awat-zawa
            person die-AOR.PTCP-TEMP s/he-GEN star-ALSO fall-IPFV
            'When a person dies, his or her star also falls down.'

        b. Ada-n Sirin meci   ǭwan-ni čʼala-l   gi-da
            he-GEN sweet tongue.ERG stone-even speech-SRESS bring-FUT
            'His sweet tongue will even make a stone talk.'

                                        Haspelmath (1993, 328ff)

(70)   [Tʼur-ar ǧil-er-a   ama] [wil-er-**ni**   ǭažǧanda-l ala.]
        spoon-PL hand-PL-INESS be.still eye-PL-COORD pot-SRESS   be.on
        'The spoons are still in their hands and the eyes are on the pot.'

                                        Haspelmath (1993, 336)

In (69), which illustrates two instances of focus-related use of the additive marker

ni, we see that focused elements are either immediately preverbal as in (69a) or, as in (69b) are only followed by the collocational object. As Haspelmath (1993, 301) notes, given information precedes new information and thus, focus tends to be far to the right. In its use as a clausal coordinator (70), the same suffix appears after the first XP of the clause. As such the different uses of additive markers are usually fairly easily distinguished.

Before I conclude this section, I briefly want to say a few words on potential other uses of monosyndetic coordinators. As with the discussion about morphophonological properties of these elements, we can conclude that monosyndetic coordinators show much less interaction with the semantic or information-structure of their coordinands and they usually also do not encode other semantic features but coordination configurations. Elements like *and, or* or *but* very rarely have other functions in a given language.

But again, as with the morphophonology, that statement is merely a strong tendency rather than an absolute universal. In a number of languages, we find that monosyndetic coordinators can occasionally take up other functions as well. The German adversative coordinator *aber* is sometimes argued to having grammaticalized into a modal particle expressing some sort unexpectedness or mirativity (see Kwon 2005). Consider (71):

(71)   Du bist aber groß geworden!
        You are *but* tall   become
        'You have grown so much!'

Similarly, Abimbola (2017) notes that the Yorùbá coordinator *sì* discussed in Section 4.1 can be used as what he calls an emphasis marker.[23]

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[23]Another interesting puzzle is found in Makalero, a language already mentioned above. In Makalero, Huber (2011) notes that the non-canonically placed monosyndetic coordinator *ini* slowly grammaticalized into a subject marker, some sort of marked nominative marker. She further goes on to speculate that this came about as *ini* moving from a pure coordinator to a contrastive topic marker, which then due to the language's word order restrictions developed into a subject marker.

(72) O   *sì*   mò   mi
      you EMPH know me
      'As a matter of fact, you know me.'   Abimbola (2017, 62)

But in both cases, these examples are extremely infrequent compared to the uses of the respective elements as proper clausal coordinators and further, for all I know we have little reason to believe that there are any common patterns of related uses as with polysyndetic markers, where, as Forker (2016) impressively showed, there are clear paths of grammaticalization and clear expectations which uses of additive markers pattern together and which ones are unlikely to. As with the morphophonological differences between monosyndetic and polysyndetic elements, we can thus conclude that monosyndetic coordinators also show less semantic interactions with the respective clauses they attach to. Again, I will come back to this observation in Part II of this book.

2.3.3. Phonological complexity

Since the earliest discussions of clitics, it has been a recurring intuition that these elements are phonologically deficient in some sense and therefore attach to a phonological host element. This intuition has for example been implemented by Halpern (1995) who assumes that the clitic's shift into second position in Slavic languages is a postsyntactic repair to that deficiency. In its syntactic base position, the clitic does not have a phonological host and then needs to be shifted to the closest position in which it does. This configuration will then result in a configuration in which the clitic shifts exactly one phonological word to its right.

However, the claim that phonological deficiency was at the heart of many second-position placement patterns or of non-canonical clitic placement patterns in general was criticized by a number people, most notably Klavans (1985, 1995); Anderson (2005) (see also Bošković 2001 for a detailed review of Halpern's account). In particular, Klavans (1985, 1995) makes the point that some second position clitics also

cliticize to their right, something that they could have done in their assumed under-lying base position and she goes on to argue at length that the syntactic placement and the phonological dependency of the clitic must be viewed as two independent variables.

Nonetheless, the intuition that second position clitic placement patterns are due to phonological properties of the clitic itself continues to be pursued to this day. A number of very recent accounts of clitic placement patterns couched in the frame-work of Optimality Theory make use of the constraint STRONG START (Werle 2009; Selkirk 2011) that requires the start of a given domain to be prosodically strong. As a result of this constraint, prosodically weak elements in initial position of that do-main need to be displaced (see e.g. Selkirk 2011; Elfner 2012; Bennett et al. 2016; Branan 2018).

Against the background of this ongoing discussion, it seems reasonable to control for the phonological complexity of the items under investigation. If we compare ele-ments in non-canonical position with the ones in canonical position with respect to their phonological complexity, we may arrive at a conclusion as to whether phono-logical deficiency may plausibly be assumed to be the driving force of certain clitic placement patterns.

As indicated above, the qualitative methodology employed in this work does not allow me to make any quantitative claims about the distribution of clitic patterns and accordingly, I will treat phonological complexity as a relative notion and look at it on a language-by-language basis. If we find that, in a given language, two coor-dinators with otherwise the same properties (e.g. both of them of the polysyndetic type) show differences in their placement, then we can see if their relative phonolog-ical complexity patterns with the predictions made by the accounts above. In other words, we can ask ourselves whether it is true then that it is always the phonologi-cally weaker one that undergoes displacement.

2.4. Interim Summary: What it means to be a shifting coordinator

At this point of the discussion, we have all the pieces in place to begin our study and start looking at at the concrete languages. We have identified and defined the subject matter and discussed the diagnostics that allow us to identify coordination configurations and to decide which elements count as coordinators and which do not. Further, we have briefly discussed some of the variables that we want to control for. Building on this discussion, we can now go on to define the actual subject matter of this typological investigation, i.e. we can be concrete about what it means to be a shifting coordinator.

Under the term *shifting coordinator* I understand any coordinator that does not appear in its canonical position. The term canonical position here refers to the positions identified in Section 2.3.2 and depends on whether we are dealing with monosyndetic coordinators or polysyndetic coordinators. Monosyndetic coordinators have only one possible position available.

(73)   The canonical position of a monosyndetic coordinator:

A < & < B

Note that I am using the precedence symbol (<) to indicate that this representation abstracts away from the different kinds of phonological relations that a given coordinator has to either one of the coordinands. We have seen that monosyndetic coordinators sometimes form a phonological unit of some sort with coordinand A and sometimes with coordinand B. For the purposes of defining what a shifting coordinator is, phonological attachment does not matter. Any monosyndetic coordinator that does not appear in between the two coordinands A and B will count as a shifting one.

As for polysyndetic coordinators, they on the other hand have two canonical posi-

tions available depending on whether they come as preposed to their respective co-ordinands or postposed. Abstracting away from phonological attachment relations, we find that one of the two coordinators appears in between the two coordinands and the other appears peripheral.

(74)   The canonical positions of polysyndetic coordination:

    a.   A ≺ & ≺ B ≺ &

    b.   & ≺ A ≺ & ≺ B

In the case of polysyndetic coordinators, it seems that there are no cases where the phonological attachment seems to be in conflict with the syntactic constituency. In other words, in the case of postposed polysyndetic coordinators as in (74a), we find that central coordinator also phonologically attaches to the first coordinand and the peripheral coordinator to the second one. Similarly, for (74b), we find that the peripheral coordinator attaches to the first coordinand phonologically and the central coordinator attaches to the second one.

We have seen plenty of examples in which the coordinators of the respective patterns actually appear in these positions and even without a balanced comprehensive survey, it seems like a safe assumption to say that the vast majority of coordinator placement patterns conform to one of these linear patterns. These patterns are by far more frequent than the ones discussed in the next chapters, which all have in common that they depart from the patterns above. I would argue that this does not limit the significance of the findings in the next chapter but merely should be read as an argument that the patterns above really instantiate the canonical positions and that placement of a coordinators seems to be a domain where languages exhibit a fairly strong tendency to follow the canonical patterns compared to others.

Fortunately for us, data collection from languages worldwide has drastically improved in the last decades so that "fairly strong tendency" still means that there are plenty of attested exceptions to study and discuss. In the following chapters, we will

look at quite a number of language which resist this strong tendency and which have their coordinators appear in linearly different positions. The languages are grouped into four different types, which, somewhat anticlimactically, gives away the typology that I will propose.

3. Coordinators after the first phonological word

In this chapter, we will present a number of case studies that will show shifting coordinators that appear exactly one phonological word to the right of where we expect them. The main case studies will come from Latin, Oklahoma Cherokee and from West Greenlandic, also known as Kalaallisut. At the end of Section 3.3, I will also list some evidence from other languages that seem to exhibit the same pattern.

3.1. Latin

In this section, I will take a closer look at the pattern of the shifted conjunction *-que* as well as the shifted disjunction *-ve* in Latin. This pattern is well-documented and much discussed in the relevant literature. I will not have too much to add to this discussion from an empirical point of view but I nonetheless think that for the sake of coherence and completeness, and in order get a better look at the big picture, it still pays off to discuss the pattern in sufficient detail.

Latin employs two sets of coordinators with different properties. On the one hand there are the phonologically largely independent, monosyndetic coordinators *et* ('and'), *vel* ('or') and *sed* ('but') which always appear in the canonical position in between the two conjuncts. But on the other hand, at least for conjunction and disjunction the also have a phonologically dependent counterparts *que* and *ve*, respectively.

3. Coordinators after the first phonological word

The example in (1) shows quite straightforwardly that we are dealing with a non-canonical placement position. The disjunction *ve* does not linearly appear in between the two verb phrases it disjoins but rather embedded inside of it.[1]

(1)   ... ut   consules   [sortir-entur]   [conparar-ent=**ve** inter   se]
         ... that console.NOM.PL draw.lots-3PL.PASS arrange   between REFL
         'that the consuls should draw lots or arrange between themselves.'

<div align="right">Livius, The History of Rome, Book 24</div>

A similar example with the conjunction *que* involving three conjuncts is given below. The conjunction *que* appears internal to both the second and the third conjunct.

(2)   [Caesar loqu-endi fin-em   fec-it]   [se=**que**   ad suos
         Caesar speak.PTCP end-ACC do-PERF.3SG self=COORD to   his.ACC
         recep-it]   [suis=**que**   impera-v-it...
         take.back.PERF-3SG his.DAT=COORD order-PERF-3SG
         'Caesar put an end to his speech and went back to his (troups) and ordered

         his (troups) to...   Caesar, De Bello Gallico 1.46

The first thing to establish is whether *que* and *ve* are coordinators according to the diagnostics developed in Chapter 2. However in this case, the literature is very clear on this and uniformly treats them as coordinators.

   First, we note that the coordinators *que* and *ve* can coordinate various syntactic categories. Above we saw a disjunction of verb phrases and a conjunction of clauses, below we see many more examples of noun phrases and other categories. In (3), we see the disjunction of adjectives.[2]

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[1] I will continue to give the respective coordinators in bold and the coordinands in brackets so as to highlight the fact that shifting coordinators are not in their canonical positions.

[2] In what follows, I will be only concerned with the distribution of *que* as the available data are much more. For all we know, *ve* patterns alike.

(3)   [albus] [ater=**ve**] fueris,   ignor-ans
       white   black=or be.SBJ.2SG not.know-PTCP.SG
       'not knowing whether you were white or black'   Cicero, Philippics 2.16.41

As for the morphosyntactic tests, it is quite clear that the constituents joined by both *ve* and *que* are always morphosyntactically parallel. In the example in (4), we see that both verbs are present tense indicative and both show finite subject agreement with the third person plural subject. If constructions of this sort were asymmetric of some sort, we would expect to reflect this in the morphosyntax of each conjunct as Latin is a language with elaborate systems of subjunctive mood and nominalized participial constructions. The same holds for (3), where all three verbs share the same tense, aspect, mood and subject agreement features.

(4)   [viv-unt]   [vig-ent=**que**]   fama rer-um
       live-PRES.IND.3PL flourish-PRES.IND.3PL=COORD fame thing-GEN.PL
       gesta-rum
       achieve-PTCP.PASS.GEN.PL
       'They live and flourish in the fame of their achievements.'

                                        Livius, History of Rome 25.38

We find quite a number of straightforward cases of nominal coordination with *que* that involve more than two conjuncts. This, according to Haspelmath (2007a), suggests a coordinate relation as well.

(5)   [puer-i],   [sen-es],   [mulier-es=**que**]
       boy.NOM.PL, old.man.NOM.PL woman.NOM.PL=COORD
       'the boys, the old men and the women'   Caesar, De Bello Gallico 1.29

So, against the background of these arguments as well as the fact that this is and always has been the standard assumption, it seems justified to conclude that *que* and *ve* are in fact coordinators.

It is more interesting however to decide whether *que* and *ve* are monosyndetic coordinators or polysyndetic ones. In all examples above, there was only ever one co-

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ordinator per coordination structure (except in (2) where there were however, three conjuncts). But since polysyndetic coordinators often have omission of a subset of coordinators (as discussion in Chapter 2.3.2, this may only serve as a rough orientation. The crucial question is whether we can have one coordinator per coordinand. And in fact, Lewis & Short (1879) note that the pattern with *que* at the beginning of the second conjunct is only one of several possible ones. Another pattern is that each conjunct is marked with *que*:

(6)   [noct-es=**que**]   [die-s=**que**]
            night-PL=COORD day.PL=COORD
            'nights and days'   Cicero De Finibus, 1,16,51

(7)   [mitt-unt=**que**]   [fer-unt=**que**]
            send.3PL=COORD carry-3PL=COORD
            '(they) send and carry...'   Ovid, Metarmorphoses 12,495

We also find double uses of *ve*:

(8)   [plus=**ve**] [minus=**ve**]
            more=or less=or
            'more or less'   Ovid, Fasti 5,110

Another argument for the polysyndetic status of *que* is that we find co-occurrence of *que* with the central, free-standing coordinator *et*. In co-occurrence, they are usually then realized as *atque*. Given what we have said in Section 3.1 about the potential co-occurrence of monosyndetic coordinators with polysyndetic ones, this might be a hint at the potential polysyndetic origins of *que*.

(9)   salus   [soci-orum] at=**que** [amic-orum]
            health ally-GEN.PL and   friend-GEN.PL
            'the health of our allies and friends'   Cicero, On Pompey's Command 2,6

Mitrović (2014) building on Torrego (2009) argues that the Latin pattern was part of a general shift from polysyndetic towards a monosyndetic pattern in Indo-European

languages. Corpus data show quite clearly that the relatively frequent use of *que* in early Latin is subsequently replaced by the use of *et* or *atque*. In line with the discussion in the preceding chapter, I will thus conclude with Mitrović (2014) that Latin *que* and *ve* are polysyndetic coordinators.

As for the distributional properties of *que*, in the previous chapter, I have already briefly mentioned the pattern of the Latin *que* and its distributional properties. I argued that the conjunction *que* or *ve* follow the first word of the second conjunct. As the reader may confirm, this holds for all examples above. In some cases, such as (3) or (4), this was equivalent to saying that the conjunction followed the second conjunct as a whole simply because the second conjunct simply only consisted of one word. However, examples such as the one involving conjunction of two (or three) clauses showed that there is more to the pattern. Here we see that the conjunction does *not* follow the the second conjunct as a whole but merely its first word. Note that this is not a difference in terms of clausal vs nominal coordination. We also find cases of non-clausal coordination where the distributional pattern shows the same difference. The examples below show that the same pattern emerges with PPs (10) and NPs (11). In both cases, the respective second conjunct consists of two words rather than one and hence we see that *-que* appears inside the second conjunct, namely after its first word.

(10)   ... [sine   scut-is]   [sine=**que**   ferr-o]   fu-erint
         without shield-ABL.PL without=COORD iron-ABL be-SBJ.PERF.3PL
         '... that they were without shields and without swords'

Embick (2007, 309)

(11)   [cunctis oppidis] [castellis=**que**   desertis]
         defeated towns   fortresses=COORD deserted
         'the towns defeated and the fortresses deserted'

Caesar, de Bello Gallico 2.29

However, more needs to be said about the term 'word' here of course. As linguists

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have long noted, there are various definitions and diagnostics of that term and they often lead to different results when applied. In many cases, we find that grammatical (or morphosyntactic) definitions of *word* do not match with phonological definitions of what a word is. Thus, we should ask ourselves whether *que* follows the first phonological word or the first grammatical word. And in this regard, it has been observed that it seems to be the phonological wordhood that determines the position of *que*. This insight goes back to the observation by Lewis & Short (1879) who note that when the second conjunct of *que* is or begins with a prepositional phrase, then the generalization is that *que* follows the preposition of the second conjunct if the preposition is bisyllabic. This can be seen in the example in (10), where the bisyllabic preposition counts as the first word of the second conjunct. Compare this to examples in (12) where the monosyllabic prepositions do not count as the first word. As a result, *que* skips also the following noun.

(12) a. [sub   occasum=**que** sol-is]
         before setting=COORD sun.GEN
         'and before the setting of the sun'

                                                    Caesar, De Bello Gallico 2.11

      b. [is istum reliqui-t]   [de   provincia=**que** decess-it]
         he it   leave.PERF-3SG from province=COORD depart.PERF-3SG
         'He left it and departed from the province.'

                                                    Cicero, Against Verres 2.2.48

This strongly suggests that the distribution of *que* is sensitive to phonological or prosodic phrasing rather than to syntactic structure (see also amongst others Marantz 1988; Embick & Noyer 2001; Agbayani & Golston 2010 for the same conclusion).

What we also observe is that the positioning of *que* after the first word seems to be completely ignorant of syntactic constituency or syntactic islands. It is not always very easy to determine whether a given constituent is a syntactic island in Latin as the transformation rules often depend on a given author and a given format but at

least adjunct clauses headed by a subordinating conjunction are typically opaque for syntactic movement. But still we find that if the second conjunct begins with an adverbial clause, then *que* can occur inside that adverbial clause. In (13), the second conjunct of *que* begins with a causal adjunct clause headed by the subordinator *quia* ('because') which then ends up preceding the conjunction.

(13) ... [[quia=**que**   adeo me complevi flore   Liberi], magis libera uti
         because=COORD so.far me filled   flower Liberi, more free   use
      lingua collibitum   est mihi]
      tongue please.PART is   me
      'and because I have filled myself with the fruit of the wine god, I like to use

      my tongue more freely.'   Maccius Plautus, Cistellaria, 1,2,8

The same holds for the above-mentioned case of *que* occuring inside prepositional phrases, another example given in (14). Again, a bisyllabic preposition such as *circum* ('around') counts as one phonological word and thus *que* follows it.

(14) [Narbo-ne] [circum-**que**   ea   loca]   hiema-ndi
      Narbo-ABL around-COORD DEM-ABL place-PL-ACC winter-PTCP
      'wintering in Narbo and around these places'

                                              Caesar, De Bello Civili 1.37.1

While Latin allows for free word order in a wide variety of contexts, including inside nominal phrases, it did not allow for a preposition and its complement to appear discontinuously Vincent (1999); Hewson & Bubenik (2006); Ledgeway (2012).[3] Thus, the important point here is that *circum* cannot otherwise not appear separated from its complement. PPs are an opaque syntactic domain in Latin. This strongly suggests that the placement of *que* ignores syntactic islands.[4] I thus would like to conclude that *que* and *ve* are polysyndetic coordinators that follow the first phonological word

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[3]Ledgeway (2012) attributes the observation to Adams (1971).

[4]This is by no means an unprecedented claim. In fact, this is more or less what people have said about the placement of so-called second position clitics in Indo-European since Wackernagel (1892). See more recently e.g. Halpern (1995); Anderson (1996); Garrett (1996); Hale (1996); Hock (1996); Embick & Noyer (2001); Agbayani & Golston (2010); Mitrović (2014)

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of the respective coordinands they attach to. We can represent this as follows, where
A and B are the respective coordinands and *ω* represents a phonological word.

(15)   [*ω* < **que/ve** < …]$_A$ < [*ω* < **que/ve** < …]$_B$

I will now turn to the distribution of the coordinators in Oklahoma Cherokee and
in West Greenlandic/Kaallalisuut, which show a surprisingly similar pattern com-
pared to the Latin one.

3.2. Oklahoma Cherokee

The second language under investigation in this chapter is Oklahoma Cherokee. The
data and the discussion presented in this section is based on the grammars by Feel-
ing (1975); Montgomery-Anderson (2008) and the discussions in Haag (1999, 2001);
Uchihara (2013); Cornelius (2018). Conjunction in Oklahoma Cherokee can be ex-
pressed by two different morphological means: Either by the use of the monosyn-
detic coordinator *ale*, which appears in its prototypical position in between the two
conjuncts or by the use of the element *hnóo*, which usually occurs as *hno* or *hnv*
in fast speech and as *heehnóo* in formal registers like bible translations (see Feeling
1975; Montgomery-Anderson 2008).

In (16), we see the use of *ale* and in (17), we see a minimal pair with the clitic *hno*,
which appears after the first word of the second conjunct.[5]

(16)   [asgaya gawoniha] **ale** [agehya dekanogiʔa].
        man   is.speaking and woman is.singing
        'The man is speaking and the woman is singing.'   Feeling (1975, 348)

(17)   [asgaya gawoniha] [agehya=**hno** dekanogiʔa].
        man   is.speaking woman=and is.singing
        'The man is speaking and the woman is singing.'   Feeling (1975, 348)

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[5]I will leave all glosses of examples from Cherokee as given in the original sources. I will not tran-
   scribe the numeral tonal heights as given in Feeling (1975). Whenever more detailed glosses to
   the examples in Feeling (1975) are available in Montgomery-Anderson (2008), I will use them.

Montgomery-Anderson (2008, 145) also notes that there is another coordinator *khe* which can be used as a disjunction or as an alternative question marker and which, at least at first sight, shows a similar distribution than *hno*:

(18)   káako uùkóòti a-samááti-iiya [nihi] [eja-to=**khe**]
        who   more   3A-smart-INT 2PRO 2O-sibling=AQ
        'Who is smarter, you or your sister?'   Montgomery-Anderson (2008, 145)

(19)   [ka-hneèki=s ji-jii-ali-hnohehtiisk-v́v́ʔi] [hla=**khe**]
        3A-answer.Q REL-2A-converse-DVB   NEG=AQ
        'Did he answer when you were speaking to him, or not?'

Montgomery-Anderson (2008, 145)

We will come back to a minimal comparison between the two coordinators below. For now, I will focus on the behavior of *hno* as this element is discussed in detail by Feeling (1975) and it is also much more common in the respective texts in Feeling (1975) and Montgomery-Anderson (2008). As Feeling (1975) notes, we find that both *ale* and *hno* can also conjoin other things than clauses. The distributional pattern for both coordinators remains the same: *ale* appears in between the conjuncts and *hno* attaches to the first word of the second conjunct (Feeling 1975, Montgomery-Anderson 2008, Haag 1999,2001).

(20)   Wili [usdo] [ayanuli=**hno**].
        Bill [small] [fast=and]
        'Bill is small and fast'

(21)   a.   [asgaya] **ale** [agehyuja] anahlinoheha.
            man   and girl   are.conversing
            'A man and a girl are conversing'   Feeling (1975, 348)

        b.   [asgaya] [agehyuja=**hno**] anahlinoheha.
            man   girl=and   are.conversing
            'A man and a girl are conversing'   Feeling (1975, 348)

In (20), we see a coordination of predicative adjectives and in (21), we see that both *ale* and *hno* can coordinate noun phrases. (22) gives an example, where both the two

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subject noun phrases and the two intransitive verbs are coordinated respectively:

(22)   [wili] [dami=**hnv**] ijula [dunihnogisv] [unalsgisvʔi=**hno**]
         Bill   Tom=and   both they.sang   they.danced=and
         'Bill and Tom both sang and danced.'   Feeling (1975, 350)

We can see that in all cases, the respective conjuncts are morphologically parallel, which, in line with all the published sources, suggests that we are dealing with co-ordination configurations rather than with subordination. This is further supported by the fact that Feeling (1975, 350) also gives plenty of examples where the clitic *hno/hnv* license processes that, on the surface look like coordination-specific ellipsis processes or word-order variation that fits the profile of coordination. In (23), we see an example of ellipsis, where the the verb(s) of the second conjunct are elided, a process that is superficially similar to gapping in English.

(23)   [Jani uldawoʔnisvʔvsv]   [wili=**hnv** vsgwu]
         John he.went.swimming Bill=and   also
         'John went swimming and Bill did too'   Feeling (1975, 350)

The examples in (24) show that this process is, like English gapping, also directional in the sense that we can elide the verb in the second conjunct but not in the first one.

(24)   a.   [wili gadu uduliha] [dami=**hno** nuna]
              Bill bread wants   Tom=and   potato
              'Bill wants bread and Tom a potato.'

         b.   *[wili gadu] [dami=**hno** nuna   uduliha]
              Bill   bread Tom=and   potato wants
              'Bill wants bread and Tom a potato.'

In (25), we see that, the object of both conjunct clauses is preposed in an ATB-like fashion, which is another indicator that the constructions in question are in fact coordinate constructions.

(25)   gihli [agowhtiha wili] [agehya=**hno** atvgiʔa].
       dog sees   Bill woman=and hears
       'Bill sees the dog and the woman hears it'   Feeling (1975, 349)

In line with all the existing literature that I am aware of, I thus conclude that *hno* is a coordinator. Let us now turn to the question of whether it is a polysyndetic coordinator or a monosyndetic one. As for the distribution of *hno*, both Feeling and Montgomery-Anderson note that *hno* is usually only present on the final (or at least on the non-initial) conjuncts. With three conjuncts, we get patterns like the following:

(26)   [wili] [dami] [Sami=**hno**] dunihnogisvʔi
       Bill Tom   Sam=and   they.sang
       'Bill, Tom and Sam sang.'

(27)   [asgaya gawoniha] [agehya=**hno** dekanogiʔa] [anichuja=**hno**
       man   is.speaking woman=and is.singing   boys=and
       anahlinoheha].
       are.conversing
       'The man is speaking, the woman is singing and the boys are conversing.'

                                                         Feeling (1975, 348)

This alone is however not a strong indicator of whether we are dealing with a monosyndetic or a polysyndetic coordinator because, as we have seen in Latin, even polysyndetic coordinators are often dropped in non-final conjuncts. What is more revealing is whether they *can* appear in initial conjuncts and in fact the stories in both grammars contain numerous examples that reveal that it is sometimes also present on the initial conjunct, which we can take as evidence that *hno* is indeed a polysyndetic coordinator.

(28)   [sagwu=**hno** asgaya galogwe ganehe] [soʔi=**hnv** hla].
       One=and   man   gun   had   other=and not.
       'One man had a gun and the other one didn't.'   Feeling (1975, 354)

Further, even though we do not find evidence for the co-occurrence of *ale* and *hno*,

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we find that at least the disjunction marker *khe* can co-occur with *ale*. Again, this co-occurrence suggests that the disjunction *khe* is also a polysyndetic coordinator.

(29) [yóoneeká=**khe**] ale [jalaki   kawóonisk-óʔi]
      English=AQ   or Cherokee 3A-speak-HAB
      'Does he speak English or Cherokee?'   Montgomery-Anderson (2008, 144)

As for the distribution, Feeling (1975); Montgomery-Anderson (2008); Haag (1999, 2001); Cornelius (2018) all agree that the coordinators *hno/hnv* and *khe* appear after the first word of their respective coordinands. The question that arises is whether we have more to say about the question how 'word' is defined in that context. Fortunately, there is a substantial amount of work on the notion of wordhood in Cherokee, in particular with respect to the word-final clitics.

Oklahoma Cherokee actually has a group of second position clitics all of which show a similar distribution as the ones that I have discussed in this section in that they appear after the first word of the respective clause. Many of these clitics have a focus- or question-related semantics associated with them. However, as noted by Haag (1997, 1999, 2001); Cornelius (2018), these clitics do not behave similarly when it comes to word-level phonology. Haag (1997, 1999) contrasts the disjunction marker *khe* (or in her transcription *ke* with the question marker *sgo* (*sko*). However, as Cornelius (2018) shows, the behavior of *sgo* and *hnóó* is identical with respect to the crucial property, namely word-final boundary tones.

The boundary tone, is according to Haag (1997, 1999); Cornelius (2018) a extra high falling tone that is a predictable indicator of the word-final syllable.[6] However, as Haag (1997, 1999) notes, there seems to be a difference as to whether the word-final clitics can bear the boundary tone or not. In particular, she notes that the question marker *sgo/sko* attaches outside of the boundary tone whereas the disjunction

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[6]Depending on the tone of the preceding syllable it may be realized as a simply high falling tone (as opposed to an extra high). Also, as discussed in detail by Cornelius (2018), it interacts with the process of word-final vowel deletion such that it may not appear in some cases at all. Nonetheless, Cornelius (2018) argues that its presence is completely predictable.

marker *ke/khe* can actually bear the boundary tone:

(30)   L.B   =L   (31)   H   =B
         Jan.ti   =sko   Jan.ti   =ke
         you.know =Q   you.know =DISJ
         'Do you know?'   'Do you know (or not)?'

<div align="right">Haag (1999)</div>

In (30), we see that with *sko*, the boundary tone remains on the verbal root, whereas with *ke*, it spreads onto the clitic. As Cornelius (2018, 159ff) shows, *hnóo* behaves exactly like *sko* in the examples above as it attaches outside of the boundary tone.[7]

(32)   L.B   (33)   L.B   =H
         wa.hya   wa.hya =hnoo
         wolf   wolf   =COORD
         'wolf'   '...and wolf'

<div align="right">Cornelius (2018, 160)</div>

As Cornelius (2018) notes, this could be interpreted as evidence that the two clitics attach in different morphosyntactic and/or prosodic domains (see also Haag (1997, 1999) for discussion). For example, we might envisage a solution where the class of clitics including *ke* attaches to the first morphological word of the clause and the class including *sgo* and *hnoo* attaches to the first phonological word of the clause. In doing so, we could explain why the former seems to be part of the phonological word for the purposes of the boundary tone while the latter does not. However, such a solution is rejected both by Haag (1999) and Cornelius (2018). One argument against such a view would be that we would predict to find cases where two cooccuring clitics attach to different hosts in the respective clause. Such a situation would arise whenever phonological words and morphological words do not match. However, as noted in Montgomery-Anderson (2008), the set of clitics always cluster in the same position:

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[7]Cornelius (2018) uses the symbol H% to indicate the boundary tone. I will use simply use the notion of Haag (1997, 1999) where *B* indicates the boundary tone.

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(34) [uhna=kwu=tvv=**hno**   aji-khehvs-iítóòl-éʔi jíistvvna].
      there=DT=FOC=COORD 3O-chase-AMB-PST crawdad
      'And then he started chasing him (the crawdad).'

<div align="right">Montgomery-Anderson (2008, 555)</div>

In (34), the first word hosts three clitics: The so-called delimiter clitic *skwu*, which according to Montgomery-Anderson (2008) has a focus-related function that is similar to the English particles *only* or *just*. The second clitic is the plain focus clitic *tvv* and the final one is the coordinator *hno*. We see that they all attach to the same host and the different sources contain no examples of two second position clitics that attach to different hosts within the same clause.

This raises the question what the constituent is that the clitics attach to. In fact, Haag (1997, 1999) puts forward the claim that all clitics attach to the first *morphosyntactic* word of the clause. Her argument is based on the fact that clitics have a lengthening effect on mono-moraic words like the determiner *na*. This claim is, however, questioned by Cornelius (2018) who investigates the interactions between the phonological process of word-final vowel deletion and clitic placement. What Cornelius (2018) observes is that the vowels of clitics are protected from word-final vowel deletion but if the stem that the clitic attaches to ends in a vowel, that vowel might optionally delete.

(35) svv́kta=ju → *svv́ktajü / svv́ktjü*
      apple=Q
      'apple?'   Cornelius (2018, 111)

As Cornelius (2018) argues, the process of word-final vowel deletion is specifically triggered at the end of a phonological word in fast speech and therefore this pattern indicates that there is a phonological wordhood boundary inside of the clitic. She also goes on to show that the differences between the types of clitics regarding the boundary tones noted above in (31) and (33) for example are *not* due to differences in the attachment sites but rather due to the fact that some clitics such as *hnóo* or

sgo come with their own tonal specification and therefore cannot host the bound-ary tone while others like *ke* do not. Therefore the boundary tones can spread freely onto the clitic *ke* but not on *hnóo* or *sgo*. This, according to Cornelius (2018) is the preferable solution because *hnóo* and *sgo* surface with different tones (36) and since there is no other process that would derive that, this can only be explained by means of lexical specifications and thus it seems plausible to assume the lexical specifica-tions are the reasons for the inability of the boundary tone to spread as well.

(36) a.   L.B
          ja.ji
          mother
          'mother'

     b.   L.L   =B
          ja.ji   =ke
          mother =OR
          '...or mother'

     c.   L.B   =H
          ja.ji   =hnoo
          mother =COORD
          '...and mother'

(37) a.   L.B
          noh.ji
          pine
          'pine'

     b.   L.L =B
          noh.ji =ke
          pine   =OR
          '...or pine'

     c.   L.B =L
          noh.ji =sgo
          pine   =Q
          '...pine?'

Cornelius (2018)

Comparing the tone on the clitic in (36c) and (37c) shows that the tone after the boundary tone shows up as a high tone on *hnóo* and as a low tone on *sgo*, a differ-ence that can only be explained by means of lexical specifications of the respective clitics. Cornelius (2018) thus concludes that all clitics including *hnóo*, *ke* and *sgo* attach to the first phonological word of the clause.[8]

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[8]Under these assumptions, Cornelius (2018) notes that it is still not entirely clear why the monomoraic determiner *na* can host the clitic and is lengthened when it does. In order to test whether *na* can be a phonological word on its own, she conducts tests to see whether it sur-faces with a boundary tone but these tests yield somewhat inconclusive results. She also cites Dyck (2009), who claims that, in the related language Cayuga, single particles consisting only of monomoraic syllables can be phonological words on their own. But, in her treatment of clitic placement, she then ultimately opts for a constraint that requires clitics to be placed in a clus-ter. As a result, the clausal clitics then will align next to the determiner *na* as it is a clitic itself, procliticizing to the following element. Such a solution strikes me as somewhat problematic as the clausal clitics and the determiner clitic come from different domains and it seems implausi-ble that that constraint will require all clitics of different domains to be adjacent. Arguably, that

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Similar to the observations from Latin, we can also see that placement of these clitics such as *hnóo* do not care for syntactic constituents or islands. In the example in (38), we see that the coordinator *hnóo* appears on the numeral modifying a noun which form clause-initial adverbial. As (Montgomery-Anderson, 2008, 516f) notes, numerals always immediately precede the noun (and potentially adjectives) and the grammar gives no examples of a numeral and a head noun that appear discontinuous. It thus seems reasonable to conclude that that they form one syntactic constituent and cannot be separated by syntactic movement. Still the coordinator can appear in between the two.

(38) [saakwu=**hnóo** iyúwáákhti aji-atuuliísk-vv́ʔi aji-xxhyeèst-i jíistvvna
       one=COORD   time   3O-want.PST   3O-eat.NOM2 crawdad
       wahya].
       wolf
       'And one time wolf wanted to eat the crawdad.'

       Montgomery-Anderson (2008, 365)

The same point can be made with the example below. Here the coordinator *hnó* attaches to the determiner that modifies a noun that itself is part of an adverbial clause. As with numerals, we have no reason to believe that determiners can ever be separated from their head nouns, nor that adverbial clauses such as the one in the inner brackets below should not form a syntactic constituent.

(39) [[naàski=**hno** iyúústi ii-ka]   tee-ookii-lvv́hwístaàneeh-óʔi kavvhnóóta
        that=COORD reason ITR=be DST-1PLwork-HAB   3A-alive
       ii-uu-alistoht-ííʔi].
       PRT-become-NOM2
       '(and) that's why we struggle to keep it alive.'

       Montgomery-Anderson (2008, 545)

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constraint is not violated when the determiner is not clause-initial but appears on another noun phrase in the clause. Given the somewhat inconclusive results on the phonological wordhood status of *na*, I will thus leave that problem aside for now and follow Cornelius' conclusion that the clitics attach to the first phonological word of the clause.

So, we can conclude for Oklahoma Cherokee has a pattern that is, on an abstract level, very much the same as the Latin one above. We saw that it has two polysyndetic coordinators (*hnóo* 'and' as well as *ke* 'or') that appear after the first phonological word of the respective coordinand.

(40) $[\,\omega \prec \mathbf{hno/khe} \prec \dots\,]_A \quad \prec \quad [\,\omega \prec \mathbf{hno/khe} \prec \dots\,]_B$

As in Latin, the coordinator in the non-final conjuncts are preferably dropped and as in Latin, we find that the coordinator seems to be able to appear inside complex syntactic constituents (like noun phrases) that can otherwise not be separated if these complex noun phrases appear clause-initially. Examples like (39) seem to indicate that the coordinators can even appear inside adverbial clauses if these adverbial clauses are initial to the respective conjuncts.

3.3. Kalaallisut

The final language that I want to address in this section is Kalaallisut, also sometimes referred to as West Greenlandic. The coordinator placement pattern in this language is briefly mentioned in Sadock (2003); Anderson (2005); Haspelmath (2007a) but has otherwise not received much attention to my knowledge.

The standard way to coordinate constituents in Kalaallisut is to us a series of enclitic coordinators.[9] The example in (41), taken from Sadock's description illustrates the basic neutral coordinator *lu* which is used for conjunction of all major syntactic categories. (42) shows the adversative coordinator *li* which mainly coordinates clauses or clause-like categories but occasionally also adjectives if the context allows for it. The example in (43) illustrates another case of conjunction by means of *lu* as well as a case of disjunction by means of *luuniit*. Finally (44) gives an example

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[9]Kalaallisut has a set of straightforward, free-standing monosyndetic coordinators an example of which are given in (41) but as Fortescue (1997, 122) notes, some of them derive from inflected verbs and clearly, more investigation is necessary to figure out the underlying structure in such cases.

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of disjunction of two subordinate conditional clauses. Again, the disjunction used
is *luuniit.*

(41) ukioq   aasarlu
      [ukiuq-∅] [aasaq-∅=**lu**]
      winter-ABS summer-ABS+CONJ
      'Winter and summer'   Sadock (2003, 70)[10]

(42) [pualasuuq] [pinnirtur=**li**]
      fat   beautiful=-ADVS
      'fat but beautiful'   Fortescue (1997, 128)

(43) [Kanata-mi] [Alaska-mi]=**lu**/=**luunniit**
      Canada-LOC Alaska-LOC=CONJ/DISJ
      'in Canada and/or in Alaska'   Fortescue (1997, 128f)

(44) [isi-ruit]   [ani-guil=**luunniit**]
      go.in.2SG.COND go.out.2SG.COND=DISJ
      'whether you go in or come out'   Fortescue (1997, 123)

Both Fortescue (1997) and Sadock (2003) take these elements above to be coordi-
nators. In most cases, the conjuncts are morphologically parallel as evidenced in
(45).[11]

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[10]Sadock (2003) uses different symbols to indicate morpheme boundaries as well as clitic bound-
aries. I have adapted the examples for the sake of coherence.

[11]Fortescue (1997) notes that in some cases, we find that with clausal coordination, we observe that
one of the coordinands can but does not have to be in what he calls the contemporary mood (here
glosses as *cont*). This is illustrated in (45).

(45) qimmiq taanna [nakuarsuu-vuq]   [saamasuu-lluni=**li**]
      dog   that   be.strong-IND.3SG be.gentle-4SG.CONT=ADVS
      'That dog is strong but gentle.'   Fortescue (1997, 123)

He then goes on to discuss whether the contemporary mood is a "subordinate paradigm" or not.
But since the contemporary mood is (a) not obligatory and (b) occasionally found in regular main
clauses as well and based on the other arguments discussed below, he in the end also takes these
elements to be coordinators. See also Fortescue (1997) for an elaborate discussion that the scope
of negation indicates that the constituents joined by *lu* are coordinate.

(46) [iqqa-a   timmitar-passuar-nik ilikkaar-puq]
      proximity-its bird-lots.of-INS   be.fill-IND.3SG
      [siqque-ta-nngil-aa=**li**]
      shoot-ITER-NOT-3SG-3PL.IND=ADVS
      'Around (it) there were lots of birds but he didn't shoot them.'

<div align="right">Fortescue (1997, 122)</div>

Additional arguments for coordinate structures come from the fact that nominal coordination uses the same elements and that more than we find many cases of more than two constituents being joined by *lu.*

(47) [tuluit]   [qallunaat] [kalaallil=**lu**]
      Englishmen Danes   Greenlanders=CONJ
      'Englishmen, Danes and Greenlanders'   Fortescue (1997:127)

Finally, Fortescue (1997, 132ff) notes that in coordination, it is possible to omit verbs in non-initial coordinands under identity as in (48). This is not possible in subordination. If this is true, then it is a strong indicator of a coordinate relation as it licenses coordination-specific processes such as gapping.

(48) [nukappiarag Jensi-mik ati-qar-pug]   [niviarsiar=**lu** Sissii-mik]
      boy   Jensi-INS name.have-3SG-IND girl=CONJ   Sissii-INS
      'The boy is called Jensi and the girl Sissii,'   Fortescue (1997:133)

As for the syntactic type of coordinator, Fortescue (1997) also gives a number of examples where both coordinands are marked with *lu, li* or *luunniit* indicating that these are in fact of the polysyndetic type.

(49) a. [palasi=**luunniit**] [niurtur=**luunniit**]
          priest=DISJ   shopkeeper=DISJ
          'either the priest or the shopkeeper'

      b. [palasi=**lu**]   [niurtur=**lu**]
          priest=CONJ shopkeeper=CONJ
          'the priest and the shopkeeper'   Fortescue (1997:127)

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In line with what we said above about the polyfunctional nature of polysyndetic coordinators, we find that, in isolation, they can be used to express focus-related meanings such as *even*:

(50) Aki-nngil-aanga=luunniit
      reply-not-3SG>1SG=even
      'He didn't even reply to me.'   Fortescue (1997:311)

As for the distribution, we often see that these elements are final to the coordinand they modify but this is hardly surprising given that West Greenlandic is one the textbook examples of polysynthetic languages, in which even whole clauses usually consist of one word only. But we do find some examples that clearly show that the elements in question appear clause-internally.

(51) [Tului(t)-nunaan-nuka-nngil-aq] [ikinngun-ni=**lu**
      England-go.to-not-3SG.IND   friend.3SG.REFL=CONJ
      tikiraar-nagu.]
      visit-(4SG)-3SG-NEG-CONT
      'He didn't go to England and visit his friend.'   Fortescue (1997, 140)

As in Latin and Cherokee, it seems to be the case that it is the first word of the second conjunct that hosts the three coordinators in question. Below are two more examples. The first one in (52) involves an incorporation structure with a stranded possessor and (53) involves another example with gapping of the verb in the second conjunct. Here the subject of the second conjunct is realized exceptionally with an overt pronoun to indicate the contrast and thus it hosts the conjunction *lu*.

(52) ... puisillu   neqitorpunga
      ... [puisi=p+**lu**]   [niqE-tuq-Vunga]
      ... seal-ERG+CONJ meat-consume-IND.3SG
      'and I ate seal meat'   Sadock (2003, 61)

(53) [Hansi ataatsi-mik aqissir-puq]   [uanga=**lu** pingasu-nik]
      Hansi one-INS   ptarmigan.catch-3sg.ind I=CONJ   three-INS
      'Hansi caught one ptarmigan and I three.'   Fortescue (1997, 134)

Given the polysynthetic nature of the language, it is per se not easy to tell whether the coordinators appear after the first word or the first phrase, and given that we have even less information about the prosodification of this language, it is clearly hard or even impossible to tell for sure with the available data whether we are dealing with phonological words or phrases or with syntactic ones.

But I would like to suggest that, even though we do not have any watertight evidence for one claim or the other, we do find some very insightful pieces of data. In his discussion about the distribution of clitics in West Greenlandic, Fortescue notes that elements like *lu* and *li* attach to the first phrase of the second coordinand.

Sadock (2003) gives some insightful discussion about that point and specifically claims that *lu* shows up on the first word of the second conjunct.[12] In (54), the coordinator *lu* breaks up syntactic phrases to attach to the first word of the coordinand. In (54), we that the second conjunct of *lu* itself begins with a subordinate adjunct clause *tamanna pillugu* ('because of this'). And nonetheless, the coordinator *lu* ignores the syntactic phrasing here and simply skips the first word ending up inside the adjunct clause. The example in (55) illustrates a different kind of pattern but ultimately it shows the same configuration. In (55), we see that the first syntactic phrase of the second conjunct is a nominal phrase modified by some nominalized clause indicated by the active participial marker and the directional case marker on the verb *pinngoriartopoq* ('having land'). And again, the coordinator splits up this syntactic constituent consisting of the noun and the nominalized clause modifying it and appears inside.

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[12]To be more precise, he states that *"clitic (+lu) "and" will show up as a suffix to the first word it precedes..."* (Sadock 2003:61) which, in a sense anticipates the frequently stated intuition, that coordinators like West Greenlandic *lu* or Latin *que* are base-generated in between the conjunct but then move one word to the right.

3. Coordinators after the first phonological word

(54) ... tamannalu   pillugu
      ... [tamanna=**lu** pi-(l)lugu
      ... this=CONJ   because-CONT.3SG
      toqukkuminaappallaarsimallutik
      tuquk-Guminar-ik-Vallaar-sima-(l)lutik]
      kill-be.easy-not.be-too-CONT
      'and because of this they were difficult to kill'   Sadock (2003, 71)

(55) Iluilli   tarnaani   nunaqartut   iluanni
      [inuk-t=**li**   ta-ma-mi   nuna-qar-Tuq-t   ilu-ani
      person=DIR+ADVS AN-here-LOC land-have-ACT.PTCP-DIR midst=LOC
      pinngoriartopoq   erinineq
      pi-nngur-Giartur-Vuq   irini-niq-∅]
      thing-become-more.and.more=IND.3SG long.for-NOM-ABS
      '...but amongst the Inuit living here there arose a yearning...'

                                                          Sadock (2003, 71)

In the light of these examples where it seems that, just as in Latin, the placement of the coordinators in Kalaallisut ignore all kinds of syntactic constituency, I would tentatively like to conclude that the pattern of the coordinators *lu*, *li* and *luuniit* occurs after the first word of the second coordinand. And even though I do not have the possibility to conduct an actual study of the boundaries of the phonological word-hood in the language, I would like to assume that the examples above suggests that the placement rules of these coordinators are sensitive to phonological structure rather than syntactic constituency. It thus seems reasonable to assume that it is also phonological wordhood that determines the placement of the elements in question. In other words, for now, I would like to assume that they behave exactly like the Latin *que*.

3.4. Summary

The three case studies that we have seen in this chapter all converge on the same abstract pattern. A polysyndetic coordinator attaches to the first word of its respective coordinand. For Latin and Oklahoma Cherokee, we had quite convincing arguments

that the notion of the word that the grammar refers to is the *phonological word*. For Kalaallisut, the evidence was less clear simply because of the polysynthetic nature of the language and the question of where morphosyntactic words and phonological words diverge in this language. However, in absence of evidence to the contrary, I will assume that these three languages abstractly instantiate the same underlying pattern represented in (56), where A and B are the respective coordinands, $\&_{POL}$ refers to a polysyndetic coordinator and ω refers to a phonological word.

(56) $[\, \omega \prec \&_{POL} \prec \ldots \,]_A \;\; \prec \;\; [\, \omega \prec \&_{POL} \prec \ldots \,]_B$

Further, we have seen that we also had good evidence to assume that the placement pattern applies regardless of syntactic constituency. The position of the coordinator would not be affected by any sort of constituency or even syntactic islands. Regardless of what type of constituent the respective coordinand start with, the coordinator will always appear after the first word even it is an adverbial clause or complex nominal phrase, etc.

As for other languages exhibiting the same patterns, we note that Agbayani & Golston (2010); Mitrović (2014) state that at a certain stage of Indo-European, the majority of languages in that family actually followed this pattern.

Agbayani & Golston (2010) note that Ancient Greek and Hittite show the same or very similar the distributional patterns. In Ancient Greek, the shifting coordinators in question are the conjunctions *te* and *dé*. In the Hittite examples in (57), we see the same pattern involving the conjunctions *(y)a*.

(57)   a.   [dzéu] [álloi **te**   tʰeií]
             Zeus   other and gods
             'Zeus and other gods'

                  Ancient Greek, Homer, Iliad 6.476 in Agbayani & Golston (2010)

3. Coordinators after the first phonological word

b. [érgeto d'   eks húpnou] [theíee **dè** min amphékhut'   ompheé]
keeps   and out of.sleep divine and him around.poured voice
'he kept off sleep and the divine voice poured around him.'

Ancient Greek, Homer, Iliad 2.41 in Agbayani & Golston (2010)

(58) a. [ginuwas GAD.HI.A] [patann=**a**   ^{GIŠ}GIR.GUB]
for.knees veils   of.feet=and stool
'veils for the knees and a stool for the feet'

b. … [apass=**a**   ARAD DINGIRLIM eesdu]
… he=COORD servant   deity.of become
'and let him (too) be a servant of the deity.'

Hittite, Agbayani & Golston (2010)

Mitrović (2014) gives some historical sources from many branches of Indo-European showing that the pattern is more wide-spread. I will simply just cite two selected branches, namely Celtic and Germanic. The Celtic examples illustrated with the languages Old Irish and Gaulish illustrate the position of the coordinator *ch* or *c*, which in both cases follow the clause-initial verb. In the Old Irish example in (59), it follows the copular which is unsurprising as Old Irish is a VSO language. In the example from Gaulish, an SVO language, it follows a lexical verb as the subject is dropped.

(59) … [ba **ch** ri   Temrach]
COP and kind Tara.GEN
'and he was king of Tara.'

Old Irish (Celtic), Mitrović (2014, 130) citing Thurneysen (2003, 549)

(60) [lotites   snī̄]   [regu=**c**   cambion]
quicken.2 us.ENCL straighten.1SG=COORD crooked.ACC
'You quicken us and I righten the wrong (*lit.* straighten the crooked one).'

Gaulish (Celtic), Mitrović (2014, 132f)

As for the Germanic branch, Mitrović (2014) notes that, as far as we can tell, only Gothic had a second-position coordinator. This is illustrated in (61). Here, the coordinator is *uh* and attaches again after the first word of the second conjunct:

(61)   ... [wopida   Iesu]   [gaþ   **uh** imma].
            call.PAST.3SG Jesus.ACC say.PAST.3SG and him.DAT.SG
            '... he called Jesus and said unto him.'   Mitrović (2014, 79)

Clearly, our sources on these patterns are limited and it cannot be stated with absolute certainty that these languages exhibit the same pattern as Latin but the data are fairly suggestive. The pattern was very widespread in Indo-European and replaced by medial central coordinators relatively recently. Note also, that Mitrović (2014) notes that all of these languages (including Hittite and Ancient Greek) also resemble Latin in that the coordinators in question are of the polysyndetic type.

Beyond Indo-European, I do not (with the exception of Kalaallisut and Cherokee of course) know of a language, which exhibits this pattern.

4. Coordinators after the first prosodic phrase

In this chapter, I will present case studies exhibiting a different pattern from the one we saw above in Latin, Cherokee and Kalaallisut. In Yorùbá, German and Polish. we find that an element that seems indicative of a coordinate relation is linearly located embedded inside the second coordinand. Unlike in Latin, Ancient Greek or Cherokee, this pattern has not been described as a second position pattern for coordinators to my knowledge and therefore, these patterns are usually not referred to as clitics.

The patterns in this chapter are also more controversial inasmuch as the literature contains occasional claims that these elements are not coordinators but rather some kind of adverbial element or some sort of discourse particle.

As a result, both the identification of these elements as coordinators as well as the discussion of their distribution will be more elaborate than the fairly uncontroversial ones in the last chapter and will show in detail that the elements in question are indeed coordinators despite their unusual surface position.

4.1. Yorùbá

The Yorùbá language belongs to the Niger-Congo language family and together with the language groups of Igálà and Itsẹkiri, it forms the Yoruboid branch of the Volta-

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Niger group. It is spoken mainly in Nigeria, Benin and Togo and has, according to ethnologue.com, about 50 million native speakers.[1]

The grammatical markers used to indicate coordination in Yorùbá distinguish between the clausal and the non-clausal domain. In the non-clausal domain, the markers *àti* and *pèlú* are all used to coordinate nouns but according to Awobuluyi (1977, 104f) only *àti* is used to coordinate other elements such as PPs (2b).

(1) [Olá] **àti/pèlú** [Adé] wá ilé lánàá.
     Olá CONJ/CONJ Adé come house yesterday
     'Olá and Adé came home yesterday.'   Abimbola (2017, 60)

(2) a. ní [ayé] **àti** [òrun].
         in heaven CONJ earth
         'in heaven and earth'

     b. [ní ayé] **àti** [ní òrun].
         in heaven CONJ in earth
         'in heaven and on earth'   Awobuluyi (1977, 105)

In the clausal domain however, these markers cannot be employed. Two straightforward coordinators used for clausal coordination are *àmó* and *sùgbón*, both of which express an adversative relation between the two conjuncts that is usually translated with the English coordinator *but*:

(3) [Mo gbó], **àmó** [mi ò gbà].
     I hear but I NEG accept
     'I have heard but I am not accepting the offer.'   Ilori (2010, 170)

(4) [Mo jeun], **sùgbón** [mi ò yó].
     I eat but I NEG be.full
     'I ate but I am not satisfied.'   Ilori (2010, 170)

---

[1] The case study of the shifting coordinator in Yoruba is a collaboration with Daniel Aremu (Goethe-Universität Frankfurt). All examples, unless otherwise noted, are provided by him. All judgments taken from the literature were double-checked by him as well. Some of the more subtle judgments were discussed with other native speakers. For a more elaborate discussion of the case study on Yoruba, more arguments for the status as a coordinator that shifts to a prosodically defined position, as well as a concrete theoretical implementation of this process, see Aremu & Weisser (2024).

Simple, non-adversative coordination of clauses usually makes use of the element *sì*. Curiously, however, *sì* does not occur in the same position as the above-mentioned elements *àmọ́* and *ṣùgbọ́n*. Rather it appears in a position somewhere between the subject and the verb of the second conjunct.

(5) [Ó mu ọtí], [ó **sì** yó kánrin].
     He drink wine he CONJ brim excess
     'He drank wine and he was drunk a lot.'   Abimbola (2017, 63)

(6) [Èmi óò dìde], [èmi óò **sì**   tọ baba mi lọ], [èmi óò **sì**   wí fún un
      I   will arise, I   will CONJ to father my go, I   will CONJ say to him
     pé]
     that
     'I will arise, go to my father and will say that...'

                                              Ilori (2010, 176), gloss adapted

Given examples as in (5) and (6), the literature is divided as to whether *sì* should be treated as a regular coordinator or not. Awobuluyi (1977) and Ilori (2010) both reject the notion of *sì* as a coordinator and call it a consecutive adverb. Accordingly Ilori (2010) glosses *sì* as 'in-addition' and Awobuluyi (1977) sometimes translates it to English *'then'*. Yusuf (1980), Abimbola (2017) and Givón (2018) on the other hand take *sì* to be a coordinator. In order to show that *sì* is indeed a coordinator and not an adverb, it helps to first look at its distribution and only then come back to the question of whether it is coordinator or an adverb.

4.1.1. The distribution of *sì*

As we have seen in the introduction to this case study, *sì* is, in simple clauses, located somewhere between the subject and the verb. Accordingly, we find two statements about the actual position of the element in question. Awobuluyi (1977, 69) calls *sì* a preverbal modifier whereas Givón (2018, 187) calls the position a "post-subject position". And while these statements are clearly not wrong, we can refine them and be more precise if we employ *sì* in slightly more complex configurations. For example,

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we can see that *sì* not only follows the subject but rather also follows a number of modal and temporal elements (7) as well as negation (8):

(7)   a.   ... Ọlá yóò **sì**   lọ.
            ... Ola will CONJ go
            '...and Ola will go.'

       b.   ... Ọlá ò   bá   **sì**   lọ.
            ... Ola should have CONJ go
            '...and Ola should have gone.'

       c.   ... Ọlá á   **sì**   lọ.
            ... Ola would CONJ go
            '...and Ola would go.'   Abimbola (2017)

(8)   ... Ola ò   **sì**   lọ.
         ... Ola not CONJ go
         '...and Ola does not go.'   Abimbola (2017)

On the other hand, we see that *sì* also does not appear to be immediately preverbal. Quite a number of preverbal adverbs can intervene between *sì* and the verb. Similarly, Yorùbá allows for two kinds of preverbal PPs both of which intervene between *sì* and the verb.

(9)   a.   ... Ọlá **sì**   tun   lọ.
            ... Ola CONJ again go
            '...and Ola goes again.'

       b.   ... Ọlá **sì**   jàjà   lọ.
            ... Ola CONJ finally go
            '...and Ola finally goes.'

       c.   ... Ọlá **sì**   mà   lọ.
            ... Ola CONJ in.fact go
            '...and Ola in fact goes.'   Abimbola (2017)

In (10), the benefactive PP *bá mi* ('for me'), must appear in between *sì* and the verb.

(10)   ... ó **sì**   bá mi ra   bàtà bọ.
          ... he CONJ for me buy shoe
          '...and he bought a pair of shoes for me.'

Finally, we also note that the aspectual marker indicating perfect appears after *sì* and before the verb.

(11)   ... ó **sì**   ti   ra   bàtà.
         ... he CONJ PERF buy shoe
         '...and he has bought a pair of shoes.'

So, if we only restrict ourselves to the coordination of simple, monoclausal configurations we can thus summarize the position of *sì* within the second conjunct schematically as follows:

(12)   [Comp ≺ Subj ≺ Neg/Tense/Modal] ≺ ***sì*** ≺ [Perf ≺ Adv/PP-Adjuncts ≺ Verb ≺ Obj]

Ilori (2010) describes this position as a vP/VP-peripheral position and for these simplex cases, such a description might be sufficient. However with more complex configurations such as conjuncts that include clause-initial conditional clauses, we get a slightly more complicated picture. In (13), we see a coordination of two clauses both of which begin with an adverbial conditional clause. Interestingly, the element *sì* does not appear in between the subject and the verb of the matrix clause of the second conjunct but rather inside the clause-initial adverbial clause.

(13)   [[Tí   òrùn ba ran   ], Ade yóò lọ sí Èkó   ] [[tí   òjò ba **sì**   rọ̀
           COMP sun may shine,   Ade will go to Lagos   COMP rain may CONJ fall
         ], Olú yóò lọ sí Ìbàdàn].
           Olú will go to Ibàdàn
         'If the sun is shining, Ade will go to Lagos and if it rains, Olú will go to Ìbàdàn.'

The (possibly) expected position in the matrix clause is very much dispreferred (14).

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(14) ?? [[Tí   òrùn ba ran   ], Ade yóò lọ sí Èkó   ] [[tí   òjò ba rọ̀],
        COMP sun may shine, Ade will go to Lagos   COMP rain may fall
        Olú yóò **sì**   lọ sí Ìbàdàn].
        Olú will CONJ go to Ibàdàn
        'If the sun is shining, Ade will go to Lagos and if it rains, Olú will go to

        Ìbàdàn.'

Interestingly, clause-initial adverbial clauses are not the only cases where we get a mismatch of this type. If the subject is modified with a relative clause, we also have the option of putting *sì* linearly inside the relative clause.[2]

(16) [Olú ti rà   aṣọ   ], [obìnrin [tí Adé **sì**   ri ní anà   ]
       Olu PERF bought clothes   woman that Ade CONJ saw at yesterday
       ti   ra bàtà]
       PERF buy shoes
       'Olu has bought clothes and the woman who Adé saw yesterday has bought

       shoes'

Similarly, to instances of clause-initial conditional clauses, we find that the *sì* can also pick out the position inside of the embedded clause.

    The third case involves a focus construction. Focus is expressed by placing the constituent in focus in the clause-initial position and mark it with the so-called focus marker *ni*.

(17)   a. mo ra aṣọ
         I   buy clothes
         'I bought clothes'

      b. aṣọ   ni mo rà
         clothes FOC I   buy
         'I bought CLOTHES'   Bisang & Sonaiya (2000, 180)

---

[2]Unlike with conditional clauses, the potentially expected position of *sì* in between the subject and the perfectivity marker is also available. See Aremu & Weisser (2024) for discussion and also for more information on the differences between subject and object relative clauses.

(15)   [Olú ti rà   aṣọ   ], [obìnrin [tí Adé ri ní anà   ] **sì** ti   ra bàtà.]
        Olu PERF bought clothes   woman   that Ade saw at yesterday   CONJ PERF buy shoes
        'Olu has bought clothes and the woman who Adé saw yesterday has bought shoes'

The question that arises of course, is where *sì* goes in configurations in which two focus-clauses are coordinated. In the example in (19) we see that *sì* appears in between the focused phrase and the focus marker *ni*.

(18)　　[aṣọ　　ni mo rà　], [bàtà **sì**　 ni Olá rà　].
　　　　　clothes FOC I　buy　　shoes CONJ FOC Ola buy
　　　　　'I bought CLOTHES and Ola bought SHOES.'

This is quite surprising since this position is not one that can be occupied by any other element in Yorùbá for all we know.

　　Against this background, we can now come back to the discussion of whether Yorùbá *sì* is a coordinator or an adverb. In what follows, I will present a number of arguments that *sì* is a coordinator.

4.1.2.　Yoruba *sì* is a coordinator

In this section, I will argue that the assumption along the lines of Yusuf (1980); Abimbola (2017); Givón (2018) that *sì* cannot be treated as a consecutive adverb is correct and that it should be treated as a coordinator. First, we have seen that *sì* has a different distribution from other adverbs or any preverbal elements in Yorùbá.

　　The first argument concerns the distribution of *sì*, which does not match the distribution of adverbs. The first one concerns the focus construction we have already seen where, in coordination, *sì* appears in between the focused phrase and the coordinator. This is highly unusual because it is not a position that is compatible with any adverbs or preverbal markers that Yorùbá otherwise exhibits. This clearly points to *sì* being different from all the other markers that appear in between the verb and the subject.

(19)　　[aṣọ　　ni mo rà　], [bàtà **sì**　 ni Olá rà　].
　　　　　clothes FOC I　buy　　shoes CONJ FOC Ola buy
　　　　　'I bought CLOTHES and Ola bought SHOES.'

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As shown in (20), this position cannot be occupied by adverbs. This shows straightforwardly that the distribution of *sì* does not match that of an adverb.

(20) *aṣọ   tun/jàjà/mà   ni   mo rà
      clothes again/finally/in.fact FOC I   buy
      'I bought CLOTHES again/finally/in.fact'

The second argument against the treatment of *sì* as an adverb involves more complex configurations in adverbial clauses and concerns its scopal behavior in such constructions. Again, I have repeated the crucial example below. The example in (21) shows the coordination of two clauses both of which start with a conditional clause. The element *sì* does not show up between the auxiliary and the lexical verb of the main clause of the second conjunct but rather inside of the conditional clause. As we have seen, the expected position of *sì* inside the matrix clause of the second conjunct is actually much dispreferred.

(21) [[Tí   òrùn ba ran   ], Ade yóò lọ sí Èkó] [[tí   òjò ba **sì**   rò
         COMP sun   may shine,   Ade will go to Lagos   COMP rain may CONJ fall
      ], Olú yóò lọ sí Ìbàdàn].
         Olú will go to Ibàdàn
      'If the sun is shining, Ade will go to Lagos and if it rains, Olú will go to
      Ìbàdàn.'

Despite its linear position, of course, *sì* expresses a coordination between the two main clauses. In other words, even though *sì* is linearly located inside the adverbial clause, its meaning contribution affects the two main clauses. In that sense, *sì* behaves completely different from other adverbs, whose scope is always unambiguously clause-bound. Consider the configuration in (22) where the clause-initial adverbial clause contains an adverb in the very same position as *sì* above. Crucially, the adverb *tun* ('again') takes scope inside the embedded clause. The sentence can only mean *'If it rains again, Olú will go to Ibàdàn.'*, not *'If it rains, Olú will go to Ibàdàn again.'*.

(22) [[tí   òjò ba tun rò], Olú yóò lọ sí Ìbàdàn].
      COMP rain may again fall   Olú will go to Ibàdàn
      'If it rains again, Olú will go to Ibàdàn.'

This clearly shows that in terms of its general properties, *sì* behaves completely differently from other adverbs.

So, for now, we have seen quite clearly, that equating *sì* with other adverbs or other preverbal elements in Yorùbá does not help describe its grammatical properties.

The next argument pointing to the conclusion that *sì* simply expresses coordinate semantics and no notion of consecutivity comes from Abimbola (2017). As noted above, Awobuluyi (1977) and Ilori (2010) both assume that *sì* is a consecutive adverb that corresponds to English *then* rather to a coordinator. And even though this explanation is reasonable for many of the examples above, it is not hard to come up with examples that employ *sì* but do not have a consecutive semantics. Consider the following example taken from Abimbola (2017). Here, the two conjuncts are not in a consecutive relation; rather they express two states that both hold simultaneously. A consecutive adverb like English *then* is arguably not felicitous in such contexts.

(23) [Ó pupa] [ó **sì**   lẹ́wà   ]
        he fair   he CONJ beautiful
      'He is fair and he is beautiful'   Abimbola (2017), gloss adapted

This seems to point to the conclusion that *sì* has nothing to do with consecutivity per se and can be used in all contexts in which English *and* can be used. In other words, the consecutive readings of coordination are simply pragmatically inferred in some cases (as they are in English).

The next argument is for the conclusion that *sì* is a coordinator with a somewhat unusual distribution is that, its use incompatible with its non-shifted counterparts *àmọ́* and *ṣùgbọ́n*. We can see that in the examples below. These examples feel very redundant and cumbersome.

(24)   [Adé ra   àpò] ṣùgbọ́n [Olú kò   (*?**sì**) mọ̀   ].
        Ade buy bag   but   Olu NEG CONJ know
       'Ade bought a bag but Olu did not know.'

(25)   [Adé ra   àpò] àmọ́ [Olú kò   (*?**sì**) mọ̀   ].
        Ade buy bag   but   Olu NEG CONJ know
       'Ade bought a bag but Olu did not know.'

Such behavior would be very unexpected if *sì* were really an adverb because we do not expect an adverb to depend on the presence or absence of a clausal coordinator. In English for example, a consecutive adverb can easily co-occur with an adversative conjunction ('*John went to bed early but then he still woke up too late*'). In fact, we would like to submit that this piece of data strongly suggests not only that *sì* is not an adverb but rather that *sì* should be treated as a proper coordinator.

   Based on these reasons, I would like to conclude that an analysis of *sì* as an adverb is on the wrong track. Rather, everything points to *sì* being a proper conjunction for all syntactic and semantic purposes. The only thing that is surprising is that it has an unusual distribution.

4.1.3. The placement pattern of Yorùbá *sì*

In this subsection, I will try to convince the reader that in light of the three more complex configurations (adverbial clauses, relative clauses and focus constructions), it is the most adequate description to assume that the placement pattern is not governed by syntactic criteria but rather by prosodic ones.

   To explain the distribution of *sì* in simple clauses, we saw that Ilori (2010)'s assessment of *sì* being an adverb that attaches to some yet to be defined verb phrase might actually work. However, for the three more complex configurations, it arguably did not.

   What these three unexpected configurations have in common is that they all have more elements to the left of the *sì*'s expected position (schematized in (12)), be it a conditional clause, a relative clause or a focus phrase. As a result, *sì* appears in a

position that is to the left of its expected position.

In the light of these data, Aremu & Weisser (2024) argue that the correct general-ization for the placement of *sì* should be formulated in reference to the left edge of the second conjunct. Thus, they suggest that the empirically correct generalization is the following:

(26) *sì* appears linearly after the first prosodic phrase of the second conjunct.

Let us look at some configurations to see what the predicted phonological phrasing would be. In simplex clauses, this will simply amount to the position schematized in (12) because the prosodic phrase preceding *sì* will comprise the subject plus gram-matical markers indicating tense, negation and modals.[3,4]

(27) ... { Ọlá ò   bá   }$_\varphi$ **sì**   { lọ }$_\varphi$
      ...   Ola should have   CONJ go
      '...and Ola should have gone.'

Similarly, the more complex constructions can receive a similar explanation. As for clause-initial conditional clauses, we can assume that they are prosodically inte-grated and their prosodic phrasing is therefore accessible for *sì*-placement. Again the pattern is the same, *sì* will simply attach right after the first prosodic phrase, which again comprises the subject and potential tense markers, negation or modals.

(28) { tí   òjò ba   }$_\varphi$ **sì**   { rọ̀ }$_\varphi$ { Olú yóò }$_\varphi$ { lọ sí Ìbàdàn }$_\varphi$
      COMP rain may   CONJ fall   Olú will   go to Ibàdàn
      '...and if it rains, Olú will go to Ibàdàn.'

With relative clauses, we do see a similar effect as with the adverbial clauses in that the linear order simply trumps the syntactic embedding and again, the coordinator

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[3]Similarly, a clause-initial subordinator/complementizer, if present, will be incorporated into the prosodic phrase of the subject.

[4]In what follows, I will represent prosodic constituents with curly brackets and prosodic phrases with the symbol φ.

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will attach after the first prosodic phrase.

(29)　…{ obìnrin tí　Adé }$_\varphi$ **sì** 　{ ri 　ní anà 　　}$_\varphi$ { ti 　ra 　bàtà }$_\varphi$
　　　　woman that Ade　CONJ　saw at yesterday　　PERF buy shoes
　　　'…and the woman who Adé saw yesterday has bought shoes'

The final pattern that we need to take a look at are the focus constructions. We saw that with focus, the coordinator does not appear in its expected position in the clausal middle field but rather in between the focused XP and the focus marker. This is due to the fact that focused XPs are prosodically prominent because they receive their own prosodic phrase. This explains why they serve as a host for the coordinator *sì*:

(30)　…{ bàtà 　}$_\varphi$ **sì** 　{ ni 　Olá }$_\varphi$ { rà 　}$_\varphi$
　　　　shoes　　CONJ　FOC Ola 　buy
　　　'…and Ola bought SHOES.'

The assumption that focused XPs receive their own prosodic phrase finds support in the actual form of pronouns when they appear in that focused position. Yorùbá, like many other languages, employs two sets of pronouns, bound clitic-like forms and independent strong pronouns. Akinlabi & Liberman (2001) argue that the short forms are phonologically deficient and need to attach to a phonological host. But given that a focused phrase receives its own prosodic domain, there is arguably nothing to cliticize to and thus, weak pronouns cannot appear in that positions. This is shown in (31). In (31a), the short form of the first singular pronoun *mo* is ungrammatical in focused position, instead the long form *èmi* must be used. The same holds for (31b) for second singular. The short form *o* is not possible in focused position; rather the long form *iwọ* is needed.

(31)　a.　Èmi/*Mo ni 　mo/ó 　　ra 　ìwé.
　　　　　1SG　　　FOC 1SG/HTS buy book
　　　　　'It is I who bought the book.'

b. Iwọ/*O ni o/ó   ra ìwé.
    1SG   FOC 2SG/HTS buy book
    'It is you who bought the book.'

In addition, the assumptions about prosodic phrasing in Yorùbá can be backed up with a number of arguments from independent phonological processes in the language. Aremu & Weisser (2024) closely look at morphophonological processes that are typically used as indicative of phonological phrasing. The processes the investigate are phonological fusion, phonologically and morphologically conditioned allomorphy, assimilation, tone spreading and tone dissimilation and the processes indicate that the language indeed groups the elements prosodically speaking in exactly the two phrases predicted by our placement rule for *sì*. We will briefly illustrate two such phenomena.

The first of these phenomena we can call fusion, coalescence or portmenteau formation. Yorùbá exhibits a range of configurations where two adjacent elements fuse or coalesce to produce phonologically more or less predictably portmanteau morphemes. The first configuration involves cases between verbs and objects (see Akinlabi & Liberman 2001). In (32), for example, we see that the vowel-final verb coalesces with the vowel-initial object.

(32)   a.   wá   + ẹ́kọ́   → wẹ́kǒ
           look.for   education   'look for education'

       b.   wá   + ọ̀nọ̀ → wọ́nọ̀
           look.for   way   'look for a way'

                                                   Akinlabi & Liberman (2001))

The next, possibly more surprising configuration involves question markers or complementizers and subject pronouns. Having a third person singular pronoun will lead to fusion of the two elements.

(33)   a.   àbí + ó   + wá   → àbó wá
           Q   3SG   come   'did he come?'

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    b.   ... wípé + ó   + wá   → wípó wá
          ... C   3SG   come   'that he came'

Similarly, and possibly even more surprising, the focus marker *ni* will fuse with a second person singular subject *o* to result in the phonologically unpredictable form *lo*.

(34)   a. kí   lo   rà?   (35)   a. ni + o   → lo
          what FOC.2SG buy   FOC + 2SG
          'What did you buy?'   Bisang & Sonaiya (2000,

                                                           179,196)

Finally, we can also see that the subject can fuse with something following it, namely negation. In (36), we see tha the subject does not fuse in the second person singular with negation but in the third person singular it does (37).

(36)   a. O lọ   (37)   a. Ó lọ
          2SG go   3SG go
          'You go'   'S/he goes'

    b. O ò lọ   b. kò   lọ
          2SG NEG go   3SG.NEG go
          'You don't go'   'S/he doesn't go'

              Oshodi (2018, 3)   Oshodi (2018, 3)

    Another process briefly discussed by Ilori (2010) is assimilation, which shows that negation can also be affected by elements following it. Negation changes from *kò* to *kì* when preceding the habitual modal *í*.

(38)   a. Akin kò   (/*kì) lọ.
          Akin NEG NEG go.
          'Akin did not go.'

    b. Akin kì   (/*kò) í   lọ.
          Akin NEG NEG HAB go.
          'Akin habitually does not go.'   Ilori (2010, 235)

The following illustration in (39) taken from Aremu & Weisser (2024) summarizes the processes and the configurations they apply in.

(39)
$$\{\,\text{FocXP}\,\} \prec \{\,\text{Comp/Foc} \prec \text{Subj} \prec \text{Tense} \prec \text{Neg} \prec \text{Modal}\,\} \prec \{\,\text{Perf} \prec \text{V} \prec \text{O}\,\}$$

with the overbraces (top): Fusion / Assimil. over Comp/Foc–Subj; Spread. over Subj–Tense; Assimil. over Neg–Modal; Fusion / Dissim. over Perf–V–O; and underbrace (bottom): Fusion / Allom. over Subj–Tense–Neg.

We see that the preverbal particles such as question markers, complementizers and the focus marker *ni* shows a morphophonological interdependence with the subject position. The subject position is also closely related to the tense position and the position of negation as it shows allomorphy, fusion and instances of tone spreading with these positions. Negation in turn is dependent on the presence or absence of the habitual modal *í*. Finally, the verb and the object position are closely related. They are fused in some cases and also, we see the application of the tonal dissimilation deleting the tone of the object depending on the tone of the verb. All in all, we see a lot of interdependencies between various elements in the clause but crucially for the claims put forward in this section, we do not see any interdependencies across the prosodic boundaries we assumed for the purposes of *sì*-placement. There is no interdependency between the subject and the verb or between negation or a modal and the perfect marker or the verb. Recall also from the examples in (31) that the obligatory choice of the strong pronoun forms in focus position indicated that the focused phrase was indeed prosodified on its own, as also predicted by (39).

What I would therefore like to conclude based on these findings is that an analysis in terms of prosodic phrasing not only straightforwardly derives the distribution of *sì* including its somewhat unusual behavior with clause-initial adverbial clauses, relative clauses and focus constructions but also that it fits nicely with general accounts of the independent morphophonological processes above, which can be taken as evidence that the prosodic phrasing I assumed for Yorùbá is very plausible.

So, to summarize, building on the elaborate case study in Aremu & Weisser (2024),

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I argued here that the placement pattern of Yorùbá *sì* is best accounted for if we assume that it is sensitive to prosodic phrasing. To be more concrete, we have assumed that *sì* is located immediately after the first prosodic phrase of its second conjunct. Parallel to the case studies in the lase chapter, we can illustrate the pattern abstractly as follows, where A and B are the conjuncts and φ indicates a prosodic phrase.

(40) $[\dots]_A \prec [\varphi \prec \textbf{\textit{sì}} \prec \dots]_B$

In the following section, I will take a look at the adversative coordinator *aber* in German, arguing that, on an abstract level, it has the same distribution.

4.2. German

The standard German adversative coordinator that we will take a closer look at in this section is *aber*, which corresponds in almost every way to English *but*.[5] It is used in what Malchukov (2004) calls contrastive uses (a notion also known as *semantic opposition*) as well as mirative (unexpectedness) uses (for different notions of adversativity see Lakoff (1971); Lang (1984); Blakemore (1989) and many others). The example in (41a) illustrates a typical contrastive use, where both conjuncts contain a contrastive topic (see Büring 1997, 2014). The examples in (41b) and (41c) illustrate the use of *aber* in a mirativity/unexpectedness context. Here, *aber* expresses some sort of denial of a expectation that can be drawn from the first conjunct.

(41) a. [Sie ist im   Wohnzimmer], **aber** [er ist in der Küche].
          she is in.the living.room   but   he is in the kitchen
          'She is in the living room but he is in the kitchen.'

      b. Dieses Mädchen kann [gut werfen]   **aber** [schlecht fangen].
          This   girl   can well throw.INF but   badly   catch.INF
          'This girl throws well but catches badly.'

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[5]The case study about German features in the discussion in Weisser (2020a) and is discussed in
   much more detail in Weisser (2019b).

    c.   Dieses Mädchen ist [sehr groß] **aber** [schlecht im Basketball].
           this   girl   is very tall but bad   at basketball
           'This girl is very tall but bad at basketball.'

Like English *but*, *aber* can coordinate various syntactic categories such as clauses (41a) or verb phrases (41b) and adjective (phrases) (41c), which are certainly the most frequent uses but it occasionally also conjoins nominal phrases. [6]

(43)   Drei   Kardiologen aber nur ein Neurochirurg werden bei der OP
        Three cardiologists but   only one neurosurgeon will   at   the operation
        anwesend sein.
        present   be.
        'Three cardiologists but only one neurosurgeon will be present at the operation.'

                                              cf. Vicente (2010)

The one major difference between English *but* and German *aber* is that the latter can optionally shift into various positions inside the second conjunct.[7] This peculiar behavior of *aber* has been known since Ross (1967) who gives the following minimal pair in (44). Ross does not explore the behavior of *aber* in any more detail or provide an analysis for it but rather simply takes it as evidence that the coordinator forms a constituent together with the second conjunct to the exclusion of the first one.

(44)   a.   [Sie will   tanzen], **aber** [ich will   nach hause gehen].
            she wants dance   but I   want to   home go

---

[6] Unlike English *but*, *aber* cannot be used for correctives, which in German are formed using *sondern*.

    (42)   Amanda hat keinen Apfel gegessen sondern/*aber eine Banane
           Amanda has no   apple eaten but   a   banana
                                      cf. Vicente (2010)

[7] German has some other adversative conjunctions which are less frequent and perceived as somewhat archaic and which pattern to a large extent with *aber* in terms of their empirical distribution. One of these is *jedoch* which shifts into the second conjunct in very much the same way as *aber*, except that it shifting is obligatory for *jedoch* but optional for *aber*. The behavior of *jedoch* again interestingly contrasts with the minimally different *doch* which *cannot* shift into the second conjunct. For examples, see the second part of this book where I discuss what exactly triggers the shifting.

b.   [Sie will   tanzen], [ich will   **aber** nach hause gehen].
     she wants dance   I   want but to   home go
     'She wants to dance but I want to go home'   (Ross, 1967, 163)

We can even add another example to this minimal pair showing that, in some contexts it is even possible to have *aber* in between the preverbal constituent and the verb, namely when the pronoun in preverbal constituent is stressed (cf. Pasch et al. (2009))

(45)   [Sie will   tanzen], [ICH **aber** will   nach hause gehen].
        she wants dance   I   but want to   home go
        'She wants to dance but I want to go home'

However, even though the facts have been known for quite a while, to my knowledge, people have addressed this pattern only very recently (see Sæbø 2003; Pasch et al. 2009; Büring & Hartmann 2015; Ferraresi 2018; Breitbarth 2019) coming to different conclusions. Sæbø (2003) calls *aber* a topic particle while Pasch et al. (2009) and Ferraresi (2018) call it an adverbial particle. Breitbarth (2019) assumes it to be an adverbial marker of certain topics. Büring & Hartmann (2015) discuss the behavior of clause-internal *aber* and arrive at the conclusion that it, syntactically speaking, belongs to the class of "particles" but semantically speaking, it is a coordinator.

In the following subsection, I will address these comments in turn and present five arguments that *aber* is in fact a proper coordinator which checks all the boxes for coordinator diagnostics that we have. Its only peculiarity is its somewhat unusual placement.

4.2.1. German *aber* is a coordinator

The first thing to note is that joined clauses involving *aber* are uncontroversially coordinate, regardless of whether *aber* occurs clause-externally (i.e. in between the conjuncts) or clause-internally (i.e. inside the second conjunct). The conjuncts are

morphosyntactically symmetric (see e.g. (45)), the construction allows for symmetric (ATB-)movement but disallows asymmetric movement out of only one of the conjuncts. This is shown in (46). The example in (46a) illustrates parallel, symmetric extraction of the direct object out of both conjuncts. This is grammatical. But asymmetric extraction out of the first conjunct (46b) or the second conjunct (46c), is in both cases out.

(46) a. Was hat sie [ihm gekauft] (**aber**) [in der Bahn (**aber**) vergessen]?
        what has she him bought   but   in the train but   forgotten
        'What did she buy for him but forget on the train?

    b. *Was hat sie [ihm gekauft] (**aber**) [in der Bahn (**aber**) Zeitung
        what has she him bought   but   in the train but   newspaper
        gelesen]?
        read
        *'What has she bought him but read a newspaper on the train?'

    c. *Was hat sie [ihm ein Buch gekauft] (**aber**) [in der Bahn (**aber**)
        what has she him a   book bought   but   in the train but
        gelesen]?
        read
        *'What has she bought a book but read on the train?'

Similarly, we note that like coordinate constructions in German but unlike subordinate constructions, examples like (45) never allow for center-embedding. This is shown in (47a), which is a grammatical center-embedding construction with a subordinate clause but (47b) shows that this is not possible with a prototypical coordinate construction involving *und* ('and'). Finally, (48) shows that clauses involving *aber* also do not allow for center-embedding.

(47) a. Ich wollte ihn, obwohl   er schlief, anrufen.
        I   wanted him although he slept   call
        'I wanted to call him even though he slept.'   subordination

    b. *Ich wollte ihn und er schlief, anrufen.
        I   wanted him and he slept   call

                                                                coordination

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(48) *Ich wollte   ihn er (aber) schlief, anrufen.
        I   wanted him he but   slept   call

We could go through all the tests and diagnostics listed in Chapter 2 and construc-
tions involving *aber* would always pattern with the coordinate constructions. This
is uncontroversial. What is not uncontroversial however is whether clause-internal
aber is in fact the conjunction in these cases or whether it is just some sort of ad-
verb or modal particle that is pragmatically licensed in adversative contexts. In other
words, it could be that the clauses are simply juxtaposed without any coordinator
and that the instance of *aber* inside the second conjunct is an adverb or a modal
particle. And it should be noted that German can in principle juxtapose full finite
clauses even though in these cases, it is typically not clear whether the clauses are
somehow connected or whether they then are completely independent of each other.

However, if we look at this in a little bit more detail, then we can come up with
quite a number of reasons why an analysis involving juxtaposition (no overt coordi-
nator) and *aber* as some kind of adverb or modal particle is not an adequate anal-
ysis. First, we note that just in terms of empirical distribution, clause-internal *aber*
patterns completely differently from other adverbs or modal particles in German.

It is a well-known fact about German that it allows exactly one constituent in
the preverbal position. This element can be an adverb as shown with the adverb
wahrscheinlich ('probably') in (49). Modal particles such as *wohl* (roughly also 'prob-
ably') are restricted to the postverbal position (50a) and are impossible in preverbal
position (50b).

(49) Wahrscheinlich ist der   süß.
        Probably   is DEM.MASC sweet
        'It is probably sweet.'

(50) a. Der   ist wohl süß.
            DEM.MASC is PART sweet
            'It is sweet, I assume.'

b. *Wohl   ist der   süß.
     MOD.PART is DEM.MASC sweet

The distribution of clause-internal *aber* matches neither of these patterns. *aber* can occur in preverbal position but not alone by itself. It always accompanies another constituent.

(51)   [Sie will   tanzen], [ich **aber** will   nach hause].
        She wants to.dance I   but want to   home
        'She wants to dance but I want to go home.'

Examples of this sort are completely impossible with adverbs or modal particles.

(52)   a. *Du wahrscheinlich willst nach hause.
          you probably   want to   home
          'You probably want to go home.'

       b. *Du wohl   willst nach hause.
          You MOD.PART want to   home
          'You want to go home, I assume.'

However, in a sense, we already see that even clause-internal *aber* here patterns with regular German coordinators such as *und* ('and') as coordinators also do not count as a preverbal constituent. They also precede the verb together with another constituent.[8]

(54)   Sie will   tanzen und ich will   nach hause.
        She wants to.dance and I   want to   home
        'She wants to dance and I want to go home.'

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[8]Note however that *und* as well as *aber* can also coordinate constituents that exclude the preverbal constituent such as (53).

(53)   Sie will   noch bleiben und muss nach hause.
        She wants yet   stay   and must to   home
        'She wants to stay and must go home.'

Of course though, the assumption here is that *und* does not occupy the preverbal position. Rather there is no preverbal position since the preverbal position occupied by the common subject *sie* is shared by both conjuncts.

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So even if we assumed that examples with clause-internal *aber* involve juxtaposition, we would need to say something extra about the distributional pattern of *aber*. It neither patterns with adverbs nor with modal particles. So, we would presumably have to say that it is entirely different syntactic category. Sæbø (2003) is willing to take this step and assumes that clause-internal *aber* is some sort of topic particle, a category which is not otherwise attested in German. This assumption is argued to account for the fact that clause-internal *aber* is prone to appear after clause-internal topics but as can easily be shown that this is not the driving force that places *aber* inside a certain position. Frey (2004) discusses topics in German in quite some detail and amongst his diagnostics is that high sentential adverbs such as *leider* or *unglücklicherweise* (both 'unfortunately') cannot be topics in German and as can be shown quite simply, *aber* can follow these elements.

(55) [Ich will   noch bleiben], [leider   **aber** muss ich morgen   früh
       I   want yet   stay   unfortunately but   must I   tomorrow early
       raus].
       out
       'I want to still stay but unfortunately, I've got to get up early tomorrow.'

I will come back to the connection between topics and the placement of *aber* below but for now, I would like to argue that the claim that *aber* is a topic marker or something like that cannot be maintained.

However, apart from that, there are a number of strong arguments that *aber* is in fact a coordinator regardless of its position. If we apply the diagnostics listed in Chapter 2, we will see that it patterns with the other coordinators in almost every respect. First, we note that clause-internal *aber* cannot co-occur with prototypical coordinators such as *und* (or even clause-external *aber*). In Chapter 2, we noted that the complementary distribution of an element with a prototypical coordinator counts as a diagnostic for the coordinator status of that element (see Büring & Hartmann (2015) for the same observation).[9]

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[9]In a footnote, Zhang (2007) claims that there are examples in which *und* and *aber* co-occur. And

(56) Sie will   nach hause (*und/*aber) ich will **aber**   noch bleiben.
      She wants to   home and/but   I   but wants still   stay
      'She wants to go home but I still want to stay.'

It would be very unusual to say that a modal particle or an adverb is in complementary distribution with a coordinator such as *und*.

Secondly, we saw in Chapter 2 that the limited distribution of juxtaposition often gives a clue about whether a given element counts as a diagnostic or not. Even if we assumed that German can juxtapose finite clauses without overt coordinator, then we would quickly note that German cannot do the same with embedded clauses (finite or non-finite) or VPs. None of these categories can be juxtaposed without overt coordinator. But these categories can occur with conjunct-internal *aber*.

(57) a. *?[Sie versuchte das Artefakt zu stehlen], [die Alarmanlage nicht
          she tried   the artifact to steal,   the alarm.system not
          auszulösen].
          trigger
          'She tried to steal the artifact (and) not to trigger the alarm.'

      b. [Sie versuchte das Artefakt zu stehlen], [die Alarmanlage **aber** nicht
         she tried   the artifact to steal,   the alarm.system but   not
         auszulösen].
         trigger
         'She tried to steal the artifact but not to trigger the alarm.'

What this means is that, even if we assumed that *aber* were a special kind of adverb-like element with a peculiar distribution, we would also have to make some additional statements about the availability of juxtaposition (or a covert coordinator) in the presence of that element. I take this to be implausible.

Thirdly we find that clause-internal *aber* licenses coordination-specific processes such as Right Node Raising and ATB-movemement. In (58), we see an example in-

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while it is true that, in some corpora, sometimes *und* and *aber* co-occur but this happens almost exclusively when the distance between the two elements is very far as the preverbal constituent contains a relative clause or something. This suggests as well that this is rather a production error than an actual fact about German grammar. In light of these observations, I want to conclude with Büring & Hartmann (2015) that *aber* cannot co-occur with *und*.

volving ATB-movement of the direct object out of both conjuncts. In this example, *aber* occurs deeply embedded inside the second conjunct but, importantly, it still required for the grammaticality. We need *aber* to be present. It does not matter whether *aber* occurs in between the conjuncts or inside the second one but we need it nonetheless in order to license symmetrical ATB-movement. The same holds for Right Node Raising in (59). Here, I have conjoined two verb-final embedded clauses with the clause-final verb shared by both conjuncts. This kind of sharing is only possible in coordination and it is only possible with an overt coordinator present. Crucially, *aber* can license Right Node Raising in (59) even in clause-internal position. Again, Right Node Raising becomes ungrammatical without having *aber* in this configuration.

(58)   Was hat [sich Remi gewünscht] [seine Eltern   ihm *(**aber**) nicht gekauft]?
        What has REFL Remi wished   his   parents him but   not   bought
        'What did Remi wish for but his parents didn't buy?'   German, ATB

(59)   ...dass Remi [Geld   gespart], [sich das Lego-Set *(**aber**) nicht gekauft] hat.
        ...that Remi money saved   but self the   lego.set not   bought   has
        'that Remi has saved up money but still hasn't bought himself the lego set.'

                                                                     German, RNR

Licensing of coordination-specific processes was one of the stronger diagnostics for the coordinator status of a given element as discussed in Chapter 2. It is entirely plausible to assume that a coordinator licenses ATB-movement or Right Node Raising but it would be very unexpected to assume that an adverb, a modal particle or a topic particle would be required to be present for ATB-movement or Right Node Raising to be possible.

    All of these arguments strongly suggest that *aber* is a coordinator even if it occurs inside the second conjunct. All of the alternative explanations above fail to account for the placement of *aber* and face many additional problems.

    Finally, another argument that already leads up to the next section shows that

the placement of *aber* is not that of adverbs or modal particles because *aber* ignores syntactic constituency and islandhood. The argumentation is parallel to the example involving conditional clauses in Yorùbá in the previous section. If the second conjunct of *aber* starts with an adverbial clause, the coordinator can freely shift into that adverbial clause. Consider the example in (60), a syntactic island configurations. Here, the first conjunct is given without gloss and the bracket indicate the clause-initial adverbial clause rather than the conjunct.

(60)   Tom will noch bleiben... ('Tom wants to stay...')
        ... [weil   sie **aber** früh raus muss] will   Pia nach hause
           because she but   early out   must   wants Pia to   home
        '...but because she has to get up early, Pia wants to go home.'

The contrast expressed by *aber* here is between Tom wanting to stay and Pia wanting to go home. The adjunct in question simply gives a reason why Pia wants to go home. Despite the fact that *aber* is located inside a strong adjunct, it expresses a contrast between the two matrix clauses. Adverbs and modal particles are never able to take scope outside of a strong island and this shows that *aber* has different scopal properties from adverbs or modal particles.

   Building on all of these arguments, I think it is plausible to assume that *aber* is in fact a proper coordinator even when it is located in a position inside the second conjunct.

4.2.2. German *aber* is sensitive to phonological phrasing

In the previous section, I have argued at length that German *aber* is in fact a coordinator despite its unusual surface position. It is in complementary distribution with other coordinators, it licenses coordination of categories that cannot be juxtaposed and it licenses coordination-specific processes ATB-movement or Right Node Raising. Also, we saw that alternative explanations for its clause-internal position such as it being an adverb or a modal particle are not tenable.

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In this section, I want to show that, unlike the placement of adverbs for example, the placement of *aber* is not sensitive to syntactic constituency at all. Rather, it is only sensitive to phonological phrasing. There are two types arguments to this claim. The first one is the one we have already gotten a glimpse of, namely that syntactic constituency does not predict the placement properties of *aber* at all. As we will see, *aber* ignores essentially all established syntactic islands we have in German, including ones such as adjunct islands and coordination islands, which, otherwise in German, are to my knowledge exceptionless. The other kind of argument is that we can see that it is phonological phrasing rather than syntactic constituency that determines the placement of *aber* because the prosodic strength of pronominal elements determines whether *aber* can follow them or not. We can show that prosodically weak and prosodically strong pronouns behave alike for syntactic purposes in German and only differ in prosodic strength. But crucially, the placement of *aber* is sensitive to this difference and hence, so the argument, the placement of *aber* is prosodically determined.

So, let us start with the argument that *aber* can occur inside various syntactic constituents, even those that are usually claimed to be syntactic islands in German. In (60) above, we saw that if the preverbal constituent in German is an adjunct clause, the coordinator can freely float into that clause. We can mimic a similar configuration with relative clauses. If the preverbal constituent consists of a head noun and a relative clause, then we can find cases, where *aber* floats in between the head noun and the relative clause (61a). However, this is not the only possible pattern. With a slightly different prosodic grouping, we can even have *aber* occur inside the relative clause.

(61) a. Remi will jemanden über Dinos ausfragen ... ('Remi wants to ask someone about dinosaurs')...

    ... [Rainer **aber**, der sich damit auskennt, ist beschäftigt]
    ... Rainer but who self with.it know is busy

    '... but Rainer who knows about it is busy.'

  b. Remi will jemanden über Dinos ausfragen... ('Remi wants to ask someone about dinosaurs')...

    ... [jeder, der sich **aber** damit auskennt, ist beschäftigt]
    ... everyone who self but with.it know is busy

    '... but everyone who knows about it is busy.'

Note that the two patterns come with a slightly different prosodic grouping. In (61a), we have a longer break in between the head noun and the relative clause whereas in (61b) the head noun appears to be grouped in one prosodic domain with the relative pronoun *der* and the reflexive pronoun *sich*. In the example in (61), this difference is facilitated by the difference between a restrictive vs non-restrictive reading of the relative clause as the latter typically are less prosodically integrated.[10]

As noted above, the mere fact that *aber* despite coordinating two full clauses can appear deeply embedded inside strong syntactic islands inside the second conjunct indicates that its placement is not about syntactic structure. Rather it is about prosodic grouping. In particular, it seems that whenever the preverbal constituent is -prosodically speaking - big enough, *aber* freely shifts into it regardless of its syntactic status.

The second piece of evidence in favor of a prosodic analysis comes from the difference between and weak (non-contrastive) pronouns and other material. Syntactically, weak pronouns in German and other nominal phrases do not differ syntactically.

Nonetheless pronouns and full noun phrases behave differently when it comes to

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[10]It should be noted that we do not find a perfect correlation between the two types of relative clauses. We can find examples where *aber* shifts into a non-restrictive relative clause and examples where it remains outside of a restrictive one. I take this to be an indicator that there is a certain amount of flexibility in prosodic grouping here.

the placement of *aber*. Consider the examples in (62) which show that postverbal weak pronouns have to precede *aber* if *aber* is postverbal. Crucially, *aber* cannot be put in between the verb and any weak pronouns following it. Importantly, full noun phrases as in (62d) can appear in between the verb and *aber*.

(62) a. [Der Ball kam zu Cristiano Ronaldo] [aus irgendeinem Grund schoss
     The ball came to Cristiano Ronaldo for some   reason hit
     er ihn **aber** daneben].
     he it but next.to.it
     'The ball came to Cristiano Ronaldo but, for some reason, he missed.'

    b. [Der Ball kam zu Cristiano Ronaldo] [aus irgendeinem Grund schoss
     The ball came to Cristiano Ronaldo for some   reason hit
     (*aber) er (*aber) ihn (aber) daneben].
     but he but it but next.to.it
     'The ball came to Cristiano Ronaldo but, for some reason, he missed.'

    c. [Cristiano Ronaldo lief allein aufs Tor zu] [aus irgendeinem
     Cristiano Ronaldo went alone onto.the goal to for some
     Grund schoss (*aber) er (aber) den Ball (aber) daneben].
     reason hit but he but it but next.to.it
     'Cristiano was all alone in front of the goal but, for some reason, he missed.'

What this shows is that the weak pronouns which phonologically cliticize to the verb, cannot be interrupted by *aber*. In other words, *aber* attaches to the phonological phrase including the verb plus any weak pronoun rather than to syntactic heads or phrases.

  Thus, what we have seen in this subsection is that the placement of German *aber* ignores syntactic islands and, to some extent constituency and (b) it seems to be sensitive to phonological weight and phrasing. In the next subsection, I will sketch a more accurate picture of how we can explain the pattern of *aber* placement.

4.2.3. A placement rule for German *aber*

In this section, I will, similarly to the discussion above in Yorùbá argue that the actual generalization governing the distribution is the following:

(63)   Shifted *aber* appears linearly after the first prosodic phrase of the second conjunct.

The first thing to note is that this rule immediately derives the placement of *aber* with respect to the differences between weak and strong pronouns. The straightforward prosodic phrasing for such cases is given in (64) and (65).

(64)   ... $\{$ ICH $\}_\varphi$ **aber** $\{$ will $\}_\varphi$ $\{$ nach hause gehen $\}_\varphi$
           ...   ME   but   want   to   home go
           'but I (as opposed to someone else) want to go home.'

(65)   ... $\{$ ich will $\}_\varphi$ **aber** $\{$ nach hause gehen $\}_\varphi$
           ...   I   want   but   to   home go
           'but I want to go home.'

The same goes for the fact that *aber* cannot intervene between the verb in second position and weak pronouns following it. Since these pronouns obligatorily form a prosodic phrase with the verb, the rule in (63) predicts that *aber* can only attach to the right of the verb+pronoun cluster.

(66)   ... $\{$ ich will   es ihm $\}_\varphi$ **aber** $\{$ noch zeigen $\}_\varphi$
           ...   I   want it him   but   still show
           'but I still want to show it to him.'

As also predicted by the rule, the pattern is different with full noun phrases in the same position as the weak pronouns above. Since they can receive their own prosodic phrases, the pattern is such that *aber* can appear in between the verb and the postverbal full noun phrase.

(67) ... { ich will   es }$_\varphi$ **aber** { dem   Peter }$_\varphi$ { noch zeigen }$_\varphi$
     ... I   want it   but   the.DAT Peter   still   show
     'but I still want to show it to Peter.'

Finally I want to note that the rule in (63) also predicts the more complicated configurations with adverbial clauses or relative clauses in the prefield. As argued for German, adverbial clauses that are located in the prefield and relative clauses can be prosodically intergrated (see amongst many others König & van der Auwera 1988; Truckenbrodt 2002, 2005; Holler 2008; Frey 2011; Frey & Truckenbrodt 2015; Féry 2017) and as such we expect them to be accessible for shifting of *aber*, in line with the facts.

(68) ... { weil   sie }$_\varphi$ **aber** { morgen   früh raus muss }$_\varphi$ { will   sie nach
     ... because she   but   tomorrow early out must   wants she to
     hause }$_\varphi$
     home
     'but because she has to get up early tomorrow, she wants to go home.'

(69) ... { jeder   der sich }$_\varphi$ **aber** { damit auskennt }$_\varphi$ { ist beschäftigt }$_\varphi$
     ... everybody who REFL   but   with.it knows   is busy
     'but everybody who knows about it is busy.'

4.2.3.1. A complication: Further patterns

So far, the patterns of German and the discussion of Yorùbá in the previous section are almost identical. We saw a coordinator that would, in simple clauses, appear in some middle-field position but which could depending on the syntactic configuration also appear in an earlier position (such as the focus examples in both languages).

We also saw that in both languages, the coordinator would freely float into adverbial clauses or relative clauses if they happen to interfere between the left edge of the clause and the expected middle-field position. And in both cases, we had good evidence that the placement of these coordinators was not sensitive to syntactic

structure but rather to prosodic constituency.

Against this background, we came up with the same generalization for the distribution of both coordinators that they both appear immediately after the first prosodic phrase of their respective second conjuncts. And while that worked out quite perfectly for Yorùbá, there are some facts about German that this distributional rule can, at least on the face of it, not explain.

As we have seen for German, quite a number of examples - in fact most of them - allow for various positions of *aber* within the second conjunct. In Yorùbá, we did not see any optionality with respect to the placement if *sì* but in German, we productively do.

We can illustrate that by expanding the original examples by adding some additional material in the German middle-field. If we have a ditransitive verb with two full NPs as object (or a configuration with various middle-field adverbs), we can get a number of different shifted positions.

(70)   Ich will nach hause... ('I want to go home')

sie will   (**aber**) Peter (**aber**) das Plakat (**aber**) noch zeigen.
she wants but   Peter   the poster but   still   show
'... but she wants to still show the poster to Peter.'

The question that arises of course is whether these examples can actually be maintained under the nice and straightforward generalization in (63) above. The answer to this is non-trivial and depends to a certain extent on one's notion of what it means to be a phonological phrase. But even in its original stages, the notion of the phonological stages was taken to be a recursive one to some extent. In their seminal work on the prosodic hierarchy, Nespor & Vogel (1986) note that prosodic phrases show clearer evidence of recursion compared to other elements on the prosodic hierarchy and they end up proposing an optional prosodic restructuring rule that joins two adjacent prosodic phrases together under a single prosodic phrase. Subsequently,

the literature has substantiated the claim that prosodic phrases must be recursive in many domains.[11]

Building on this, I want to argue in this subsection that a recursive notion of the prosodic phrase allows us to maintain the simple rule in (63) that German *aber* attaches to the first prosodic phrase and that it is thus nonetheless plausible to unify the German pattern with the one found in Yorùbá. This, I will argue, becomes especially apparent when we take a closer look at what kinds of recursive prosodic phrases German allows for and which ones it does not. Even though the claim that prosodic phrases exhibit instances of recursivity is as far as I can tell largely uncontroversial, it has been noted early on that there are limits as to where this recursivity is found.

Ghini (1993) for example shows that a certain syntactic boundaries, in particular what he calls the VP-boundary can never be crossed by prosodic restructuring.

(71)   a. $\{ \text{La} \quad \text{verita} \}_{\varphi} \{ \text{vince} \}_{\varphi}$
            The truth   wins
           'The truth wins.'

    b. $*\{ \{ \text{La} \quad \text{verita} \}_{\varphi} \{ \text{vince} \}_{\varphi} \}_{\varphi}$
            The truth   wins
           'The truth wins.'   Ghini (1993:43)

And as in the Italian examples above, we see that the recursion in the prosodic phrasing in German must be such that *aber* can never appear in or after a VP-boundary. We see that specifically when we compare the minimal pair in (72). In (72a), we have a definite specific direct object and *aber* has two available positions. In (72b), where we have a nonspecific indefinite, *aber* must precede it.

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[11]See e.g., Ladd (1992); Wagner (2005); Féry & Truckenbrodt (2005); Ishihara (2007); Féry & Schubö (2010); Myrberg (2010, 2013); Féry & Kentner (2013); Elfner (2012, 2015); Bennett et al. (2016) for overviews see Féry 2017; Bennett & Elfner 2019).

(72)   Er will nach hause... ('He wants to go home')

    a.   ... sie will   ihm (**aber**) das Plakat (**aber**) zeigen.
          ... she wants but him   the poster but   show
          '... but she wants to show the poster to him.'

    b.   ... sie will   ihm (**aber**) irgendwas (***aber**) zeigen.
          ... she wants him but   something but   show
          '... but she wants to show the poster to him.'

Negation, also usually taken to be a vP/VP-adjunct (Zeijlstra (2004)), must also precede *aber*.

(73)   Ich will nach hause... ('I want to go home')

    ... sie will   (**aber**) nicht (***aber**) gehen.
    ... she wants but   not   but   go
    '... but she doesn't want to go.'

Finally, we see that *aber* can appear after a verb in second position even if that position is then clause-final but not in its vP/VP-internal position.

(74)   Ich wollte ihn anrufen... ('I wanted to call him...')

    a.   er schlief **aber**.
          he slept   but
          'but he slept.'

    b.   er hat (**aber**) geschlafen (***aber**).
          he has but   slept   but
          'but he was sleeping.'

What this indicates that clause-finality itself is not a problem for the position of *aber* but rather that it is impossible to appear after the verb in its VP-internal position. All of this points to the fact that similar to the original facts given by Ghini (1993), prosodic phrases above the VP/vP can be recursively grouped but the ones below cannot.

    As a result, I would like to argue that apparent cases where *aber* appears after what

looks like the second or third prosodic phrase of a clause should indeed be analyzed as including recursive prosodic phrases. This is illustrated in (75).

(75) Ich will nach hause... ('I want to go home')

$\Big\{ \big\{ \text{sie will} \big\}_\varphi \big\{ \text{Peter} \big\}_\varphi \Big\}_\varphi$ **aber** $\big\{ \text{das Plakat} \big\}_\varphi \big\{ \text{noch zeigen} \big\}$.
      she wants   Peter   but   the poster   still   show

'... but she wants to still show the poster to Peter.'

And since this prosodic regrouping can be applied iteratively, we also expect several adjacent prosodic phrases to be skipped.[12]

(76) Ich will nach hause... ('I want to go home')

$\Big\{ \big\{ \text{sie will} \big\}_\varphi \big\{ \text{Peter} \big\}_\varphi \big\{ \text{das Plakat} \big\}_\varphi \Big\}_\varphi$ **aber** $\big\{ \text{noch zeigen} \big\}$.
      she wants   Peter   the poster   but   still   show

'... but she wants to still show the poster to Peter.'

Finally, we also note that this idea of prosodic regrouping also helps to explain why information-structural properties of the clause seem to have an effect on the possible placement patterns of *aber*. For example, we find that with strong contrastive topics, middle field positions of *aber* are clearly degraded.

(77) Question: Hat Sam oder Jona eingekauft? ('Did Sam or Jona buy groceries?')

Sam hat geschlafen, Jona (aber) hat (*?aber) eingekauft.
Sam has slept,   Jona but   has but   bought
'Sam slept but Jona bought groceries.'

This is expected because as a number of people have argued, contrastive topics in German receive their own intonation phrase and there is a pretty strong prosodic boundary separating them from the rest of the clause (see e.g. Féry 2017). Thus,

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[12]I am staying agnostic as to whether the prosodic structure has a requirement to be binary branching as it does not seem to affect the point here but see Myrberg (2010, 2013) for arguments that binary branching structures are preferred.

prosodic regrouping should be impossible; in line with the facts.

(78) $\left\{ \begin{array}{c} \{ \text{Jona} \}_{\varphi} \end{array} \right\}_{\iota}$ { hat } (***aber**) { eingekauft } .
   Jona   has   but   bought

Against this background, it is plausible that Sæbø (2003) calls *aber* a topic particle as it is clearly sensitive to information structure. However, I think I have shown that the properties of *aber* are better understood if this sensitivity is encoded indirectly. The position of *aber* is governed by prosodic phrasing which in turn can be sensitive to information structure.

So, to sum up the discussion of German *aber*, we have seen that clauses joined by *aber* are uncontroversially coordinate and we have seen quite a number of arguments that *aber* must be analyzed as coordinator rather than as a modal particle or an adverb.

Further, I have provided a number of arguments that indicate that the position of *aber* is not governed by syntactic constituency but rather by prosodic factors. The distributional generalization I have proposed for *aber* is, on an abstract level the same as the one we saw for Yorùbá above. I have proposed that *aber* optionally attaches to the first prosodic phrase of the second conjunct.

(79) $[\ldots]_A \; \prec \; [\varphi \prec \textbf{aber} \prec \ldots]_B$

I have shown that this assumption captures the behavior of *aber* in simple clauses and straightforwardly extends to more complicated patterns involving clause-initial adverb clauses or relative clauses.

In the final subsection, I have discussed one possible objection, namely cases where it looks like *aber* seems to attach to the second or third prosodic phrase. I have argued along the lines of Nespor & Vogel (1986); Ghini (1993) that this indicates that prosodic phrases in the German prefield and middle-field can be recur-

sive.[13] Under this assumption, we can maintain the simple assumption that *aber* simply only attaches to the first prosodic phrase. I have shown that similar to the prosodic regrouping rules in Ghini (1993), the vP/VP in German counts as a strong prosodic boundary across which regrouping cannot take place.

Before we come to the short case study from Polish, which can be shown to behave very similar to German in this respect, I want to note that like Latin, Cherokee or Yorùbá, the coordinator placement of German *aber* seems to ignore syntactic islands. We have seen examples where *aber* freely shifts into adverbial clauses or relative clauses. This provides a further indication, I think that the pattern at hand is governed by prosodic considerations rather than by syntactic ones.

4.3. Polish

In this section, we will be concerned with the properties of the element *zaś* in Polish, which in many ways behaves similar to German *aber*.[14] Before we proceed, I want to note that despite their geographical proximity, the similarities of *aber* and *zaś* are unlikely to be the result of borrowings. For all I know, neither of these elements do have a cognate in the respective other language and as we will see below, what we find is that the two coordinators seem to have very different selectional properties. The only thing that is similar is their abstract shifting pattern.

Unlike German *aber*, *zaś* is not the standard adversative conjunction of the language in question but rather a semantically more specific element. Polish has some other adversative conjunctions, most notably *a* and *ale*, which have a more widespread distribution. One of the core differences in terms of the syntacto-semantic use of *zaś* is that it is only grammatical in what we above called a contrastive topic con-

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[13]See also the argumentation in Bennett et al. (2016), who argue along the same lines for recursive prosodic phrases concerning the process of pronoun displacement in Irish.

[14]I am very much indebted to Joanna Zaleska for suggesting that I look at the properties of this element, for providing me with the data used in this subsection and discussing the judmgents with me. Further, I want to thank Joanna Błaszczak for sharing her thoughts on this project and discussing some of the intricacies of Polish syntax with me.

text or situation of semantic opposition. Consider the examples in (80). In (80a), we see a typical use of a semantic opposition with two conjuncts with contrastive subjects. Here, *zaś* is licit. But in (80b), we see an example involving an unexpectedness/mirativity reading which does not allow for the use of *zaś*.

(80)   a.   [Piotr chce   zostać na imprezie] [ja **zaś** chcę juz   iść do domu].
            Piotr wants stay   at party   I   but want already go to home
            'Piotr wants to stay at the party but I want to leave.'

       b. *?[Tom jest wysoki], [jest on **zaś** złym   koszykarzem].
            Tom is   tall   is   he but bad.INS basketball.player.INS
            'Tom is tall but he is a bad basketball player.'

   A second difference we see between Polish *zaś* and German *aber* is that *zaś must* shift into the second conjunct; it cannot appear in the position in between the two conjuncts. This is illustrated in (81).

(81)   [Piotr chce   zostać na imprezie] (***zaś**) [ja (**zaś**) chcę juz   iść do domu].
       Piotr wants stay   at party   but I   but   want already go to home
       'Piotr wants to stay at the party but I want to leave.'

As in the section about German *aber*, I will discuss the issues involving *zaś* in turn. In the next subsection, I will provide four arguments that despite its linear position, *zaś* should be regarded as a proper coordinator. After that I will go on to discuss its empirical distribution.

4.3.0.1. *zaś* is a coordinator

This fact that *zaś* obligatorily shifts into the second conjunct might potentially make it a little bit harder to believe that *zaś* is a proper conjunction since we do not have the immediate minimal pairs where it really seems that it behaves like a prototypical conjunction in each and every respect. However, applying the same tests that we used for German, again gives a relatively clear-cut picture that *zaś* shows all of the hallmark properties of a conjunction.

4. Coordinators after the first prosodic phrase

First, we observe that *zaś* is in complementary distribution with the more standard prototypical conjunctions *a* or *ale*. In (82a), we see that a conjunction like *ale* is acceptable on its own in a contrastive context but example (82b) shows that it cannot be combined with *zaś*, indicating that both of them are conjunctions.

(82)   a.   [Piotr chce   zostać na imprezie] ale [ja chcę juz   iść do domu].
            Piotr wants stay   at party   but I   want already go to home
            'Piotr wants to stay at the party but I want to leave.'

       b.   [Piotr chce   zostać na imprezie] (*a/*ale) [ja **zaś** chcę juz   iść do
            Piotr wants stay   at party   and/but I   but want already go to
            domu]
            home
            'Piotr wants to stay at the party but I want to leave.'

Second, we see that *zaś* licenses coordination-specific processes. Here, this is illustrated for symmetric extraction (i.e. ATB-movement) where we extract the direct objects out of both conjuncts at the same time. The example in (83a) shows that this process requires a coordinator, we cannot simply do this with juxtaposed clauses without overt marking. However, the example becomes perfectly grammatical if we use *zaś* inside the second conjunct. Again, despite its clause-internal position, *zaś* licenses coordination-specific processes. This would be quite unexpected if *zaś* were some sort of contrastive adverb or anything else. Rather, it strongly suggests that *zaś* itself is a coordination.

(83)   a.   *Co   [Kasia sprzedała], [Piotr kupił]?
            What Kate   sold   Peter buy?
            'What did Kate sell but Winston buy?'

       b.   Co   [Kasia sprzedała], [Piotr **zaś** kupił]?
            What Kate   sold   Peter but buy?
            'What did Kate sell but Peter buy?'

Third, we can construct further arguments on the basis of language-specific processes in Polish. One of the more peculiar facts about the morphosyntax of Polish is the phenomenon of so-called mobile inflections, a phenomenon extensively stud-

ied in works on the syntax-morphology and the morphology-phonology interface
(see e.g. Booij & Rubach 1987; Borsley & Rivero 1994; Embick 1998; Franks & Bański
1999; Migdalski 2006). The phenomenon is characterized by the fact that agreement
forms in the past paradigm of the language can appear on any preverbal constituent
rather than on the verb itself. And since the word order in Polish is relatively free,
this process can affect a whole range of syntactic elements. In (84), we see a mini-
mal pair with (84a) being the baseline example where the agreement is located on
the verb. In (84b), it is located on the preverbal subject and in (84c), the agreement
marker indicating the subject of the clause are, somewhat paradoxically, located on
the direct object.

(84)   a.   Ty   to widziałe-s
              you it saw-2SG

        b.   Ty-ś   to widział
              you-2SG it saw

        c.   Ty   to-ś   widział
              you it-2SG saw
              'You saw it.'   Embick (1998) citing Dogil (1987)

Importantly, this process can also affect subordinate complementizers shown in
(85) as well as adverbs as shown in (86).

(85)   a.   Janek powiedział że   pojechałe-ś do Warszawy
              Janek said   that went-2SG   to Warsaw

        b.   Janek powiedział że-ś   pojechał do Warszawy
              Janek said   that-2SG went   to Warsaw
              'Janek said that you went to Warsaw.'   Borsley & Rivero (1994)

(86)   Pewnie-śmy juz   tam byli
        perhaps-1PL already there were
        'Perhaps we have already been there.'

In stark contrast however, this process cannot affect coordinators. The example in

4. Coordinators after the first prosodic phrase

(87) gives a minimal pair to the adverb example in (86), except that the agreement suffix attaches to the prototypical coordinator *ale*. The result is ungrammatical.

(87)   *... ale-śmy my juz   tam byli.
        ... but-1PL we already there were
        'but we have already been there.'

Now the point of this argument is that, even though *zaś* is linearly contained inside the second conjunct, it behaves just like a prototypical coordinator such as *ale* in (87). *Zaś* cannot act as a host for the mobile inflections even though its linear position suggests that it should.

(88)   *... my **zaś**-my juz   tam byli
        ... we but-1PL already there were
        'but we have already been there.'

This shows that despite its linear position, *zaś* patterns with coordinators rather than subordinate complementizers or adverbs. This strongly suggests that *zaś* is neither of those categories.

Before we take a closer look at the empirical distribution of Polish *zaś*, I would briefly like to mention that, as in the case we saw above, any alternative explanation for the behavior of *zaś* must also account for the fact, the placement seems to ignore all sorts of syntactic island generalizations available. As we see in the example in (89) below (and in more examples in the next subsection), if we place a syntactic island at the left edge of the second conjunct, *zaś* seems to shift into this island without any problems. Consider the example in (89), which parallels similar examples from German discussed above. Here, the adjunct clause in brackets, i.e. *poniewaz ja muszę wstać rano* ('because I have to get up early tomorrow') occupies a position at the left edge of the second conjunct. Nonetheless, *zaś* can shift into various positions inside that adjunct.

(89)   Piotr chce zostać na imprezie, ('Piotr wants to stay at the party')

[poniewaz (**zaś**) ja (**zaś**) muszę wstać rano],   chcę juz   iść do domu
because   but I but must get.up tomorrow, want already go to home
'Piotr wants to stay at the party but because I need to get up tomorrow, I

want to leave.'

The logic of these examples is just like before. *Zaś* connects the two matrix clauses, which contrast their respective subjects but nonetheless appears inside the adjunct clause. This is strong evidence against an analysis as some kind of contrastive adverb, as the scope of adverbs is always clause-bound.

4.3.0.2. The empirical distribution of *zaś*

Since *zaś*, unlike German *aber* is only licit in syntacto-semantic contexts involving an immediate contrast between the two conjuncts, it is somewhat harder to show that its placement is sensitive to phonological phrasing simply because contrasting pronouns are necessarily stressed and therefore cannot be skipped by *zaś*. As in German, contrastive pronouns are prone to attract *zaś* and thus, we do not find as many cases where *zaś* shifts across various constituents.

However, we do have two options to show that the placement is phonologically determined. Either we make the topic itself phonologically heavy enough to see the effects or we can have a subordinate clause precede the topic. The example involving the latter option was already used above to show that, as in German, the placement of *zaś* ignores syntactic islands such as adverbial clauses. For simplicity, it is repeated below. And apart from the fact that we see *zaś* float into the adjunct clause, we can also observe the already familiar optionality. *Zaś* can either go after the complementizer *poniewaz* ('because') or it can go after the subsequent pronoun *ja* ('I').

4. Coordinators after the first prosodic phrase

(90) Piotr chce zostać na imprezie, ('Piotr wants to stay at party')
      [poniewaz (**zaś**) ja (**zaś**) muszę wstać rano],   chcę juz   iść do domu
      because   but I but must get.up tomorrow, want already go to home
      'Piotr wants to stay at the party but because I need to get up tomorrow, I
      want to leave.'

The same pattern can be observed the contrastive topic itself is modified by a rela-
tive clause. In that case, *zaś* does not go all the way after the topic which would be
after the relative clause (in fact, it cannot go there). Rather, it must go in one of four
different positions, either in between the head noun *Piotr* and the relative clause or
in between the different positions inside the relative clause.

(91) Julia rozmawia z Kati, (Julia talks to Kati)

      ... Piotr (**zaś**) który (**zaś**) robi (**zaś**) najlepsze (**zaś**) pierogi, jest w kuchni.
         Piotr but who but does but best   but pierogi is   in kitchen
      'Julia talks to Kati but Peter who makes the best pierogi, is in the kitchen.'

The fact that *zaś* cannot go all the way after the relative clause is thus reminiscent
of what we saw for German above: Both coordinators are banned from attaching to
the phonological phrase including VP-internal material. And as for the placement
of *zaś* it seems that it does not matter that it is the VP of the relative clause in this
case. *Aber* and *zaś* both seem to be banned from any sort of VP-domain, regardless
of whether it is the matrix clause VP or the VP of some embedded clause.

   Based on these facts, I would like to conclude that despite their different prop-
erties in terms of selection and despite the syntactic differences between the two
languages, we can conclude that the shifting pattern in Polish is the same as in Ger-
man. The monosyndetic adversative coordinator *zaś* attaches to the first prosodic
phrase of the second conjunct.

(92)   […]$_A$ ≺ [φ ≺ **zaś** ≺ …]$_B$

4.4. Summary

The three case studies from Yorùbá, German and Polish share quite a number of properties. In all cases, we saw that a monosyndetic coordinator shifts to a position inside the second conjunct. In all three cases, we saw that syntactic attempts of characterizing this position quickly ran into problems as soon as more complex configurations were considered. One of the many recurring patterns in these three sections was that the respective coordinators freely shifted into adverbial clauses or relative clauses if they were sufficiently close to the left edge of the second conjunct.

Further we saw that in all cases, information structural properties of the respective clauses had an impact on the position of the respective coordinators. In German and Polish, contrastive topics attracted the coordinator to appear to the immediate right and in Yorùbá, it was focused phrases that did. In all three cases, I argued that the observed connection was indirect. Contrastive topics and focused phrases are prosodically prominent and set apart from the rest of the clause by means of a strong prosodic break, which then ends up being the natural target for the respective coordinators. Thus, for all three cases, it could be shown that the sensitivity to information structure can plausibly be derived by reference to the prosodic phrasing thereby providing another argument that the placement pattern in all three languages is sensitive to prosody.

I would like to propose that the three languages abstractly show the same pattern according to which a monosyndetic coordinator appears after the first prosodic phrase of its second coordinand. The pattern is abstractly represented as in (93). As in the previous chapter, A and B refer to the coordinands. $\&_{mon}$ refers to a monosyndetic coordinator and φ refers to a prosodic phrase.

(93) $[\ldots]_A \prec [\varphi \prec \boldsymbol{\&}_{mon} \prec \ldots]_B$

In the previous chapter, the summary section also listed a number of languages that

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seemed to exhibit the same pattern. In this chapter, I have very little to add in this regard. The only languages I know of, which may exhibit the same phenomenon are the two languages Nupe and Slovenian, which are closely related to Polish and Yorùbá, respectively.

Kandybowicz (2005) discusses the clausal coordinator *ma* in Nupe that shows a pattern that is, at least at first sight, reminiscent of the behavior of Yorùbá *sì*.

(94)   [Musa à   ba _] [Gana **ma** à   gi nakàn].
       Musa FUT cut   Gana CONJ FUT eat meat
       'Musa will cut and Gana will eat the meat.'   Kandybowicz (2005, 57f)

The pattern is however analyzed as a case of morphosyntactically determined clitic placement in Kandybowicz (2005), i.e. as a pattern of the kind discussed in the next chapter. However, it should also be mentioned that Kandybowicz (2005) only looks at simple transitive clauses and does not take into account the complex adverbial clause constructions or any of the other tests that we have seen for Yorùbá. A more detailed discussion and a classification of Yorùbá will thus have to wait until more data are available.

A similar conclusion must be drawn for Slovenian. The pattern is discussed by Mitrović (2011); Marušič et al. (2011). The contrastive coordination marker *pa* appears in a position that Mitrović (2011) likens to a second position along the lines of Latin. But as Marušič et al. (2011) show, there are quite some examples that do not pattern together with such a view. They note that *pa* can appear after reasonably complex phrases (95a) and building on Franks & King (2000), they show that it can appear inside clitic clusters preceding the contrastively focused clitic. The elements preceding *pa* in (95b) cannot plausibly be analyzed as one constituent and therefore, the pattern cannot be straightforwardly analyzed as a Latin case nor as a case of a clitic attaching to the first morphosyntactic phrase.

(95) a. [Vid se   je   usedel], [children z   baloni   v rokah **pa**   so
          Vid REFL AUX sat   children with balloons in hands CONJ AUX
          skočili].
          jumped.
          'Vid sat down while children with balloons in their hands jumped.

      b. [Peter me   jo   je   pokazal], [Janez mu   **pa**   GA
          Peter HIM.DAT HER.ACC AUX show   Janez HIM.DAT CONJ HIM.ACC
          je   pokazal].
          AUX show
          'Peter has shown her to him while Janez showed HIM to him.'

Marušič et al. (2011), gloss adapted

But of course, more data are necessary to determine whether the pattern in Slovenian patterns like the one discussed in this chapter.[15]

In general, it should be noticed that the apparent rarity of the pattern at hand may have several reasons. First, it might indeed be that instances of second position clitics attaching to prosodic phrases are in general rarer than other patterns. If we look at other kinds of second position clitics, we note that although such patterns have been described outside of coordinators (see e.g. Chung 2003; Bennett et al. 2016) but it seems uncontroversial that other patterns seem more frequent.

On the other hand, it could also be that these patterns are somewhat harder to identify crosslinguistically than others. As mentioned throughout this chapter, the patterns at hand can easily be mistaken as clitic attaching to the first morphosyntactic phrase. It is only in configurations where morphosyntactic phrasing and prosodic phrasing diverge, that we can figure out which pattern we are actually dealing with. Thus, it might actually be that some patterns classified as patterns belonging to the pattern discussed in the next chapter, might in fact, under closer scrutiny, turn out to be clitics that attach to prosodic phrases.

However, as mentioned in Subsection 1.3, the qualitative methodology of this book does not allow for any reliable statements about quantitative distributions of

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[15]Or whether it is a pattern of a shifting coordinator to begin with. Marušič et al. (2011) note that *pa* can also function as a topic marker outside of coordination and can cooccur with other coordinators, which might indicate that it should not be analyzed as a coordinator to begin with.

patterns and thus, the discussion at hand is not really conclusive.

Nonetheless, I hope to have shown that the pattern of a coordinator attaching to the first prosodic phrase of its second coordinand is robustly attested in at least two unrelated language families. In the next chapter, I will turn to a different pattern in which the coordinator appears after a morphosyntactically determined constituent.

5. Coordinators after the first morphosyntactic phrase

In this chapter, we will see three case studies from Lezgian, Udihe and Yavapai. In all three languages, the coordinator can be shown to appear in a second position. However, unlike in the case studies of the previous chapter, the second position is defined in morphosyntactic terms. The coordinator follows the first morphosyntactic phrase rather than a phonological constituent.

5.1. Lezgian

Lezgian is a Northeast Caucasian language of the Lezgic branch. It is spoken in southern Daghestan as well as Nothern Azerbaijan. It is distantly related to Khwarshi and Tsez, languages discussed in the next chapter. But as the languages come from different branches of the family and since the coordinator placement pattern is different in crucial respects, I decided to take them all into the sample at hand. Most of the data for this case study are taken from the grammar as well as the texts in Haspelmath (1993), which discusses the standard Güne dialect. In some cases, examples from Babaliyeva (2007) are taken for minimal comparison but she discusses a different Lezgian dialect spoken in Northern Azerbaijian. According to Haspelmath (1993), the dialects do not differ substantially but I will nonetheless not draw conclusions solely based on data found in Babaliyeva (2007).

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Sharing many of the typical features with other Nakh-Daghestanian and Caucasian languages, Lezgian word-formation is strongly agglutinating and relies almost exclusively on suffixes. The language is characterized by a large inventory of case markers in the nominal domain and a similarly large inventory of TAM-categories in the verbal domain. As for the syntax, the language is largely head-final and shows ergative alignment.

Coordination in Lezgian is uniformly expressed by the morpheme *ni*, which is compatible with various syntactic categories. In (1), we see two examples of nominal coordination.[1]

In (2a), we see coordination of absolutive noun phrases and in (2b), we see a coordination of ergative noun phrases.

(2)   a.   [Kic']-**ni**   [kac] čeb=čpi-n   dušman-ar ja
             dog-COORD cat selves=selves-GEN enemy-PL COP
             'The dog and the cat are each other's enemies.'

<div align="right">Haspelmath (1993, 415)</div>

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[1]Haspelmath (1993) notes that in some cases the coordinator *wa*, borrowed from Turkish and ultimately from Arabic, is employed. *wa* appears in the canonical position between the coordinands.

(1)   a.   [güzel]   **wa** [č'exi] šeher
            beautiful and big   city
            a beautiful and big city'

      b.   [güzel   jajlax-ar], [q̄aji bulax-ar], [q'aq'an dağ-lar]   **wa** [zi
            beautiful pasture-PL cold spring-PL high   mountain-PL and I.GEN
            watanʔehli-jar]
            countryman-PL
            'the beautiful mountains pastures, the cold springs, the high mountains and my countrymen.'

<div align="right">Haspelmath (1993, 330)</div>

      c.   [Wun zi   gaf-ara-l   qʰüre-na-j] **wa** [za-z ...   žawab
            you.ABS I.GEN word-PL-SRESS laugh-AOR-PST and I-DAT answer give-AOR-PST
            ga-na-j]

            'You laughed about my words and gave me the answer ...'

<div align="right">Haspelmath (1993, 336)</div>

Wa and *ni* show no interaction even when they do cooccur.

b. [Isadi]-**ni**   [Alidi] sada=sada-w   ğil-er   quga-na
Isa.ERG-COORD Ali.ERG one=one-ADESS hand-PL give-AOR
'Isa and Ali shook hands.'

Haspelmath (1993, 327)

Haspelmath (1993) notes that a coordinator attaching to a coordinand but the last one can be said to be the standard strategy for coordination but he also mentions that, in order to achieve an additional emphatic effect, both conjuncts can be marked with *ni*. An example is given in (3).

(3)   [Zu buba-**ni**]   [bubadi-n buba-**ni**]   čuban-ar
I.GEN father-COORD father-GEN father-COORD shepherd-PL
x̂a-ji-bur   ja
become-AOR-SBST.PL COP
'Both my father and my father's father were shepherds.'

Haspelmath (1993, 328)

The examples below show that the same pattern is also found with participial verb forms (4) and predicative adjectives (5):

(4)   [Ne-da-j-di-**ni**]   [aluk'-da-j-di]   bes
eat-FUT-PTCP-SBST.SG-COORD put.on-FUT-PTCP-SBST.SG enough
že-zwa-č-ir
be-IPFV-NEG-PST
'There was not enough to eat and to put on.'

Haspelmath (1993, 343)

(5)   Dax [bürq'ü-**ni**]   x̂a-nwa   [biši-**ni**]
Dad blind-COORD become-PERF deaf-COORD
'Dad has become deaf and blind'

Haspelmath (1993, 328)

In (5), we also see that *ni* can also appear on both conjuncts with adjectival coordination. Against that background, we can conclude that *ni* can be seen as a polysyndetic coordinator even in contexts where it only occurs once per coordination. This

is corroborated by the fact that Haspelmath also notes that, in line with what we have seen about polysyndetic coordinators, these morphemes can also have various focus interpretations when used in isolation. As he notes, in such examples, *ni* often translates to *even* or *also*:

(6) Ada-z bubadi   hina k'walax-zawa-t'a-ni   či-da-č-ir
     he-DAT [father.ERG where work-IPFV-COND]-even know-FUT-NEG-PST
     'He didn't even know where his father was working.'

<div align="right">Haspelmath (1993, 328)</div>

(7) Čan bade,   wuna za-z kal-er aca-n-ni   čir-da-ni?
     dear grandmother you.ERG I-DAT [cow-PL milk-INF]-also teach-FUT-Q
     'Dear Granny, will you also teach me to milk cows?'

<div align="right">Haspelmath (1993, 329)</div>

The coordinator *ni* is also employed to coordinate full finite clauses. Then, however, it is not located at the right edge of the respective conjunct but inside of it. According to Haspelmath (1993), the generalization about its placement is that *ni* appears after the first constituent of the second conjunct. Consider the examples in (8). In both cases, there is a coordination of two finite clauses which is signalled by *ni*. In (8a), *ni* is located after the absolutive noun phrase of the second conjunct. In (8b), it is located after the noun phrase in subelative case.

(8) a. [T'ur-ar ǧil-er-a   ama] [wil-er-**ni**   ǭažǧanda-l ala.]
         spoon-PL hand-PL-INESS be.still eye-PL-COORD pot-SRESS   be.on
         'The spoons are still in their hands and the eyes are on the pot.'

     b. Abur [ča-laj   wik'eh ja] [pačahdi-kaj-**ni**   kič'e tuš].
         they we-SREL brave   COP czar-SBEL-COORD afraid COP.NEG
         'They are braver than we, and they are not afraid of the czar.'

<div align="right">Haspelmath (1993, 335f)</div>

Haspelmath (1993) notes that the symmetric status of both conjuncts in such constructions can be observed by shared predicate constructions. It is possible to only

have a predicate in the first one (as in (9)) or in the second one (as in (10)). In both

cases, the predicates are of course interpreted in both conjuncts:

(9) [Im   fana   dünja ja]   [čun-**ni**   muhman-ar]
     this.ABS transitory word COP we.ABS-COORD guests.PL
     'This is a transitory world and we are guests.'

<div align="right">Haspelmath (1993, 339)</div>

(10) Pakamaq^h   [čaǧaldi   sa werč], [žanawurdi-**ni** sa lapag
      in.the.morning jackal.ERG one chicken wolf.ERG-COORD one sheep
      ǧa-na].
      bring-AOR
      'In the morning, the jackal brought a chicken and the wolf a sheep.'

<div align="right">Haspelmath (1993, 339)</div>

For nominal coordination, Haspelmath (1993) noted that emphasis can be con-

veyed by marking all the conjuncts with *ni*. In clausal coordination, such config-

urations seem to be less frequent as I did not find an example of double marking in

Haspelmath (1993). The texts in Babaliyeva (2007) however give a handful examples

of the following type:

(11) [sa ccel nisi-**n**   gwaz qh-şa] [sa örüd fu-**n**   gwaz
      one bag cheese-COORD with REV-go.IMP one seven bread-COORD with
      qh-şa]
      REV-go.IMP
      'Come back with a bag of cheese, and come back with seven loaves of bread.'

<div align="right">Babaliyeva (2007, 12), gloss adapted, English translation mine[2]</div>

As the example in (11) also shows, the constituent in the second conjunct preced-

ing the coordinator can be complex consisting of several words. We see the same

thing in the examples below as well. In (12), we see a complex dative noun phrase

including a numeral translating to '*in a hundred years*'.

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[2]Recall that Babaliyeva (2007) discusses a different dialect, which is presumably why the coordinator is realized as *n* in (11).

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(12) [Wiš   jis.u-z   jašamiš x̂u-x̂]   [wiš   jis.u-z-**ni**   dünja.di-n
       hundred year-DAT living   be-IMP hundred year-DAT-COORD world-GEN
       sir-er čir-a]   ...
       secret know-IMP
       'Live a hundred years and know the world's secrets for a hundred years ...'

                                                              Haspelmath (1993, 450)

The following example shows an extremely complex constituent preceding *ni*. Haspelmath (1993) notes that the predicate *sa šakni alač* ('there is no doubt that') takes a clausal complement marked by the substantivized participle in superessive case.

(13) [Dağustandi-n har   sa   xür-e   lap q^{h}san wa ag'alt'aj pis
       Daghestan-GEN every one village-INESS very good   and extremely bad
       adet-ar   awa-j-da-l   sa šak-**ni**   ala-č]
       custom-PL be.in-PTCP-SBST-SRESS one doubt-COORD be.on-NEG
       '... and there is no doubt that there are very good and extremely bad customs

       in every Daghestanian village.'

                              Haspelmath (1993, 366), gloss and translation adapted

Such examples arguably show that there is, in principle, no upper bound on the size of the constituent preceding the coordinator inside of the second conjunct. It is merely the notion of a syntactic constituent that is of relevance here.

  Before we conclude our discussion of Lezgian, I want to point out a particular configuration that will become relevant in the course of the next chapter when we discuss the pattern from Khwarshi. In the following examples, the coordinator *ni* attaches to the clause-initial XP despite the fact that there is an additional absolutive noun phrase in the same clause. As we will see, such a pattern would not be possible for Khwarshi. There, the coordinator would attach to the absolutive noun phrase instead.[3]

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[3]The pattern for Lezgian with the coordinator attaching to the first XP of the clause described by Haspelmath (1993) is exceptionless in his data as well as in the vast majority of cases given by Babaliyeva (2007). However, in one out of the four stories, Babaliyeva (2007) gives in the appendix, we do find two instances of coordinator placement that suggest that for some speakers of the Lezgian dialect from Azerbajian that she describes, the coordinator seems to positioned according to the Khwarshi pattern. Consider (14):

In (15), the coordinator attaches to the dative noun phrase *ajalriz* ('children.DAT')
that is initial to the conjunct rather than to the absolutive noun *kas* ('person').[4]

(15) [Zi   pab azarlu ja], [ajalri-z-**ni**   kilig-da-j   kas   awa-č]
      I.GEN wife sick   COP child-PL-DAT-COORD look-FUT-PTCP person be-NEG
      "My wife is sick and there is no one to look after the children.'

<div align="right">Haspelmath (1993, 335)</div>

In (16), *ni* attaches to the ergative marked subject *žanawurdi* ('jackal') rather than to
the immediately following absolutive marked noun phrase *sa lapag* ('one chicken').

(16) Pakamaq^h   [čaǧaldi sa werč], [žanawurdi-**ni** sa lapag
      in.the.morning jackal.ERG one chicken wolf.ERG-COORD one sheep
      ğa-na].
      bring-AOR
      'In the morning, the jackal brought a chicken and the wolf a sheep.'

<div align="right">Haspelmath (1993, 339)</div>

So, to sum up: Lezgian makes use of a polysyndetic coordinator *ni* that can be used
as a conjunction for all major syntactic categories. In cases of noun phrase or ad-
jectival coordination, the coordinator appears in canonical position in between the
two conjuncts and can be expressed as postposed to both conjuncts for the pur-

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(14) [Za   xürek-**ni**   avu-na], [za   verç-eri-z ttwar-**ni**   vehe-na] ...
      1.ERG meal-COORD make-AOR 1.ERG hen-PL-DAT grain-COORD cast-AOR
      'I have prepared the food and I have thrown grain to the chickens'
<div align="right">Babaliyeva (2007, 106), gloss adapted, English translation mine</div>

In (14), we see that, in both conjuncts the clause-initial ergative pronoun is not the host of the
coordinator but the following absolutive phrase is. But since these are two examples from one
and the same story and the other stories follow the pattern we have seen above, I will not put
too much emphasis on that but it is interesting that there seems to be a fair amount of dialectal
variation or even variation between speakers.

[4]The example in (14) shows also an interesting contrast with (13). In both cases, the second con-
junct begins with a participial clause but in (13), it is skipped for the purposes of *ni*-placement
whereas in (14) it is not. According to Haspelmath (1993), substantivized, case-marked particip-
ial clauses such as the one in (14) are factive complement clauses whereas bare participial forms
can are mainly used as sentence-level adverbials or restrictive or non-restrictive relative clauses.
The question whether this asymmetry between adverbial clauses and complement clauses is mir-
rored in the constituents that *ni* skips (or does not skip) is an interesting one but ultimately one
that clearly needs further research.

poses of emphasis. With clausal coordination however, the coordinator surfaces uniformly after the first XP of the second conjunct. In cases of emphatic clausal coordination, both clausal conjuncts can have *ni* after their respective first XPs. We will represent the pattern as follows:

(17)   […]$_A$ < [XP < **ni** < …]$_B$

5.2. Udihe

Udihe, also known as Udege or Udekhe, is a Manchu-Tungusic language from the Southern Tungusic branch. All the examples in this section are taken from the grammar by Nikolaeva & Tolskaya (2001) and the texts in Nikolaeva et al. (2002). Udihe is a morphologically agglutinative language, which allows for a high number of affixes, all of which are suffixes, to a given stem. As for the syntax, Nikolaeva & Tolskaya (2001, 477) classify Udihe as a head-final language although they do mention that head-finality is not rigid as some phrases allow material to appear after the head of the phrase. Apart from the tendency of head-finality, word order in Udihe exhibits a fair amount of freedom and is, according to Nikolaeva & Tolskaya (2001) mainly motivated by information-structure. The immediately preverbal position is focused and topic and backgrounded material either precedes the focus or appears postverbally.

Coordination in Udihe is expressed by a polysyndetic use of what Nikolaeva & Tolskaya (2001, 441) call the additive clitic particle *-dA,* which can take the forms *-da, -de, -do* conditioned by vowel harmony. The clitic particle is compatible with all major syntactic categories that can be coordinated. The example in (18a) shows an instance of a noun phrase coordination. Throughout the grammar, the particle is glossed as FOC. Here, the three noun phrases *mother*, *father* and *siblings* are coordinated. In (18b), we have a coordination of nominalized adjectives and in (17c) we see a coordination or verbs or verb phrases. The example in (17c) also shows that

Udihe also allows for non-final instances of the coordinator to be dropped in some cases.

(18)   a.   [Ami:-**de**]   [eni:-**de**]   [xa-nta-na-i-**de**]
            father.2SG-FOC mother.2SG-FOC sibling.N-PL-2SG-FOC
            bi-si:-si.ni   gele-je
            be-IPFV-PERF.CVB-3SG ask-IMP.2SG
            'If you have a father, mother or siblings, call (them).'

                          Nikolaeva & Tolskaya (2001, 648), gloss adapted

       b.   Bi men-e zele-i   bagdi-e-mi [aja-wa-**da**]   [ge:-we-**de**].
            me REF-0 life-REF live-PST-1SG good-ACC-FOC evil-ACC-FOC
            'I have experienced good and evil in my life.'

                          Nikolaeva & Tolskaya (2001, 772), gloss adapted

       c.   Škola-du   [tatusi-u] [gusi-u-**de**]
            school-DAT learn-1PL play-1PL-FOC
            'At school, we learn and play.'   Nikolaeva & Tolskaya (2001, 654)

In line with what we know about polysyndetic coordinators, the Udihe one can also be used as a focus marker, which is why Nikolaeva & Tolskaya (2001) gloss it as FOC throughout. They do note that when appearing in isolation, it can transport a meaning such as *at least, too* or *even*.

(19)   Omo kusige-we-de   xebu-je
       one   knife-ACC-FOC take-IMP.2SG
       'Take (at least) one knife!'   Nikolaeva & Tolskaya (2001, 443)

However, Nikolaeva & Tolskaya (2001) also note that this focus reading is not necessary and especially in examples like (18b), it is clear that the function of *-da/-de* has nothing to do with focus as the postverbal position is not associated with focus Nikolaeva & Tolskaya (2001, 845).

   The examples involving noun phrase coordination or verb (phrase) coordination exhibited a standard polysyndetic pattern in which each conjunct is followed by the polysyndetic coordination marker. In cases of clausal coordination, we see that the pattern slightly deviates from what we have seen so far. In clausal coordination, we

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see that the marker *-da,-de,-do* appears after the first XP of the respective conjunct. Consider the example in (20):

(20) [Zuge-we-**de** čalu-wene-mi] [ima:-we-**de** čalu-wene-mi]
      ice-ACC-FOC melt-CAUS-1SG snow-ACC-FOC melt-CAUS-1SG
      [o:kto-**de** bagdi-wana-mi] ...
      grass-ACC-FOC grow-CAUS-1SG
      'I melt the ice, I melt the snow, I make the grass grow...'

                                    Nikolaeva & Tolskaya (2001, 584), gloss adapted

We see that each of the clauses consists of a direct object followed by a causativized, fully inflected verb and in each case, we see that *-de* attaches to the conjunct-initial direct object. In (21), we see a coordination of present participial clauses where, in both conjuncts, the coordinator attaches to the conjunct-initial wh-pronoun *ono* ('how'):

(21) Uta bede gusi-mi b'ata-ma sita-ziga ŋiča-digi sa:-ita   [ono-**do**
      that like play-INF boy-ADJ child-PL small-ABL know-3PL how-FOC
      onobui bui   xokčo-i-we-ni]   [ono-**do** wakča-i-we].
      which animal attack-PRES.PTCP-ACC-3SG how-FOC hunt-PRES.PTCP-ACC
      'Playing like this, boys learn how each animal attacks and how one should

      hunt.'   Nikolaeva & Tolskaya (2001, 807), gloss adapted

Note, however, that the conjunct-initial XPs do not have to be nominal. In (22a), we see an example of coordination of fully finite clauses both of which begin with an infinitival clause. In this case, only the second conjunct is marked for coordination and in this case, the coordinator attaches to the infinitival clause. In (22b), the coordination is between two adjectival predicate phrases both of which include a conjunct-initial participial clause that hosts the coordination marker.

(22) a. Anana   udie [oño-mi ei ñoni bi-s'e] [taŋi-mi-**de** ei ñoni
          long.ago Udihe write-INF NEG can   be-PERF read-INF-FOC NEG can

bi-s'e].
be-PERF
'Earlier, the Udihe could neither write nor read.'

<div align="right">Nikolaeva & Tolskaya (2001, 360)</div>

b. Ei aziga [jexe-i-ni-**de** paki] [uli:-ni-**de**
this girl sing-PRES.PTCP-3SG-FOC skillful sew-PRES.PTCP-3SG-FOC
paki]
skillful
'This girl can sing and sew skillfully.'

<div align="right">Nikolaeva & Tolskaya (2001, 182)</div>

In (23), we see that the clause-initial infinitival VP is internally complex but still the marker attaches to the whole constituent:

(23)   [Oño-wo   o:-mi-**de**   onobui onobui oño-wo
       ornament-ACC make-INF-FOC which   which   ornament-ACC
       o:-i]
       make-PRES.PTCP
       'And as for making ornaments, they make all sorts of them.'

<div align="right">Nikolaeva & Tolskaya (2001, 865)</div>

Other cases where the clause-initial XP hosting the coordinator clitic is complex involve complex noun phrases as in (24) and (25). The example in (24) is part of a bigger story in the course of which the coordinator is frequently used to signal text cohesion and to indicate that the clauses are connected. (24) and (25) give example from a story where a person comes back telling an old man about an unsuccessful hunt. Note that in (25), I have added a literal translation to indicate that this is indeed an instance of clausal coordination. Nikolaeva & Tolskaya (2001, 657) note that with this kind of coordination, both predicates have to be negated independently of each other indicating that this is an instance of clausal coordination.

(24)   a.   [Uti zoŋka mafasa-**de** iñekte-ili]...
            this poor old.man   laugh-3SG
            'And the poor old man laughed...'

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b. [Ni: xokto-ni-**de** anči] [bui xokto-ni-**de** anči].
man footstep-3SG-FOC no   animal footstep-3SG-FOC no
literally: 'There aren't man's footsteps and there aren't animal's footsteps.'

'There are neither a man's footsteps nor an animal's footsteps.'

So far, we have seen that the pattern in Udihe is very similar to the placement pattern seen for Lezgian above. One thing to note however is that the Udihe coordinator 'dA' can also be used for purposes of disjunction. According to Nikolaeva & Tolskaya (2001, 1352), it is then located to in a canonical position at the right edge of the respective conjuncts:

(25)   [Xekui bi:-we-ni-**de**]   [gili bi:-we-ni-**de**]
hot be-PRES.PTCP-ACC-3SG-FOC cold be-PRES.PTCP-ACC-3SG-FOC
akta-masi-mi
try-DIS-1SG
'I am checking whether it is hot or cold.'   Nikolaeva & Tolskaya (2001, 661)

In other words, the Udihe coordinator *dA* alternates between a clause-final and a second position. Note also that genuine polysyndetic disjunctions in Udihe such as the clitic *-es* always appear attached to the clause-final verb.

(26)   [Eineŋi-ke gulin-ze-u-**es**]   [timana-ni-ke   gulin-ze-u-**es**]
today-IND go-SBJ-1PL.IN-DISJ tomorrow-3SG-IND go-SBJ-1PL.IN-DISJ
'We will leave either today or tomorrow.'   Nikolaeva & Tolskaya (2001, 661)

So, to sum up, we saw that the polysyndetic coordinator '-dA' in Udihe can conjoin a range of syntactic categories. In all those cases, it is typically dropped in all non-final conjuncts.

When it coordinates clauses, we saw that its typical position is after the first XP of the respective conjunct. As with Lezgian above, the standard pattern can be illustrated as in (27).

(27)   […]$_A$ < [XP < **dA** < …]$_B$

We note however that in some cases, 'dA' can also appear in the conjunct-final position.

5.3. Yavapai

In this section, I will briefly introduce a similar pattern from the Yuman language Yavapai as described by Kendall (1976). Chaining of clauses and sentences in Yuman languages has received a lot of interest since Langdon & Munro (1979); Hardy (1979); Gordon (1983) but the discussion exclusively focused on the extensive use of the switch-reference morphemes /-m/ (different subject) and /-k/ (same subject). In the example in (28), we see that the different subject marker at the end of the first clause indicates a change of subject (from first person plural to first person singular). The use of the same subject marker on the lexical verb of the second conjunct indicates that the subject of the lexical verb and the subject of the following auxiliary is identical.

(28)   [kwalthk=yala-h-e   '-yaam-ch-m] [nya '-tala   '-'u-k   '-yu-m].
         Red.Mountain-DEM-DIR 1-go-PL-DS   I   1-father 1/3-see-SS 1-be-IPFV
         'We went to Red Mountain and I saw my father.'

                                                            Tolkapaya, Hardy (1979, 197)

There is a lot of discussion about these markers and their many uses in Yuman languages but in any case, they cannot be considered coordinators per se as for example evidenced by the fact that they appear in auxiliary constructions like the second conjunct of (28) or control structures as in *'I want to go'* vs *'I want you to go'*. For this reason, constructions of this sort are not considered in the work at hand.

   Interestingly, at least one of the Yuman languages, namely Yavapai employs another strategy for combining clauses as extensively discussed by Kendall (1976). It

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is characterized by the use of what Kendall calls the connective particle *pe:*, which typically appears after the first phrase of the second conjunct.[5]

(30) [Maria hayko-v-c   yu-m] [Lupi **pe:** ʔpa:-v-c   yu-m]
      Maria Anglo-DEM-SUBJ be-ALLO Lupi CONJ Indian-DEM-SUBJ be-ALLO
      'Maria is an Anglo and Lupi is an Indian.'   Kendall (1976, 158)

This phrase does not have to be the subject:

(31) [hmañ hme:-c   ñmi ta:v-kñ]   [kiθar **pe:** kto:h-kñ]
      child male-SUBJ cat hit-COMPL dog   CONJ kick-COMPL
      'The boy hit the cat and the girl kicked the dog.'   Kendall (1976, 156)

Kendall glosses *pe:* as a conjunction arguing that it clearly shows semantic symmetry without implication of "temporal or existential priority" (Kendall 1976, 158). She shows that the order of the conjuncts may easily be swapped without any change in meaning. She notes that (32a) and (32b) are for all practical purposes synonymous:

(32) a. [hmañ hme:-c   ñmi ta:v-kñ]   [vqi   hmañ-c   **pe:** kiθar
          child male-SUBJ cat hit-COMPL female child-SUBJ CONJ dog
          kto:h-kñ]
          kick-COMPL
          'The boy hit the cat and the girl kicked the dog.'

---

[5]Interestingly, as far as I know, the other literature on Yavapai or Yuman languages in general do not give examples of this morpheme or discuss their placement. Even in the extensive data by Hardy (1979), which discusses Tolkapaya, a Western dialect of Yavapai, *pe:* does not appear; even though it should be noted that the data in Hardy (1979) focus more on clausal syntax and not on cross-clausal phenomena. But even in other literature on Yuman languages, the element is hardly mentioned. In the dictionary of Hualapai (Watahomigie 2003), we find a note about an emphatic particle *be* (page 18) and in Shaterian (1983), which deals with the different dialects of Yavapai, we find a brief mention of what he calls an interrogative conjunction *pè* (glossed as QCON) used in examples such as the following:

(29) ʔ-yām-k   ʔ-yū-β-à-pè
      1-go.away-SS 1-beDEM-IRR-QCON
      'and how would it be if I went?'

b. [vqi hmañ-c kiθar kto:h-kñ] [hmañ hme:-c **pe:** ñmi
   female child-SUBJ dog kick-COMPL child male-SUBJ CONJ cat
   ta:v-kñ]
   hit-COMPL
   'The girl kicked the dog and the boy hit the cat.'   Kendall (1976, 158)

Kendall also notes that *pe:* can optionally occur in the position between the two conjuncts but unfortunately no examples of this kind of placement can be found in her data. She also notes that the preferred position is not in between the two conjuncts but in the above-mentioned position after the first phrase of the second conjunct. Unlike other elements Kendall discusses such as the element *yite:*, later convincingly shown by Hardy (1979) to be an auxiliary rather than a conjunction, *pe:* can never appear in the first conjunct. This indicates that *pe:* is a monosyndetic coordinator unlike the other two case studies from Udihe and Lezgian, which showed the same placement pattern.

The example in (32) also showed that the constituent preceding *pe:* can be internally complex and Kendall (1976) notes that *pe:* specifically follows a syntactic phrase including appositional modifiers. The example she gives is the one in (33). It consists of four conjuncts. Conjuncts two to four all have the conjunction *pe:* in second position following the subject. Crucially, the subject in the fourth conjunct is complex as it consists of a head noun with an appositional modifier *hwak-k* ('the two of them together'). According to Kendall (1976, 158), this indicates that this appositional modifier is part of the complex constituent.

(33)   [Kalvin-c tu vo:-k va-kñ] [θala-c **pe:** hat-k
       Calvin-SUBJ just walk-EGO come-COMPL Thala-SUBJ CONJ horse-on
       wa:-km] [maria-c **pe:** karet wi: oy-ñe] [lupi-c pil-m
       sit-INC Maria-SUBJ CONJ wagon have bring-REP Lupe-SUBJ Bill-ASSOC
       hwak-k **pe:** kʷe+civiam-l ka:v-ñe]
       two-EGO CONJ car-in come+PL-REP
       'Calvin came on foot and Thala rode a horse and Maria brought her wagon

       and Lupe and Bill came together in the car.'   Kendall (1976)[6]

---

[6]In the examples in (33), I have changed the gloss of the verbal morpheme *ñe* to REPETETIVE. As

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Kendall (1976) gives some more examples of complex XPs preceding *pe:* including the one in (34) where *pe:* seems to follow a conjunct-initial free relative clause:

(34)   [viya q^{w}aθkol ʔ-ma:-v-c   miyul-km] [kur   ʔ-ma:-c **pe:** ke
       this apple   1-eat-DEM-SUBJ sweet-INC long.ago 1-eat-SUBJ CONJ NEG
       miyul-a   om-kñ].
       sweet-TENSE not-COMPL
       literally: 'This apple I am eating is sweet and the one I ate long ago is not sweet.' 'This apple I am eating is sweeter than the other one.'

<div align="right">Kendall (1976, 144f)</div>

So, to summarize, Yavapai has a monosyndetic coordinator *pe:* that preferably appears in a position inside the second conjunct. According to Kendall (1976), it can also appear in between the conjuncts. The position inside the second conjunct is defined as appearing after the first XP.[7]

(35)   […]$_A$ < [XP < **pe:** < …]$_B$

The pattern is thus quite similar than the ones found in Lezgian and Udihe with two minor differences. First, we note that Yavapai *pe:* is a monosyndetic coordinator and second, we noted that for Udihe that the coordinator can alternate between a final and a second position. In Yavapai however, there is also an alternation, which however, is between the initial position and the second position.

    Hardy (1979) shows, this morpheme is presumably a combination of two morphemes, which she subanalyes as *-ny* and *-ee*. As Hardy (1979, 84) notes, "the former indicate is used to indicate that a situation is repeated in some way" and the latter "that the situation (...) is viewed as having occured at least once in the past."

[7]Objectively speaking, unlike for Lezgian or Udihe, where we had examples of very complex XPs preceding the coordinators, we cannot really rule out the possibility that the coordinator in fact attaches to the first prosodic phrase as in Yorùbá for example. And in order to decide whether examples like (33) can be used to distinguish between the two patterns, we need to know more about their prosodic structure.

5.4. Summary

As we have seen, the pattern at hand is very similar in all three languages discussed above. In all cases, we saw that the coordinator appears after the first phrase of the respective conjunct and in all cases, we have seen at least some evidence that the constituent in question is not a prosodic one but rather a syntactic one. Presumably the most convincing pieces of evidence in this regard were cases where the constituent preceding the coordinator was sufficiently complex so that it could not straightforwardly qualify as a phonological phrase.[8] The most striking example in this regard came from Lezgian (repeated below for convenience):

(36) [Dağustandi-n har sa xür-e   lap q^{h}san wa ag'alt'aj pis
      Daghestan-GEN every one village-INESS very good and extremely bad
      adet-ar   awa-j-da-l   sa šak-**ni**   ala-č]
      custom-PL be.in-PTCP-SBST-SRESS one doubt-COORD be.on-NEG
      '… and there is no doubt that there are very good and extremely bad customs

      in every Daghestanian village.'

                              Haspelmath (1993, 366), gloss and translation adapted

We see that the constituent preceding the coordinator *ni* comprises a head noun and an entire relative clause.

We have also seen that this pattern appears with monosyndetic and polysyndetic coordinators. Accordingly, we can represent it as follows, where *&* can either be a monosyndetic or a polysyndetic coordinator.

(37)   […]$_A$ < [XP < **&** < …]$_B$

Cases of clausal coordinators appearing after the second position after the first

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[8]I have argued in the previous chapter that phonological phrases can sometimes be recursive and thus become somewhat complex but I want to note that, as we have seen above with the case study from German, there were clear upper boundaries of complexity of phonological phrases, which is something that we do not seem to find with syntactic constituents in the patterns studied in this chapter. Also, we have seen in German that recursivity in prosodic phrasing leads to optionally bigger prosodic constituents. In the case studies in this section no such optionality was observed.

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XP of their respective conjuncts are fairly common crosslinguistically. They are extremely widespread in Caucasian languages (see e.g. van den Berg (2004)) and in Turkic languages[9] but it is also found in many other language families. The following examples show the same pattern from a Semitic language of the northeastern Neo-Aramaic branch, Urmi-Aramaic, which is spoken in the town of Urmi of Assyrian Christians in Iran.[10] In both examples, you see the element *da*, a Turkish loan (Khan 2016a, 408), in the second position after an internally complex phrase.

(38) a. [tre dan-ə   ɟu=mə́šxa ḳaluyè=la]   [tre
          two DET.PART-PL in=oil   fry.PROG=COP.3SG.F two
          dan-ə=**da**   bə-švaḳé=la   nàyə]
          DET.PART-PL=COORD PROG-leave.INF=COP.3SG.F raw.PL
          'She fries two in oil and she leaves two raw.'   Khan (2016b, 192)

      b. [+'ál dáni   ci=matt-í-va   pardùvv-ə,
          on   DEM.PL.OBL HAB=put.PRS-3PL-PST lath-PL
          mən=dà=riša]   [+'ál dán   pardúvv-ə=**da**
          from=DEM.PROX.SG.OBL=side on   DEM.PL.OBL lath-PL=COORD
          ci=matt-í-va   +pavá-nə=t   'ilàn-ə]
          HAB=put.PRS-3PL-PST branch-PL=EZ tree-PL
          'On those they put laths, from this side. On the laths they put dry branches

          of trees'   Khan (2016b, 410), glosses by Silvie Strauß

The example below shows that a similar pattern is found in Eastern Armenian, an Indo-European language of the Armenian branch.

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[9]Although it should be noted that there is an ongoing debate for Turkish itself as to whether the element in question *dA* should be treated as a coordinator or as a topic marker or as something else completely. Kornfilt (1997) calls it a post-clitic coordinator, Göksel & Kerslake (2005) call it an additive clitic that has a continuative function when it attaches to a non-focused constituent. Göksel & Ozsoy (2003) argue that it is a focus-related element, whereas Bayırlı (2021) argues that *dA* is a proper coordinator.

[10]I thank Silvie Strauß for the discussion of patterns in Urmi Aramaic and Armenian and for providing the detailed glosses for many examples from these languages.

(39)   [mi tasə k'ayl nran-ic'   et   ənk-ac k'ayl-owm ēr
       one ten step DEM.DIST-ABL back fall-RES walk-IPFV AUX.3SG.PST
       Arowt'ik-ə], [nra   hetew-ic'=**ēl**   xowl-ə]
       Arutik-DEF DEM.DIST.GEN behind-ABL=COORD deaf-DEF
       'About ten steps behind him, Arutik was walking and behind him, the deaf

       one.'[11]

We also find this pattern in other parts of the world. In Rangi, a Bantu language
spoken in Tanzania (Stegen 2011), the monosyndetic coordinator *maa* appears after
the first syntactic phrase of the second conjunct when it expresses a contrast. This
is shown in (40).

(40)   [Kʉ-fuma Ʉla va-dom-áa   na Haubi too-lʉʉmbya n-dʉʉ
          15-come Ula 2.PST-go-HAB to Haubi ITR-greet   10-relative
       jaachwe]   [njɨr-ii   **maa** va-ka-hʉmʉlʉka]
       10.3SG.POSS 9-way-LOC but 2-CONS-rest
       'From Ula, they went to Haubi to greet his relatives but on the way then, they

       rested.'   Rangi, Bantu (Tanzania), (Stegen, 2011, 275)

Interestingly, the very same coordinator can be used in its canonical position be-
tween the two conjuncts when it does not express contrast but merely consecutive
readings. In these cases, it is glossed as AND_THEN by Stegen (2011).[12]

(41)   [Mw-aaka ʉ-mwɨ kw-a-j-áa   na n-jala   mʉnʉmʉʉnʉ] [**maa**
       3-year   3-one 17-PST-be-HAB with 9-famine too.much   AND_THEN
       N-kʉkʉ   a-ka-sea   ...].
       9-chicken 1-CONS-say
       'One year, there was a very bad famine and the chicken said...'

                                                              Stegen (2011, 118)

A pattern that, at least on the surface, seems to look similar to Rangi, comes from
Makalero, a Papuan Trans-New-Guinean language of the Timor-Alor-Pantar branch

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[11]Eastern Armenian National Corpus (EANC: Šahen T'at'ikyan, Nra čanaparhə, mas 1) gloss and
   translation by Silvie Strauß.

[12]Stegen (2011) notes that in the adapted texts his consultants would suggest to use *maa* for the
   Swahili loan *na*, which is frequently used in spoken Rangi and which can only occur in canonical
   position between the conjuncts.

spoken in the Iliomar town in East Timor (Huber 2011). Makalero has a series of clause-connectors including the two frequently used ones *-(i)si* and *-(i)ni*, which simultaneously express a clausal connection and the situation coherence, similar to a system of switch-reference marking.[13]. Similar to the case from Rangi above, we find that the connectors appear in between the two clauses when they express unmarked continuous connection (42a) but inside the second conjunct when they express contrast (42b). Huber (2011) then glosses them no longer as a linker but rather as a contrast marker.

(42)   a. [Hai dur]=**ini**   [ki-sefar=ee   hai ma'u fu-ue]
            NSIT wake.up=LNK 3SG.POSS-dog-DEF NSIT come near:RED-V2DEM
            'He woke up and his dog came close (to him)...'

      b. [Uai=ni=ni   aire' muni ma'u=ni ini-horu   dame=na'a=po]
            CLS=LNK=LNK now return come=LNK 1PL.EXC-WITH peace=INT=ADV
            [ini=**ni**   na'u tepa   tule]...
            1PL.EXC=CONTR just constant not.want.
            'And now they come and want to make peace with us, but we don't want

            (that)...'   Huber (2011, 480)

According to Huber (2011), the pattern in Makalero is complicated by the fact that the clause-internal uses of these linkers have, by now, grammaticalized into some sort of subject markers and as such it can often not be clearly distinguished as to whether the clause-internal uses of *ini* are due to it marking contrast or subject-hood.

So, even though the use of this pattern seems to be a very predominant feature in Caucasian language families as well as parts of some Turkic and Indo-European subbranches, we still find instances of this pattern in other parts of the world.

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[13]For a discussion of such systems, see Stirling (1993); McKenzie (2007, 2011); Weisser (2016)

6. Coordinators attaching to specific categories

In the previous chapters, we have seen a number of case studies in which coordinators appeared in some sort of a second position. Either they followed a phonological/prosodic constituent such as the first phonological word or the first phonological phrase. Or they followed a morphosyntactic constituent, namely the first XP. In this chapter, we will see some case studies in which the distribution of the coordinator cannot be classified as some sort of second position. In these case studies here, we see that the coordinators attach to a specific category largely independently of its position.

Two of the case studies involve two closely related languages Khwarshi and Tsez. Since these languages exhibit very instructive empirical differences in the placement of their coordinators, I decided to include them in this study. The third case study comes from Sinhala.

6.1. Khwarshi

In this subsection, I want to discuss some data from the language Khwarshi, a Nakh-Daghestanian language of the Tsezic branch. It has been noted repeatedly that the Nakh-Daghestanian (or more generally, the Caucasian languages overall) exhibit various peculiar patterns when it comes to coordinator placement (see e.g. Haspel-

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math 1997, van den Berg (2004), Erschler (2013) and many others).

Khwarshi is, as illustrated by the comprehensive grammar of Khalilova (2009), no exception to this rule. The placement of the Khwarshi coordinators *-n/-un/-in/-in* exhibits an intricate pattern whose complex interactions defy the straightforward classification of shifting coordinators that we have seen so far in this work. This makes them, of course, all the more interesting and the case study of Khwarshi conjunction will play an important role this section about morphosyntactically determined shifts as well as in the more theoretical discussion about the modelling of cliticization in Part II of this book. I have nonetheless decided to place the case study of Khwarshi coordinator placement in this section since most of the occurences of coordinators are placed on the basis morphosyntactic factors.

As already mentioned above, Khwarshi has a conjunction that exhibits four different allomorphs *-n/-un/-in/-in*, whose distribution is partly determined by whether the conjunct ends in a consonant or a vowel and, if it is the latter, by quality of final vowel of the stem it attaches to. According to Khalilova (2009), there are also sociolinguistic factors such as age, which determine the distinction between *-in* and *-un*. In simple NP-coordination, the conjunction exhibits a straightforward polysyndetic pattern with the affix attaching to the right of each conjunct.

(1)   bataxu-**n**   k'oro-**n**
      bread-COORD cheese-COORD
      'bread and cheese'   Khalilova (2009, 311)

(2)   ... qʻˤwine ʕurusažes-**in**   ʕabdužalil-**in**   m-eλ'-un-ay.
      ... two   Russian-COORD Abdulžalil-COORD HUM.PL-go-PAST.UW-NEG
      'two Russians and Abdulžalil did not'   Khalilova (2009, 422)

(3)   Muħamad-i**n**   Pat'imat-i**n**   hadiyad-il   b-ak-un
      Magomed-COORD Patimat-COORD each.other-LAT HUM.PL-see-PAST.UW
      'Magomed and Patimat met.' (lit. 'saw each other')   Khalilova (2009, 446)

We can see already from these simple examples that this seems to be a straightforward pattern of NP-coordination. In (2) and (3), we see that the coordination

of the two absolute subjects triggers the *m*-prefix which is used for human plural subjects. Khalilova (2009) discusses the agreement patterns in coordination in detail and sketches how the resolution rules that determine the plural gender of conjoined noun phrases look like but they consistently result in plural agreement (except for some combinations of non-human referents). Overall, it can be said that the resolution rules seem to indicate clearly that the semantics and the morphosyntactic gender of both conjuncts is taken into account and thus this suggests that we are dealing with coordinate structures. The same also holds for the licensing of reciprocal pronouns in (3) where the reciprocal pronoun *hadiyad* is licensed by the combination of the two plural subjects. Khalilova (2007, 121) notes that reflexives are strictly local and triggered by subjects, which indicates that are sensitive to the syntactic configuration, which, again, suggests that we are dealing with an instance of proper conjunction in (3).

As is common with polysyndetic coordinators, the affixes in question combine other functions. As shown in (4), they attach to wh-pronouns to form negative indefinite pronouns or free choice pronouns, something which is well-known factor of polysyndetic conjunctions. They also seem to be attached to a constituent to yield an additive reading ('also X') (see also Khalilova 2007, 117f). But we restrict ourselves to instances of coordination here.

(4) *na*   *na-n*
     'where'   'nowhere,anywhere'
     Khalilova (2009, 158f)

The elements are often used to connect more than two constituents. As mentioned in Section 3, this is another indicator that that we are in fact dealing with coordination rather than subordination.

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(5) b-evc-un-λo   b-evc-un-ay-λo
     HUM.PL-be-PAST.UW-NARR HUM.PL-be-PAST.UW-NEG-NARR
     [yuq'-ˤuče-**n**]   [uq'-ˤuče-**n**]   [uža-s   bercina-y
     old.woman-COORD old.man-COORD boy.OBL-GEN1 beautiful-II
     kad-ɨ**n**]
     girl.II-COORD
     'Once upon a time there was a grandmother, a grandfather and their son's

     beautiful daughter.'   Khalilova (2009, 311)

It should be noted that, as we saw with other patterns of polysyndetic coordinators discussed in the previous sections, there are sometimes cases where one of the two polysyndetic conjunctions is dropped. This is particularly common with clausal co-ordination but also occasionally with NP or PP-coordination. (6) shows that this is happens with complex numerals whereas (7) illustrates that the same can also happen with coordination of two nominal phrases.

(6) a. oⁿc'o-n   hos
         ten-COORD one
         'eleven'   Khalilova (2009, 171)

(7) [heč'č'e atɣ   nišoho-**n**]   [ħalla   reła-λ'a] t'iri
     most   before evening.AD-COORD three-OBL night-SUP nothing
     židuł   himon l-eq-un-ay
     that.PL.INTER thing.IV IV-happen-PAST.UW-NEG
     'The first night and during three other nights nothing happened to them.'

     Khalilova (2009, 160)

As will be important below, Khalilova (2009, 311) emphasizes that the conjunction can also attach to NPs that bear a case different from absolutive such as the ergative or one of the many local cases:

(8) [išet'-i-**n**]   [kand-i-**n**]   aq   bac'ałak'ʷ-i.
     mother.OBL-ERG-COORD girl-OBL-ERG-COORD house clean-CAUS-PAST.W
     'The mother and the girl cleaned the house.' Khalilova (2009, 312)

Finally, we can observe that the simple polysyndetic pattern also applies when co-

ordinating infinitival phrases:

(9) ... do-n   ∅-oⁿk'-i   ono-l   [lʲoλ-a-**n**]
     ... 1SG.ABS-COORD I-go-PAST.W there-LAT plough-INF-COORD
     [n-ež-a-**n**]
     IV-sow-INF-COORD
     '...and I went there to plough and sow.'   Khalilova (2009, 415)

However, the conjunction at hand can also conjoin a range of other syntactic cat-
egories like converbial phrases and clauses. It is also very common in so-called
converb constructions as in (8) above.The interesting thing about the conjunction
of these categories is that the placement pattern changes. In the case of clause-
coordination or coordination of converb clauses, the placement of the conjunction
does not simply attach to the conjunct as a whole but rather shifts into it. In the case
of coordination of clauses, the coordinator reliably attaches to the absolutive argu-
ment inside the respective conjunct. In (10), we see three conjuncts in all of which
the the conjunction follows the absolutive phrase inside the converb clause. Note
that this is an instance of three conjuncts in the verbal domain.

(10) [q'ˤuq'ˤle-s exen-**un**   l-ez-un]   [at'-ɨ**n**
      nut-GEN1   sack-IV-COORD IV-take-PFV.CVB wheat.IV-COORD
      l-ez-un]   [maqa-**n**   b-ez-un]   m-eλ'-un
      IV-take-PFV.CVB barley.III-COORD III-take-PFV.CVB HUM.PL-go-PAST.UW
      izzu   ɣoboɣoli.
      that.PL.ABS mill.APUD.LAT
      '(They) took the sack with nuts, took the wheat and took the barley and they

      went to the mill'   Khalilova (2009, 419)

In (11), we see the coordination of two finite clauses and in both of these clauses,
the conjunction attaches to the clause-initial absolutive phrase:

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(11) [lac'a-**n**   l-ow   l-eč-i]   [orodu-**n**   l-ow
food.IV-COORD IV-good IV-be-PAST.W bouza.IV-COORD IV-good
l-eč-i].
IV-be-PAST.W
'The food was good and the bouza was good.'   Khalilova (2009, 315)

It can be demonstrated quite straightforwardly that the coordinator attaches specif-
ically to the absolutive phrase. In (10), we saw that the absolutive phrase can be is
often preverbal. Since many of these converb clauses only consist of a direct ob-
ject and a verb, the absolutive phrase that the conjunction attaches to is both verb-
adjacent and conjunct-initial. However, none of these factors seem to play a role. We
find many examples of absolutive phrases that bear the conjunctions which are lo-
cated in a post-verbal position or preverbal but not verb-adjacent or clause-initial.
Consider the example in (12) where we have two conjoined converb clauses and
in both of these clauses, we see that the conjunction attaches to the absolutive NP
even though, the absolutive NP is located in different positions with respect to the
verb: In the first conjunct, it is postverbal and even separated from the verb by an
ergative subject pronoun and in the second conjunct it is preverbal.

(12) [l-eɣ-un   ise   exena-ba-**n**   omʔoq'ʔe-λ'o-zi]
IV-take-PRF.CVB DEM.OBL.ERG sack.OBL-PL.ABS-COORD donkey-SUP-ABL
[bočka-ma-l kukku-**n**   čaλ-un]   q'udu ∅-eč-un.
barrel-IN-LAT flour.ABS-COORD pour-PFV.CVB down I-sit-PAST.UW
'He took the sacks from the donkey, poured the flour into the barrel and sat
down.'   Khalilova (2009, 87)

The example in (13), a short excerpt from a longer story, shows the same thing. In
the first conjunct, the absolutive phrase is postverbal whereas in the second and the
third, it is preverbal.

(13) ... [b-it'x-in   buλ'q'ˤu-**n**],   ... [žu-**n**
      ...III-divide-CAUS-PFV.CVB sheep.III-COORD ... that-COORD
      b-uxˤad-un],   [l-ogu isul λarmałi-**n**   l-i-yin]
      III-slaughter-PFV.CVB IV-good that.LAT hospitality.IV-COORD IV-do-PFV.CVB
      ∅-aqˤqˤ-un
      I-lie.CAUS-PAST.UW
      ...(he) stole a sheep, (...) slaughtered it, and treated him (the guest) well and

      made him (the guest) go to bed.'   Khalilova (2009, 393)

Based on countless examples of this sort, it is fair to say that the absolutive argument is the preferred target for the placement of the conjunction and whenever there is a suitable absolutive phrase, the conjunction will occur in this position. The fact that the conjunction specifically targets the absolutive phrase is clearly a pattern of morphosyntactically conditioned placement of the coordinator since it is sensitive to the morphosyntactic case of the element in question.

However, an interesting pattern emerges when the conjuncts in question do not contain an absolutive phrase. This is, again, particularly widespread with converb clauses since the arguments of these clauses are often dropped as they are identical with the ones in the matrix clause or other conjuncts. In these cases, the coordinator attaches to another phrase, namely the first XP inside the conjunct. The result is that we do find the coordinator on a number of diffent morphosyntactic categories but only in the absence of a suitable absolutive. In (14), we see that the first conjunct only consists of a converb preceded by a locative adverb because the absolutive pronoun is dropped as it is identical with the subjects in the rest of the clause. Thus, the coordinator attaches to the locative adverb.[1]

(14) [solo-qolo-**n**   ∅-uλ-un]   [idu-**n**   ∅-axxač nartaw-ba
      RED-around-COORD I-turn-PFV.CVB this.ABS-COORD I-back   giant-PL.ABS
      golzā-ɣul]   ∅-ot'q'un.
      be.PRES.LOC-CVB-VERS   I-come-PAST-UW
      'He walked around and came back to the place where the giants were.'

---

[1]Note also that the second conjunct of (14) shows that the pattern in Khwarshi is indeed different from the one in Tsez shown in the next section. In Tsez, the coordinator would attach to the rightmost noun phrase of the conjunct irrespective of its case.

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Khalilova (2009, 408)

Two more examples of this type are found in (15) and (16). In the first conjunct in (15), we see that the converb clause only consists of a converb (which is in fact the copula) and some sort of verbal particle *q'udu* which literally translates to 'down'. The combination of these two results in the meaning 'to sit'. But again, since there is no absolute subject in this conjunct, the coordinator attaches to the verbal particle. In (16), we see the second conjunct which only consists of a verb preceded by a verbal particle and again the particle bears the coordinator.

(15) ʔadala-w-in ∅-us-un eⁿxe-ho [q'udu-**n** ∅-eč-un]
      fool-I-COORD I-find-PAST.UW river.OBL-AD down-COORD I-be-PFV-CVB
      [eⁿso gobizaha].
      snow be.NEG-PRES.LOC.CVB
      'He found Fool at the river sitting at the place where there was no snow.'

Khalilova (2009, 81)

(16) [l-i-ya himon-ič i-iq'-bič], [žoho-**n** guc'-un]
      IV-do-INF thing.IV-EMPH IV-know-NEG.CVB after-COORD look-PFV-.CVB
      q'ˤemɬi-**n** λux-un.
      family-COORD remain-PAST.UW
      'The family kept staring and not knowing what to do.'

Khalilova (2009, 396)

In (17), we see that the first conjunct behaves regular in that the coordinator attaches to the absolutive phrase but since the second conjunct consists only of a copula plus an NP in superessive case, it will attach to that NP.[2]

(17) [ono oʲ-uq'ˤu-t'a aq-ba-**n** l-i-yin]
      there NON.HUM.PL-big-PL house-PL.ABS-COORD NON.HUM.PL-do-PFV.CVB
      [paraq'at-λ'a-**n** b-eč-če] b-eč-un izzu.
      quiet-SUP-COORD HUM.PL-be-IPFV.CVB HUM.PL-be-PAST.UW that.PL.ABS
      'They built many houses there and were living in peace.'

---

[2]According to Khalilova (2009, 76) superessive is either assigned by some psychological verbs or, as in the case at hand expresses a metaphorical location.

In (18), we see the coordination of two intransitive converb clauses, neither of which contains an absolutive argument as both are identical with the subject of the following clause. The only thing both clauses contain apart from the converb is a predicative adjective, which, as a result, bears the coordinator.

(18)   [y-uq'ˤu-**n**   y-eq-un],   (...) [bercina-y-**in**
      II-big-COORD II-become-PFV.CVB ... beautiful-II-COORD
      y-eq-un]   žu   kad   y-ot'q'-aλa   c'aq'-ic
      II-become-PFV.CVB that.ABS girl.II.ABS II-COME-ANTR very-PART
      ʕadaliɫ-še   y-eč-un   abaxar.
      get.crazy-IPFV.CVB II-be-PAST.UW neighbor.II
      'She grew up, became beautiful, and when this girl came, the neighbor was going crazy.'   Khalilova (2009, 287)

In the example in (19), the first of the to conjuncts does not have an absolutive noun phrase whereas the second conjunct does. Thus, in the second conjunct the coordinator will simply attach to the absolutive noun phrase (o^{n}če-č hu^{n}ho 'nine chicks'). In the first conjunct, however, the coordinator will attach to the first phrase of the conjunct, which is a phrase in the so-called contessive case, which expresses a location around its complement. Since the phrase in contessive case also contains a genitive possessor, we see that it is indeed a complex XP that the coordinator attaches to in this conjunct.

(19)   ...ō^{n}ču-ɫ   hadal   [iɫ-lo   k'al'a-qa-**n**   y-o^{n}c-un
      ...hen.III-INTER together that.OBL.GEN leg-CONT-COORD V-tie-PFV.CVB
      gollu]   [o^{n}če-č   hu^{n}ho-**n**   y-ez-un].
      be.PRS.PTCP nine-COLL chick.V-ABS-COORD V-take-PST.UW
      'Together with the hen, (the hawk) took nine chicks that were tied to her leg.'

In very much the same way as with the case studies in the previous chapter, we can ask ourselves if the pattern at hand is sensitive to syntactic locality domains. We saw that the case studies involving phonological targets, syntactic islands did not

matter. If coordinators target the first phonological word or phrase, then they will freely float into a syntactic island if the target position happens to be inside an island. But for cases involving a morphosyntactic target like the ones in the previous chapter, islands did play a role. We saw for example that, in Lezgian, a clause-initial subordinate clause was skipped in its entirety for the purposes of second-position placement. In Khwarshi, we can observe something similar. If there is an absolutive phrase inside a given conjunct but it is located inside a subordinate clause, then it will be ignored. Consider the second conjunct in the example below, which translates to 'the boy sent him again to sell the horse'. Since both matrix arguments are dropped, the only absolutive argument *soyro* ('horse') in that clause is located inside the infinitival clause. We can see that it is part of the infinitival clause because it triggers class III-agreement on the infinitive but not on the main verb of the conjunct. But because *soyro* is located inside the infinitival clause, it cannot be a target for the placement of the coordinator and thus the placement resorts to the position after the first XP, which, in this case is the adverbial *žahaλ'a* or possibly the entire verb phrase consisting of the verb and the adverb.

(20) [zamana m-eλ'-aλa] [∅-ešt'-un   žahaλ'a-**n**   [soyro   b-eɣ*ʷ*-a   ]]
      time.III   III-go-ANTR I-let-PST.UW again-COORD horse.III III-sell-INF
      'When some time passed, (boy) sent (him) again to sell the horse.'

<div align="right">Khalilova (2009, 128)</div>

A similar configuration is observed in (21), where the complement clause of the verb *behidōɣ* ('permit') bears the coordinator rather than the absolutive phrase inside of it. Again, we can see that the absolutive pronoun triggers human plural agreement on the subordinate verb but not on the superordinate verb suggesting that it is properly included in the embedded clause.

(21) [[íl*ʲ*o   ɣode   ɣono-ɬ-ɣul   m-ok'-a]-**n**
      1PL.ABS tomorrow forest-OBL-INTER-VERS HUM.PL-go-INF-COORD
      behidōy.]
      permit.GNT
      '...and we might go to the forest tomorrow.'

Khalilova (2009, 364), translation adapted

It thus seems fairly clear that these infinitival clauses count as opaque for the purposes of coordinator placement. This is comparable with them being opaque for placement in Lezgian or Udihe although the concrete placement rules differ. In order to test whether the clause was opaque for the purposes of coordinator placement in Lezgian or Udihe, we had to place the subordinate clause in an initial position to see if the coordinator would appear inside of it. In Khwarshi, due to the differences in the placement pattern in general, we need to find configuration where the superordinate clause does not have an absolutive phrase but the subordinate clause does.

So, to sum up, I counted 149 marked cases of coordination of clauses or converb clauses in Khalilova's (2009) grammar, the accompanying texts or in Khalilova (2007). In 116 cases, the coordinator attaches to the absolutive phrase in a given conjunct. In 33 cases, the coordinator lacks an absolutive phrase to attach to and will then attach to the first phrase in a given conjunct. In about 13 of these 33, absolutive phrases were ignored because they were either located in an infinitival or participial clause or a quotative construction and thereby plausibly not accessible for placement of the coordinator.[3]

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[3]Another interesting complication is found with comparative constructions. Here, the object of comparison is marked with the so-called superablative case and will reliably bear the coordination marker in addition even though, on the surface, it seems like there might be a potential absolutive target:

(22) isulo   ɣina-λ'a-zi-**n**   b-iže b-iyōy Muslim-i   halt'i
      that.OBL.GEN wife.OBL-SUP-ABL-COORD III-more III-do.GNT Muslim-ERG work.III
      'Muslim works more than his wife.'   Khalilova (2009, 287)

It is not quite clear to me what the structure of these examples are and why the superablative phrase consistently bears the coordinator here. It might be that, unlike what the gloss by Khalilova

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So, overall, I take the pattern I have described above to be fairly robust. Khwarshi has a polysyndetic coordinator that targets the absolutive phrase in a given conjunct. If there is no absolutive phrase in a given conjunct (usually due to prodrop), then the coordinator will resort to the pattern we saw in the previous chapter: It will then simply attach to the first XP of the conjunct, regardless of its case or function.[4]

We can depict the pattern in Khwarshi as follows where the respective dots inside the second conjunct indicate that there is no placement restriction on the coordinator, whose underlying form I assume to be *in* here for ease of exposition.

(25) $[\ldots]_A \prec [\ldots NP_{abs}\text{-}\mathbf{in}\ldots]_B$

In case there is no absolutive phrase inside a given conjunct, we resort to the pattern discussed above where the coordinator follows the first XP:

(26) $[\ldots]_A \prec [XP \prec \mathbf{in} \prec \ldots]_B$

(2009) suggests, this use of *n* is more focus-related and therefore does not have any bearing on the question of coordinator placement to begin with. Due to the systematic nature of the use of *n* in comparative constructions, I would like to conclude that there is something else going on here and therefore did not include them in the survey about the distribution of the coordinators.

[4]Throughout the grammar and the accompanying texts, I only found three exceptions where it seems that an absolutive phrase that could possibly be targetted is ignored. Interestingly, in all three of these cases we are dealing with configurations where the absolutive is ignored in favor of the indirect object or a goal of motion in lative case In (23), we see that there is an absolutive in the clause that triggers agreement and thus should qualify as a target but it is ignored and the coordinator attaches to the recipient in lative case. In (23), the second exception to the claim, we see that the absolutive is ignored in favor of the clause-final phrase in the apudessive-lative case.

(23)   [dub-ɣeru]   [di-l^j-in   os   b-oq-i].
        2SG.OBL-CAUSAL 1SG.OBL-LAT-COORD money.III III-get-OST.W
        'I got the money thanks to you.'   Khalilova (2009, 73)

(24)   [hobože do   ∅-ak^w-aλa] [∅-ot'q-un   Sultan diɣol-un   ].
        now   1SG.ABS I-see-ANTR I-come-PST.UW Sultan.I 1SG.APUD.LAT-COORD
        'Now when (he) saw me, Sultan came to me.'   Khalilova (2009, 303)

I have no straightforward explanations for the placement of these cases but I hope that further investigations of ditransitive constructions in Khwarshi or related languages or the nature of the lative case will provide us with an explanation about these exceptions. Despite these three exceptions, I take the above-mentioned pattern to be very robust.

6.2. Tsez

Tsez is a language that is closely related to Khwarshi above and as we will see, the coordinator that we will look at in this section, which is presumably a cognate of the Khwarshi one, has in many ways quite similar properties. Crucially, the rules determining its placement differ in some ways from the ones in Khwarshi. For this reason, I decided to include case studies from both Tsez and Khwarshi in this book as a case of micro-variation.

As in Khwarshi above, the basic strategy to coordinate nominal constituents in Tsez is a polysyndetic one, making double use of the additive marker *-n*, which, in some cases, has the allomorph *-no* and as in Khwarshi, the choice between the two allomorphs is conditioned by whether they follow a vowel or a consonant.

(27) ža kid-**no** ža uži-**n**
DEM girl-ABS.II-COORD DEM boy-ABS.I-COORD
'this girl and this boy' Polinsky (2015, 21)[5]

As is well-known from polysyndetic coordinators, they can also be used as markers for information-structural purposes indicating topic or additive focus. Polinsky (2015) argues that these uses are to be distinguished since the (a) differ in their syntactic placement within the clause, (b) can often cooccur and (c) have different restrictions as to what they can occur with. The example in (28) shows for example the cooccurence of the topic marker and the polysyndetic coordinator. Polinsky (2015, 398) also notes that the topic marker cannot cooccur with a focus particle *tow* while the coordinator can.

(28) Mus-ä-n ʕal-ä-**no**-n ža-wa r-oy-n!
Musa-ERG Ali-ERG-AND-TOP DEM.ABS.IV-EXCL IV-do-PST.UW
'For Musa and Ali, to do that!' Polinsky (2015, 398)

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[5]All data in this section come from the draft of the Tsez grammar as available on the website `http://scholar.harvard.edu/files/mpolinsky/files/polinsky_15_tsez-syntax-a.5_2.pdf` The page numbers here indicate the page numbers in the pdf-file of the draft of the Tsez Grammar as accessed in February 2024.

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So, as in Khwarshi, the nominal coordination is largely unremarkable and has both coordinators attach to the right of the respective conjuncts. With clausal coordination, the pattern looks differently. Consider the following idiom, which is a coordination of two complete clauses. In both conjuncts, we see that the coordinators attach to the respective preverbal absolutive noun phrase.

(29)   [äλi-ru   roži-**n**   r-äq-inč'-i   ] [ʕomoy-ce
        say-PST.PTCP word-ABS.IV-COORD IV-become.FUT-NEG   donkey-EQUAT
        boc'i-**n**   b-äq-inč'-i   ]
        wolf.ABS.III-COORD III-become.FUT.NEG
        'Not all things come true.' (lit: Spoken word does not get fulfilled and one

        that is donkey-like does not turn into a wolf.)   Polinsky (2015, 150)

As in Khwarshi, it is common in clausal conjunction to drop the polysyndetic coordinator in the second conjunct:

(30)   [Dey   žuka qizan-**no**   ānu],   [dā-r   kamuraw
        1SG.GEN1 bad family.ABS.III-COORD be.PRS.NEG 1SG-LAT lacking
        šebin   ānu]
        thing.ABS.IV be.PRS.NEG
        'I have a good family and I lack for nothing.'   Polinsky (2015, 333)

So, at first sight, the situation seems like the one in Khwarshi. However, upon closer inspection, it is not tricky to find examples which are unexpected under the assumption that the coordinator specifically seeks out the absolutive phrase. Consider the following complex example which includes two converb clauses both of which exhibit a polysyndetic coordination marker. Crucially, in the first conjunct, the coordination marker attaches to the preverbal element *bužzi* ('belief,trust') rather to the absolutive phrase *Goqi* in the same conjunct. In the second conjunct we see a similar situation in that the preverbal versative noun phrase *idu-ɣor* ('(towards) home') rather than the demonstrative pronoun that immediately precedes it.

(31) [Goqi   zir-ä   äƛi-ru   ƛina-ƛ'-no   bužži-**n**
      Goqi.ABS.I fox-ERG say-PST.PTCP what-SUPER-ESS-INDEF believe-COORD
      ∅-oq-no]   [nes-ä   ža   idu-ɣor-**no**
      I-become-PFV.CVB DEM.I-ERG DEM.ABS.III home-VERS-COORD
      b-iži-n]   q'ˁano-n sadaq   b-iči-x   zow-n.
      III-lead-PFV.CVB two-COLL together IPL-stay-IPFV.CVB AUX.PST-PST.UW
      'Goqi believed what Fox said, took him home, and the two of them started

      living together.'   Polinsky (2015, 320)

Another indicator that the pattern is different in Tsez can be found in cases where there is no absolutive noun phrase in the respective conjuncts. If there was no absolutive noun phrase in a given conjunct in Khwarshi, the language would resort to placing the coordinator in second position after the first XP. This is not the case in Tsez. Consider the first conjunct of the example in (32), which does not have an absolutive noun phrase. However, unlike what we would expect in Khwarshi, the coordinator then does not show up on the first XP but still only on the preverbal one marked with lative case.

(32) [Sasaqozox   ... maħo-r-**no**   y-oq-no]   [q'orol-ä
      early.in.the.morning ... outside-LAT-COORD II-become-PFV.CVB widow-ERG
      ža-z   babiw-q   esi-n   nesi-ƛ'   yäł-ru
      lad-GEN2 father-POSS.ESS tell-PST.UW DEM.I-SUPER.ESS be.PRS-PST.PTCP
      q'ʷariłi-ł-äy].
      sadness-CONT-ABL
      'In the morning the widow slipped outside (...) and told his father about the

      woes that befell him.'   Polinsky (2015, 303)

Examples of this sort indicate that despite the fact that the two languages are quite closely related, the pattern of coordinator placement is substantially different. In fact, Polinsky (2015) discusses the placement of the linking morpheme *-n(o)* in detail and gives the following generalization: "When finite clauses are coordinated, -*n(o)* appears either on the very last constituent of the first clause (...) or, if the clause is verb-final, on the immediately preverbal constituent." In other words, *n(o)* ap-

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pears on the rightmost nominal constituent in a given conjunct. This pattern extends to coordination of converb clauses, which, however, are consistently head-final such that the coordinator is always immediately preverbal. Consider the following minimal pair Polinsky (2015) gives. In (33), we have two coordinated clauses and the first conjunct is verb-final. Thus the coordinator is attached to the immediately preverbal noun phrase. In (33), we see the same configuration except that one of the noun phrases appears postverbally and then the coordinator appears in final position (34). Finally, example (35) shows the same configuration expressed by a converb clause and the element again appears on the immediately preverbal constituent.

(33) [Roλiqur   elu-r   zurma-q'ili-s   ruk'-**no**
      at.midnight 1PL-LAT zurna-drum-GEN1 loud.sound.ABS.IV-COORD
      teq-si],   [moλ-a-x-āy   č'ari-ł-si   eli].
      hear-PST.WIT dream-OS-AD-ABL wake-INTR-PST.WIT 1PL-ABS
      'At midnight we heard loud sounds of music, and woke up.'

                                                    Polinsky (2015, 399f)

(34) [Roλiqur   zurma-q'ili-s   ruk'   teq-si
      at.midnight zurna-drum-GEN1 loud.sound.ABS.IV hear-PST.WIT
      elu-r-**no**],   [moλ-a-x-āy   č'ari-ł-si   eli].
      1PL-LAT-COORD dream-OS-AD-ABL wake-INTR-PST.WIT 1PL-ABS
      'At midnight we heard loud sounds of music, and woke up.'

                                                    Polinsky (2015, 399f)

(35) [Roλiqur   elu-r   zurma-q'ili-s   ruk'-**no**
      at.midnight 1PL-LAT zurna-drum-GEN1 loud.sound.ABS.IV-COORD
      teq-no]   [moλ-a-x-āy   č'ari-ł-si   eli].
      hear-PFV.CVB dream-OS-AD-ABL wake-INTR-PST.WIT 1PL.ABS
      'At midnight we heard loud sounds of music and woke up.'

                                                    Polinsky (2015, 399f)

Importantly, despite its strong preference for being either the rightmost or at least the immediately preverbal element, the coordinator will nonetheless never attach to

a verbal element. We have already seen that, in a verb-final clause, it will always attach to the preverbal constituent, never to the verb. Moreover, we find cases involving complex verb-clusters, in which the immediately preverbal element is another verb. In these cases, the coordinator will skip that verb as well and always attach to the rightmost nominal phrase.

(36) [Sadaq ʕo-**n**   riž-äsi   zow-zaλ']   …
      together axe.ABS.IV-COORD IV-carry-RES.PTCP be.PST-CAUSAL.I.CVB
      '…didn't you have your axe with you?'   Polinsky (2015, 323f)

Polinsky (2015) makes another interesting observation that sets Tsez apart from the pattern we observed for Khwarshi above. Concerning the function of *-n(o)* as a means to indicate clause-linkage, she writes that "this function of *-n(o)* is dependent on linear order only and is not sensitive to constituency;" and she notes that *-n(o)* in this function can attach to a subconstituent of a light verb or of a clausal constituent. Consider the following examples, which contrast the behavior of an infinitival clause in Tsez (37) with an infinitival clause in Khwarshi (38). In (37), we see that the coordinator *-n* appears on the absolutive noun phrase inside of the infinitival clause because that is simply the linearly closest noun phrase.

(37) [Mi-**n**   y-ex-a]   zow-s.
      2SG.ABS(.II)-and II-die-INF be.PST-PST.WIT
      'And you would have been meant to die.'   Polinsky (2015, 227)[6]

In (38), the example from Khwarshi, we see that the absolutive *soyro* ('horse') is ignored because it is located in an infinitival clause as well. Instead the coordinator *-n* appears on the adverbial *žahaλ'a* ('again').

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[6]The bracketing is taken over from Polinsky (2015) and indicates the infinitival clause rather than the coordinand (as in the rest of this work). I only added the boldface of the coordinator *n* in this example.

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(38)   … [∅-ešt'-un   žahaλ'a-**n**   [soyro   b-eɣ^w-a]]
           I-let-PST.UW again-COORD horse.III III-sell-INF
       '… and (boy) sent (him) again to sell the horse.'

<div align="right">Khwarshi, Khalilova (2009, 128)</div>

In a sense, what this suggests is that with coordinators attaching to specific categories (in this case nouns), we find a similar split as with the second position coordinators we saw above. Some of them are sensitive to constituency and syntactic phrasing whereas others are sensitive to linear order only. This will play an important role in the discussion of these placement patterns in Part II of this book. So, to summarize, we have seen that the Tsez coordinator behaves like the Khwarshi one in many basic respects including its polysyndetic nature and that the canonical pattern in nominal coordination turns into a non-canonical one in cases of clausal coordination. Further, in both cases, we observe that the coordinator seeks to attach to a nominal category. However, the strategies to find a nominal category are fundamentally different. While, in Khwarshi, the coordinator specifically seeks out the absolutive noun phrase, the coordinator in Tsez is indifferent about the case of the noun phrase. It will always attach to the rightmost noun phrase of a given conjunct. This pattern can be schematized as in (39).

(39)   [… NP-**in** (V)]$_A$

6.3. Sinhala

The last pattern of a coordinator seeking out a specific category to attach to comes from Sinhala. Sinhala is an Indo-Aryan language spoken on the island of Sri Lanka by roughly 16 million speakers (Chandralal 2010). It greatly differs from its Indo-Aryan relatives (apart from the other insular Indo-Aryan language Dhivehi (Fritz 2002)) both in terms of its lexicon but also in terms of its grammatical properties. As both Geiger (1938) and Chandralal (2010) discuss, this is due to the fact that Sin-

hala is geographically surrounded by Dravidian languages, most notably by Tamil, which is the other main language spoken in Sri Lanka.[7]

Coordination in Sinhala is usually marked either by mere juxtaposition (40), by the monosyndetic coordinator *saha* (41) or by the polysyndetic coordinators *-i* (42).

(40) Ranjit [gedərə e-nə-wa]   [bat ka-nəwa]   [tiiwee balə-nə-wa].
Ranjit home come.NPST-IND rice eat-NPST-IND TV   watch-NPST-IND
'Ranjit comes home, has a meal and watches TV.

Chandralal (2010), gloss adapted

(41) Mame [Ranjit-wa] **saha** [Chitra-wa] daki-nə-wa
1SG   Ranjit-ACC and Chitra-ACC see-NPST-IND
I see Ranjit and Chitra.

(42) Mame [Ranjit-wa-**i**]   [Chitra-wa-**i**]   daki-nə-wa
1SG   Ranjit-ACC-COORD Chitra-ACC-COORD see-NPST-IND
I see Ranjit and Chitra.

The following examples show that the polysyndetic element comes with an allomorph *-ui* when it follows a consonant.[8]

(44) [Ranjit-**ui**]   [Chitra-**i**]   ma-we daki-nə-wa.
Ranjit-COORD Chitra-COORD 1SG-ACC see-NPST-IND
Ranjit and Chitra see me.

As common with polysyndetic coordination markers, we find that outside of coordi-

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[7]Unless otherwise indicated, the data for this case study were elicited in several elication sessions between December 2023 and June 2024 with Dilini Kolombage.

[8]Geiger (1938); Chandralal (2010) also note that there is another polysyndetic coordinator *-t* (shortened from *-da* according to Geiger (1938)) that has the same distribution. According to Chandralal (2010), it has more of an emphatic use. Note that (43b) is the same non-canonical placement pattern we will see for *-i* below.

(43) a. [umba-**t**] [mama-**t**]
2SG-COORD 1SG-COORD
'You and I'   Geiger (1938, 167)
  b. apə-ṭ [gewal hada-nna-**t**]   puluwan] [kaḍa-nna-**t**]   puluwan].
we-DAT houses make-INF-CONJ can   break-INF-CONJ can
'We can build houses and also destroy houses.'   Chandralal (2010, 184)

nation they can be used with some focus-related meaning. Note that, in these cases, the clause-final verb changes to the so-called focus form indicating that an element within the clause is focused. Since we do not see this change of the verbal morphology in (44) with conjunctional uses of *-i*, we know that the two uses are sufficiently different.

(45) John Maria-wa-i   daki-nn-e.
      John Maria-ACC-FOC see-NPST-FOC
      'John sees only Maria.'

  Chandralal (2010) notes that for coordination of clauses, juxtaposition is an option and that the use of *saha* is increasingly accepted. And indeed, my consultant readily accepts examples like (46) with or without *saha.*

(46) [Ranjit nuvərə indan en-nə-wa]   (**saha**) [Chitra Colombo ya-nə-wa]
      Ranjit Kandy from   come-PRS-IND (and) Chitra colombo go-PRS-IND
      'Ranjit comes from Kandy and Chitra goes to Kandy.

With the polysyndetic conjunction *-i,* the pattern is a bit more complicated. We note that *-i* can readily conjoin constituents that are larger than a noun phrase. In (47), we see that that *-i* can conjoin infinitival verb phrases and in (48), we see that it can also conjoin phrases that include the subject and the object but excludes the verb.

(47) [Chitra-țə nuvərə ya-nna-**i**]   [Ranji-tə   colombo ya-nna-**i**]   ooni.
      Chitra-DAT Kandy go-INF-CONJ Ranjit-DAT colombo go-INF-CONJ must.
      'Chitra must go to Kandy and Ranjit must to go to Colombo.'

(48) [Ranjit nuvəra-**i**]   [Chitra Colomba-**i**]   ya-nə-wa
      Ranjit Kandy-CONJ Chitra Colombo-CONJ go-NPST-IND
      'Ranjit goes to Kandy and Chitra to Colombo.'

Crucially, however, we cannot conjoin finite clauses with *-i.*

(49) *[Ranjit nuvərə indan e-nə-wa-**i**]   [Chitra colombo
       Ranjit Kandy from   come-PRS-IND-COORD Chitra Colombo
       ya-nə-wa-**i**]
       go-PRS-IND-COORD
       'Ranjit comes from Kandy and Chitra goes to Colombo'

This is, as it turns out, a well-known pattern in the Dravidian literature. In Malayalam and Tamil we find the same pattern and the standard conclusion here is that the problem is a morphological one, namely that the polysyndetic coordinator is in complementary distribution with finite morphology, i.e. tense and mood marking (see e.g. Amritavalli (2003); Jayaseelan (2013); Bhatt (2014)).[9]

Up to this point, the Sinhala pattern is, as curious as this morphological incompatibility may be, not an instance to be studied against the background of this typology as we have not seen a coordinator in a non-canonical position. In all cases there was a quite plausible analysis of the underlying clause structure in which the coordinators appeared at the respective edges of their conjuncts. This, however, is not always the case. Consider the example in (51) where we see the conjunction of two full clauses consisting of an auxiliary and a non-finite verb. The meaning of the sentence as well as the presence of two different auxiliaries clearly indicates that the coordination includes the auxiliaries as well.

(51) [Chitra-tə nuvərə ya-nna-**i**   puluwan] [Ranji-tə   colombo
       Chitra-DAT Kandy go-INF-CONJ can   Ranjit-DAT colombo
       ya-nna-**i**   ooni].
       go-INF-CONJ want.
       'Chitra can go to Kandy and Ranjit wants to go to Colombo.'

The following example shows a similar situation. In this case, the second auxiliary

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[9]In order to express such a meaning, the languages then resort to an auxiliary construction involving a more or less semantically bleached auxiliary.

(50)   Ranjit nuvərə indan e-nna-**i**   Chitra colombo ya-nna-**i**   in-nə-wa
       Ranjit Kandy from   come-INF-COORD Chitra Colombo go-INF-COORD be-NPST-IND
       'Ranjit hopes/expects/is going to come from Kandy and Chitra hopes/expects/is going to go to Colombo'

is a negated one *bæhæ* ('cannot'). We note that the negation is clearly embedded

inside of the second conjunct despite its linear position.

(52) yam   ken-ek-ʈə   [colombo indan e-nna-**i**   puluwan]
      thing CL.HUM-INDEF-DAT Colombo from   come-INF-CONJ can
      [nuvara ya-nna-**i**   baehae].
      Kandy   go-INF-CONJ cannot
      Someone can come from Colombo and cannot go to Kandy.

We find the same pattern with other non-finite verb forms like the perfect participle.

In (53), we see two clauses involving perfect participles ending in *la* being conjoined

by the parallel use of *-i*

(53) [Chitra nuvərə gihi-la-**i**   in-nə-wa] [Ranjit Colombo indan
      Chitra Kandy go-PERF.PTCP-CONJ can   and   Ranjit   Colombo
      æwi-la-i   in-nə-wa].
      come-PERF-PTCP-CONJ cannot
      'Chitra has gone to Kandy and Ranjit has come to Colombo.'

Such examples are also attested for Malayalam and Tamil as discussed by work

by Amritavalli (2003); Jayaseelan (2013). In particular, Jayaseelan (2013) attributes

quite some significance to these examples and develops a complex syntactic sys-

tem that is supposed to derive these facts. This system is criticized by Bhatt (2014)

who argues that we can get away with a much simpler system that has the coordi-

nator subcategorize for nominal categories (in the spirit of Anandan 1993). He then

goes on to argue that the non-finite verb forms are nominal in some sense as for

example evidenced by the fact that they can bear case marking. This part of the ar-

gumentation carries over to Sinhala where we also find that infinitival phrases can

be case-marked in some configurations (54). The example in (55) shows that they

can also occur as predicates and bear the so-called assertion marker that appears

with non-verbal predicates.

(54) api perəhærə bala-nnə-ʈə Kandy giyaa
      we festival   see-INF-DAT Kandy go.PST.IND
      'We went to Kandy to see the Perahera festival.'   Chandralal (2010, 203)

(55) ma-ge adəhasə kohoməhari upaadi-ak   gan-na-i
      I-GEN idea   however   degree-INDEF get-INF-AM
      'My idea is to get a degree at any costs.'   Chandralal (2010, 203)

The same holds for the perfect participle formed with *la* which bears the assertion marker in the following cleft context.

(56) mahattea kalutərə-ʈə gihil-la-y   ti-u-ne
      gentleman Kalutara-DAT go-PERF-AM be-PST-FOC
      'What happened was, he had gone to Kalutara.'   Gair (1970, 137)

Anandan's (1993) and Bhatt's (2014) solution involving subcategorization of the co-ordination marker for nominal constituents explains why the marker in question cannot conjoin finite clauses but it does not explain the instances of non-canonical placement in (51) and (52). And in fact, Bhatt (2014) discusses these examples only in a footnote and suggests that these examples are not instances of coordination at all. Rather these are two independent clauses with two focus-related occurrences of *-i*.

And while I cannot confirm or invalidate that speculation for Malayalam or Tamil at that point, we can show for Sinhala that this is not the case here.[10]

As we have seen above, focus marking on an element in the clause goes hand in

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[10]We can show quite straightforwardly using a combination of *-i* and *saha* that these are not two independent clauses.

(57) [Chitra-ʈə nuvərə ya-nnə-**i** puluwan] saha [Ranjit-ʈə colombo ya-nna-**i** bææ].
      Chitra-DAT Kandy go-INF can   and Ranjit-DAT colombo go-INF   cannot
      'Chitra can go to Kandy and Ranjit cannot go to Colombo.'

My consultant notes that the example in (57) feels a bit redundant and it would be slightly prefer-able without the respective *-i* but it certainly is grammatical. In Chapter 2, we have seen that the combined use of monosyndetic coordinators and polysyndetic ones is possible even though it might feel a bit redundant.

Another point that can be made to show the same thing involves examples like (58) with a non-specific indefinite noun phrase inside of a shared subject position in clauses with a non-canonical position of *-i*:

6. Coordinators attaching to specific categories

hand with a change of verbal morphology. When an element is marked with one of the many focus markers in the language, the verb morphology must change from indicative to the so-called focus form:

(59) Nuwərə bas ekə tamay dæn giy-e   / *giy-a.
      Kandy bus one FOC   now go.PST.FOC / go-PST.IND
      'It is the Kandy bus that left now.'   Henadeerage (2002)

(60) John Maria-wa-i   daki-nn-e   / *daki-nə-wa.
      John Maria-ACC-FOC see-NPST-FOC / see-NPST-IND
      'John sees only Maria.'

So, we can indeed juxtapose two clauses with independent focus marking but then we need to have focus marking on the clause-final verb.

(61) [Ranjit Chitra-wa-i   hamu-we-nn-e]   [John Maria-wa-i
      Ranjit Chitra-ACC-FOC meet-do-NPST-FOC John Maria-ACC-FOC
      daki-nn-e]
      see-NPST-FOC
      Ranjit meets only Chitra and John sees only Maria.

The same holds for cases where an infinitival clause is in focus. As (62b) shows, in-dicative marking is impossible in this configuration. This clearly indicates that we are dealing with focus marking here rather than with coordination.

(62) a. John Maria-wa dæki-nn-i   inn-e
          John Maria-ACC see-INF-FOC be.NPST.FOC
          'John is only going to see Maria.'

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(58) yam ken-ek-ţə   [colombo indan e-nna-i   puluwan] [nuvara
      thing CL.HUM-INDEF-DAT Colombo from come-INF-CONJ can   Kandy
      ya-nna-i   baehae].
      go-INF-CONJ cannot
      Someone can come from Colombo and cannot go to Kandy.

The reading that we get here is that it is one person for which both conjuncts hold. A non-specific person X can come from Colombo and the same person X cannot go to Kandy. The example does not have the meaning according to which these can be two different people. This suggests that the clauses actually share the same subject and thus need to be conjoined.

    b. *John Maria-wa dæki-nn-i   in-nə-wa
          John Maria-ACC see-INF-FOC be-NPST-IND
          'John is only going to see Maria.'

Crucially, we note that examples in which the coordinator attaches to a nominal participle do not trigger the focus form on the main verb. This shows quite clearly that the use of *-i* in these examples is not a focus-related one but rather one of co-ordination.

(63)   [Chitra nuvərə gihi-la-**i**   in-nə-wa] [Ranjit Colombo indan
        Chitra Kandy go-PERF.PTCP-CONJ can   and   Ranjit   Colombo
        æwi-la-i   in-nə-wa].
        come-PERF-PTCP-CONJ cannot
        'Chitra has gone to Kandy and Ranjit has come to Colombo.'

This in turn means that examples like (63) are instances of non-canonical coordinator placement in the sense of our research methodology. The remaining question is how we can describe the distribution of the coordinator in these examples.

    If we follow the underlying intuition in Anandan (1993) and Bhatt (2014) and assume that the coordinator *-i* attaches only to a nominal constituent, then we can see a certain parallel to the cases in Khwarshi and Tsez but then we can ask ourselves if it will, in non-canonical contexts ever shift to one of the verb's arguments. The example in (64) attempts to construe such a situation. We have a conjunction of two finite clauses and attach the conjunction to the immediately preverbal constituent (as in Tsez). In (65), we see the same configuration with postverbal objects. The result is in both cases ungrammatical.

(64)   *[Ranjit Chitra-wa-**i**   hamu-we-nə-wa]   [John Maria-wa-**i**
        Ranjit Chitra-ACC-COORD meet-do-NPST-IND John Maria-ACC-COORD
        daki-nə-wa].
        see-NPST-IND
        'Ranjit meets Chitra and John sees Maria'.

(65)   *[Ranjit hamu-we-nə-wa   Chitra-wa-**i**],   [John daki-nə-wa
       Ranjit meet-do-NPST-IND Chitra-ACC-COORD John see-NPST-IND
       Maria-wa-**i**]
       Maria-ACC-COORD
       Ranjit meets Chitra and John sees Maria.

What this means is that the somewhat paradoxical generalization that we arrive at is that the conjunction in both conjuncts targets a nominal constituent within the clause-final verb cluster. We might represent that as in (66).

(66)   [… [$_V$ NP-**i** …]]$_A$ [… [$_V$ NP-**i** …]]$_B$

Interestingly, we find that in Sinhala, when this specification cannot be fulfilled (as in simple finite clauses) then the conjunction will not be expressed. This is, in a sense parallel to what we have seen in Khwarshi and Tsez. In Khwarshi we saw that if there was no absolutive phrase in the conjunct, the conjunction would attach to the first noun phrase in a given conjunct but if there was no noun phrase at all (as the conjunct would only consist of a verb) then the conjunction would disappear.

6.4. Summary

In this section, I have discussed three case studies which do not fall under the general rubric of second position elements that we have seen for all the other case studies in this book. In the case studies at hand, it was not (only) the relative position of a given element that caused the attachment of the coordinator but first and foremost its morphosyntactic category. In all three case studies, the coordinator specifically seeks out a noun phrase to attach to. In Khwarshi, it was the absolutive noun phrase that was the preferred target for coordinator attachment, in Tsez it was the rightmost noun phrase of a given conjunct and in Sinhala it was an element with nominal properties inside the clause-final verbal cluster. In Part II of this book, I will discuss these patterns a bit further and argue that the preferred attachment of

the coordinators to the a nominal constituent is not a mere accident but rather a remnant of the diachronic process that led to this pattern. In all three languages, the coordinator in question is a polysyndetic one that – historically speaking – was used to conjoin noun phrases. The use of this coordination marker, I will argue, was extended to also conjoin clauses in addition to nominal constituents and, in the course of extending this context, the syntactic selection was reinterpreted as a morphological attachment requirement. In other words, at some point the coordinator was only syntactically compatible with noun phrases but at a later point, this was reinterpreted as the fact that the coordinator could only morphologically attach to noun phrases. Of course, the three languages resorted to different strategies as to how this morphological requirement played out and I will discuss the specifics of this in more detail in Chapter 5 of Part II of this book.

There are a number of languages, areally or genealogically close to either Khwarshi/Tsez or Sinhala that seem to exhibit patterns of the same type. As noted in the respective section on Sinhala, the Dravidian languages Tamil and Malayalam show very similar behavior to Sinhala and even though I do not have the historical sources to back up that claim, it strikes me as likely that the Sinhala pattern is ultimately of Dravidian origin. The following example is from Jayaseelan (2013) and indicates the non-canonical use of the polysyndetic coordinator *-um* attached to a nominal infinitival verb form.

(67)   [John war-uka-**(y)um** ceyt-illa],   [Mary pook-uka-**(y)um** ceyt-illa].
       John   come-INF-CONJ do.PERF-NEG Mary go-INF-CONJ   do.PERF-NEG
       'John didn't come; also, Mary didn't.'   Malayalam, Jayaseelan (2013)

As for other Caucasian languages, I would like to refer the reader to van den Berg (2004), who discusses quite a number of patterns that seem to point into a similar direction. She notes for example that there is a clausal linking morpheme *-ra* in the Daghestan language Dargi that preferably appears on the absolutive noun

phrase in embedded contexts. Similarly, van den Berg (2004) notes that in Avar, the polysyndetic coordinator *-gi* is attached to the absolutive phrase of a given conjunct to indicate coordination.

(68) was   heč'ogo kawu-**gi**   xut'utegi,   yas   heč'ogo
      boy.ABS not.being gate.ABS-COORD stay.OPT.NEG daughter.ABS not.being
      ebel-**gi**   xut'utegi
      motherABS-COORD stay.OPT.NEG
      'Let a house not be without a son, let a mother not be without a daughter

      (i.e. may a house have a son, may a mother have a daughter).'

                    Avar, Alekseev & Ataev (1998, 64) via van den Berg (2004, 207)

Other languages, for which she gives examples indicating a similar pattern are Bagvalal (see also Kibrik 2001), Hunzib, Godoberi and Archi.

  Before concluding this section, I want to briefly note that this chapter here should not be viewed as providing an exhaustive typology of this type of placement. As I will discuss in more detail in the next chapter as well as in Chapter 1 of Part II, the range of second position placement we find with coordinators seems to mirror quite perfectly what we find elsewhere with second position placement. So, in a sense, it seems plausible that the patterns we found there are exhaustive. With patterns where the coordinator targets a specific morphosyntactic category, we really do not have much to compare it to and so, it is not clear what hypothetical patterns we could possibly look for. It might be that there are languages out there, which consistently attach the coordinator to a noun phrase bearing another case (nominative, accusative, ergative, etc.) or that we find a free word order language, in which the clausal coordinator always attaches to the verb regardless of its structural or linear position. At this point, it makes little sense to speculate about these patterns but I want to point out that what I found in this chapter is in all likelihood not all that is out there.

7. Emerging generalizations

This section concludes the empirical part of this work and intends to summarize the major empirical findings. I will discuss a number of generalizing hypotheses that seem to emerge from the individual case studies discussed in the previous chapter. I do want to stress that the generalizations are called that because they generalize across my sample and not because I claim them to be generalizations that hold for all languages present and past. Nonetheless, I think they at least provide interesting hypotheses as to what to expect crosslinguistically and stating them in a clear and precise way makes it easier to (a) look for counterexamples in languages that I have not studied in this work and (b) investigate the theoretical implications for their formal modelling. The second part of this work will build precisely on those hypotheses to investigate their formal properties, their relations to the notion of the clitic and to ultimately go on to propose a coherent framework for clitics in general.

7.1. Patterns

As the organization of the previous chapters already indicated, we find that the patterns of non-canonical coordinators can roughly be grouped into four different patterns:

① ω_1-COORD: Coordinators appearing after the first phonological word of a given coordinand

② φ_1-COORD: Coordinators appearing after the first phonological phrase of a given coordinand

③ XP$_1$-COORD: Coordinators appearing after the first syntactic phrase of a given coordinand

④ [F]-COORD: Coordinators attaching to a specific feature within a given coordinand

The first three of these patterns are quite homogeneous in their behavior and fairly straightforward to describe. The fourth one is arguably less homogeneous and it is, at least at this point, quite unclear whether the different patterns can, on some level of abstraction, be unified. I will discuss this issue in more detail in the second part of this work but for now, I decided to group them together.

In the following sections, I will discuss some of the emerging generalizations from this typology, for example I will show that the availability of the above-mentioned patterns correlates with a number of variables controlled for within the current study. We will see that even though the respective patterns above were formulated in reference to "a given coordinand". But in fact which coordinand the coordinator appears in is fully predictable from the underlying syntactic type of the coordinator. Monosyndetic coordinators uniformly shift into the second coordinand whereas polysyndetic ones only shift into the one that they syntactically belong to.

7.2. Differences between morphosyntactic and phonological patterns

This section deals with the observation that we can group the above-mentioned placement patterns into two basic classes, depending on whether they target a phonological constituent or a syntactic constituent. The two patterns targeting phonological constituents are the one I called the ω-COORD pattern and the φ-COORD pattern.

The pattern I called the XP-COORD pattern targets a morphosyntactic constituent.[1] The question is of course whether this classification tells us anything about the patterns beyond the distinction it is based on. And indeed it does. We have seen that the choice of whether the target constituent is phonological or morphosyntactic in nature correlates with (a) the ability to shift into adverbial or infinitival clauses and (b) the possibility to alternate between a second position and a final position.

Let us start with the first observation concerning adverbial and infinitival clauses. Throughout the case studies, especially the ones that involve phonologically determined patterns, I often highlighted the fact that the coordinator in question sometimes appears inside a constituent that is usually known to be syntactically opaque, or as I often referred to it, an island. Consider the following configurations from Latin and Cherokee. In (1), we see that the coordinator *que* appears inside an adverbial clause simply because that clause located at the beginning of the relevant conjunct.

(1)   ... [[quia=**que**   adeo me complevi flore   Liberi], magis libera uti lingua
            because=and so.far me filled   flower Liberi, more free   use tongue
        collibitum   est mihi]
        please.PART is   me
        'and because I have filled myself with the fruit of the wine god, I like to use

        my tongue more freely.'   Maccius Plautus, Cistellaria, 1,2,8

In the Cherokee example below, we see that the second conjunct starts with an embedded clauses that literally translates to *'this being the reason'*. Nonetheless, the coordinator that scopes over the entire clause freely shifts into this embedded clause.

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[1]I will leave the discussion of the [F]-pattern aside for now but see below.

7. Emerging generalizations

(2) [[naàski=**hno** iyúústi ii-ka]   tee-ookii-lvv́hwístaàneeh-óʔi kavvhnóóta
    that=COORD reason ITR=be:PRC DST-1B.PL.EX-work:INC-HAB 3A-alive
  ii-uu-alistoht-ííʔi].
  PRT2-3B-become:DVN-NOM2
  '(and) that's why we struggle to keep it alive.'

<div align="right">Montgomery-Anderson (2008, 545)</div>

The same can be said for the example from Yorùbá below. The coordination marker appears inside of a conditional clause if it is initial to the second conjunct.

(3) [[Tí   òrùn ba ran], Ade yóò lọ sí Èkó] [[tí   òjò ba **sì**
     COMP sun   may shine, Ade will go to Lagos   COMP rain may COORD
  rọ̀], Olú yóò lọ sí Ìbàdàn].
  fall   Olú will go to Ibàdàn
  'If the sun is shining, Ade will go to Lagos and if it rains, Olú will go to Ìbàdàn.'

Parallel examples to the Yorùbá one involving conditional clauses could be found in the case studies about German and Polish. For Yorùbá, German and Polish, we also saw cases where the coordinator also appeared inside relative clauses.

It thus seems quite clear that phonologically determined coordinators, i.e. those appearing with φ-COORD and ω-COORD patterns, can freely shift into embedded clauses - even into adverbial clauses that are usually considered syntactic islands.

Patterns involving morphosyntactically determined clitic placement however seem to obey islands. An example involving an opaque infinitival clause comes from Udihe, a language exhibiting the more straightforward XP-COORD pattern. Here, the clause-initial infinitival clause counts as one constituent for the purposes of coordinator placement even though, in principle, the direct object that is part of the infinitival clause could have counted as a proper XP to host the coordinator itself. But it seems to be too far embedded.

(4) [Oño-wo   o:-mi-**de**   onobui onobui oño-wo
      ornament-ACC make-INF-FOC which which ornament-ACC
      o:-i]
      make-PRES.PTCP
      'And as for making ornaments, they make all sorts of them.'

Nikolaeva & Tolskaya (2001, 865)

We also saw an even more extreme case of a clausal constituent acting as the host of the coordinator in Lezgian. Here it is a noun phrase that is modified with an entire relative clause that precedes the coordinator. The relative clause itself contains many phrases that would, in principle, be able to act as a host for the coordinator but they are not accessible as they are embedded inside an opaque syntactic domain.

(5) [Daǧustandi-n har sa xür-e   lap q^{h}san wa ag'alt'aj pis
      Daghestan-GEN every one village-INESS very good   and extremely bad
      adet-ar   awa-j-da-l   sa šak-**ni**   ala-č]
      custom-PL be.in-PTCP-SBST-SRESS one doubt-COORD be.on-NEG
      '… and there is no doubt that there are very good and extremely bad customs

      in every Daghestanian village.'

Haspelmath (1993, 366), gloss and translation adapted

So, it seems that for morphosyntactically determined placement patterns certain embedded clauses constitute some sort of opaque domains.[2] Using this as a purely descriptive term, we can postulate the following generalization:

(6) Generalization 1:

     Shifting coordinators that target morphosyntactic constituents (XP-COORD) will not shift into syntactically opaque constituents (islands) whereas coordinators that targets phonological constituents (ω,φ) will.

This is a first, quite straightforward difference between morphosyntactically deter-

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[2]This phenomenon is already observed in Halpern (1995) who uses the term *fortresses* to refer to syntactic constituents/domains that cannot be penetrated for the purposes of clitic placement.

mined and phonologically determined shifting patterns. A second difference between these two types of patterns concerns the issue of alternations between canonical and non-canonical positions of the coordinator. We have seen that, in quite a lot of cases, the non-canonical positions we studied in the previous chapters, alternated with canonical positions.

One of the clearest cases comes from Udihe. We have seen that the regular shifting pattern had the clausal coordinator appear after the first XP of the respective conjuncts. This is shown in (7).

(7)   ... [(Uti zoŋka mafasa)$_{XP}$-**de**   iñekte-ili]...
    ... this poor old.man-COORD laugh-3SG ...
    '... and the poor old man laughed...'

<div align="right">Udihe, (Nikolaeva & Tolskaya, 2001, 911)</div>

However, in some cases, namely when the coordinator had a disjunctive reading or in cases of an emphatic conjunctive reading, we saw that the coordinator attach in a canonical position to the right of the entire conjunct.

(8)   [Xekui bi:-we-ni-**de**]   [gili bi:-we-ni-**de**]
    hot   be-PRES.PTCP-ACC-3SG-FOC cold be-PRES.PTCP-ACC-3SG-FOC
    akta-masi-mi
    try-DIS-1SG
    'I am checking whether it is hot or cold.'   Nikolaeva & Tolskaya (2001, 661)

(9)   [Mafa-ni   geu-de-i] [bue-ni mamasa-ni jaŋca-la-i-**de**]
    husband-3SG pole-V-PRP he-3SG wife-3SG   steer-VBLZ-PTCP-COORD
    'The husband was going to push and his wife was going to steer.

<div align="right">Udihe, (Nikolaeva et al., 2002, 97), gloss adapted</div>

Another well-attested alternation can be found in Lezgian. Here, in the case of clausal coordination, we saw the same pattern in Udihe with the coordinator attaching to the first XP. This is different, however, with NP-coordination, where the coordinator just attaches to the conjunct as a whole. This happens even when the conjunct NP

itself is complex in the sense that there is a possible XP-sized host inside of it. This is shown in (10), where both conjuncts have possessors that could qualify as possible hosts.

(10) [Zu buba-**ni**] [bubadi-n buba-**ni**] čuban-ar
I.GEN father-COORD father-GEN father-COORD shepherd-PL
x̂a-ji-bur ja
become-AOR-SBST.PL COP
'Both my father and my father's father were shepherds.'

Haspelmath (1993, 328)

In both Udihe and Lezgian, and in fact in many other languages of the Caucasus and nearby areas, we find that the an [XP-COORD]-patterns alternate with a canonical conjunct-final pattern. Similarly, we have seen patterns where an [XP-COORD]-pattern alternates with a conjunct-initial canonical position. Languages with this pattern were Yavapai, Rangi and Mandarin. For Rangi, Stegen (2011) specifically notes that the position after the first XP indicates some sort of contrast (11), whereas the canonical position in between the two conjuncts is a neutral one.

(11) [Kʉ-fuma Ʉla va-dom-áa na Haubi too-lʉʉmbya n-dʉʉ
15-come Ula 2.PST-go-HAB to Haubi ITR-greet 10-relative
jaachwe] [njɨr-ii **maa** va-ka-hʉmʉlʉka]
10.3SG.POSS 9-way-LOC but 2-CONS-rest
'From Ula, they went to Haubi to greet his relatives but on the way then, they

rested.' Rangi, Bantu (Tanzania), (Stegen, 2011, 275)

(12) [Mw-aaka ʉ-mwɨ kw-a-j-áa na n-jala mʉnʉmʉʉnʉ] [**maa**
3-year 3-one 17-PST-be-HAB with 9-famine too.much AND_THEN
N-kʉkʉ a-ka-sea ...].
9-chicken 1-CONS-say
'One year, there was a very bad famine and the chicken said...'

Stegen (2011, 118)

For phonologically determined shifting patterns, we also saw some alternations. In German for example, we noted that there was largely a free alternation between

the conjunct-initial position and the position after the first phonological phrase. In Latin, there is an alternation between the conjunct-initial position and the position after the first phonological word. Unlike in German, the alternation is not free but conditioned by whether the monosyndetic coordinator et/at is also pronounced or left out. If it is pronounced, the polysyndetic coordinator will simply cliticize to it (13), if however it is not, it will shift to a position after the first phonological word (14).

(13)   [reliqui   sese fug-ae   mandar-unt] at=**que**   [in proxima-s
       remaining REFL flight-ACC gave-PERF.3PL and=COORD in near-ABL
       silva-s   abdid-erunt].
       wood-ABL.PL hide-PERF.3PL
       'The remaining ones fled and hid in the nearest woods.'

Latin, Caesar, De Bello Gallico 1.12

(14)   ... [(sub   occasum)$_\omega$=**que** sol-is]
       ... before setting=COORD   sun.GEN
       '.... and before the setting of the sun'

Latin, Caesar, De Bello Gallico 2.11

What we end up with is that we find three out of four logically possible alternations. We have seen non-canonical morphosyntactically determined placement patterns that alternate with a conjunct-initial or a conjunct-final position and we have seen phonologically determined placement patterns that alternate between a conjunct-initial position and a position after the second phonological word or phrase. What I have not found in my sample is an alternation between a conjunct-final position and a phonologically determined position after the first phonological word or phrase. We can represent that as follows, where the arrows indicate an alternation and B_1, B_2, etc. are abstractions over syntactic or phonological constituents:

(15)   Alternations with morphosyntactically determined second-position patterns:

a.   [A$_1$, A$_2$ ... A$_n$]   [B$_1$ B$_2$ ... B$_n$]

b.   [A$_1$, A$_2$ ... A$_n$]   [B$_1$ B$_2$ ... B$_n$]

(16)   Alternation with phonologically determined second-position patterns:

a.   [A$_1$, A$_2$ ... A$_n$]   [B$_1$ B$_2$ ... B$_n$]

b.   [A$_1$, A$_2$ ... A$_n$]   [B$_1$ B$_2$ ... B$_n$]
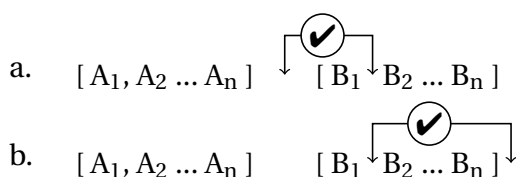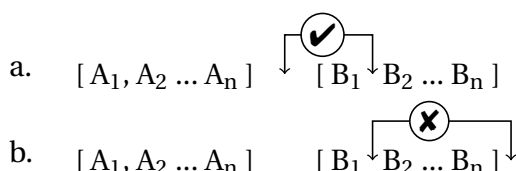
Parallel to the generalizations above, we can also capture this asymmetry as below.

(17)   Generalization 2:

Coordinator placement patterns that target morphosyntactic constituents (XP-COORD) can alternate with a coordinand-initial or a coordinand-final position. Coordinator placement patterns that target phonological constituents (ω-COORD, φ-COORD) can only alternate with a coordinand-initial position.

In the second part of this book, I will argue that this three-out-of-four pattern, although initially surprising, in fact falls out as expected under specific assumptions about how these elements come to be in the position in which they surface. But for now, we will simply note that this is another clear difference between morphosyntactically conditioned placement patterns and phonologically conditioned placement patterns.

Before we move on to the differences between monosyndetic and polysyndetic coordinators, let me say a few words about the behavior of the [F]-COORD pattern. As noted above, this does not fall quite neatly into this clearcut distinction between morphosyntactic and phonologically determined clitic placement. We have seen for Khwarshi for example that the pattern seems to obey syntactic islands. In Khwarshi, the coordinator attaches to the absolutive phrase if there is one. Crucially, we saw

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cases where an absolute phrase was ignored because it was located inside an embedded clause.

(18)   [[íl^jo   ɣode   ɣono-ɬ-ɣul   m-ok'-a]-**n**
       1PL.ABS tomorrow forest-OBL-INTER-VERS HUM.PL-go-INF-COORD
       behidōy.]
       permit.GNT
       '...and we might go to the forest tomorrow.'

<div align="right">Khalilova (2009, 364), translation adapted</div>

In (18), we see that the clause-initial absolute pronoun is not a suitable host for the coordinator because it is embedded inside an infinitival clause embedded under the verb *behidōy*. It seems that 'the algorithm' determining the coordinator placement cannot see the absolute pronoun as it is too deeply embedded. As noted in the respective section, if there is a accessible absolute phrase inside the conjunct, then the coordinator will simply be attached to the first XP in a given conjunct. In other words, the failure to find an absolute phrase will result in resorting to the other morphosyntactic placement pattern we saw in Lezgian or Udihe. And, again, here we see that the entire infinitival clause is treated as one constituent indicating that it is opaque for the purposes of coordinator placement.

On the other hand we saw the minimally different pattern in Tsez, where, according to Polinsky (2015), the coordinator placement rule ignores any sort of syntactically opaque domains such as infinitival clauses. In (19), the simple rule that the coordinator simply attaches to the rightmost nominal element ignores the infinitive clause boundary.

(19)   [Mi-**n**   y-ex-a]   zow-s.
       2SG.ABS(.II)-and II-die-INF be.PST-PST.WIT
       'And you would have been meant to die.'   Polinsky (2015, 227)[3]

---

[3]The bracketing is taken over from Polinsky (2015) and indicates the infinitival clause rather than the coordinand (as in the rest of this work). I only added the boldface of the coordinator *n* in this example.

In Part II of this work, I will argue in detail that the difference between Khwarshi and Tsez mirrors, in a sense, the dichotomy between morphosyntactic and phonologically determined coordinator placement and that the differences in empirical behavior between the two languages fall out from this distinction. In this sense, the [F]-COORD pattern does not fall as neatly into this dichotomy. But crucially, the individual case studies in that category do.

7.3. Differences between monosyndetic and polysyndetic coordinators

One of the variables we controlled for was the syntactic difference between monosyndetic and polysyndetic coordinators. Monosyndetic coordinators only appear once per coordination structure and, for coordination of two coordinands, their canonical position is in between the two coordinands. Polysyndetic coordinators can appear more than once and will usually appear once per coordinand. In this section, we will briefly see that controlling for this variable actually has an immediate impact on which non-canonical placement patterns we find.

All of the placement patterns noted in Section 8.1 were formulated in terms of coordinator placement being determined within "a given coordinand". But if we control for the syntactic difference between monosyndetic and polysyndetic coordination, then it is fully predictable which coordinand the coordinator appears in. In all the case studies in the previous chapters we have seen that monosyndetic coordinators will always appear in the second conjunct. Polysyndetic coordinators on the other hand will always appear in the respective conjuncts they syntactically belong to. The respective patterns are illustrated below. In (20), we see the attested patterns for monosyndetic coordinators. Monosyndetic coordinators that appear in a non-canonical position will always appear inside the second conjunct (conjunct B) below (20). The hypothetical pattern of a monosyndetic coordinator appearing to

the left of its canonical position, i.e. in conjunct A, is unattested. Note that these representations are intended as abstracting away from the individual patterns and the concrete nature of the respective elements. In that sense, the element B_1 in this regard can be any sort of syntactic or phonological constituent.[4]

(20)
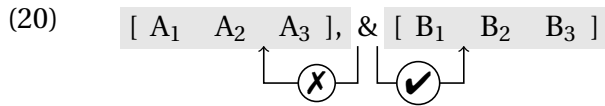
Languages in the core sample instantiating this pattern were German, Polish, Yorùbá, Yavapai and the extended sample includes others such as Makalero, Mandarin, Nupe or Rangi. To give a simple example, we have seen the Yorùbá example in (21) already but a hypothetical example of a language like Yorùbá' as in (22) below, where we have the exact same placement pattern but within the first conjunct seems completely unattested.

(21)   [Ó pupa] [ó **sì**   lẹ́wà   ]
           he fair   he COORD beautiful
           'He is fair and he is beautiful'   Yorùbá,(Abimbola, 2017), gloss adapted

(22)   *[Ó **sì**   pupa] [ó lẹ́wà   ]
           he COORD fair   he beautiful
           'He is fair and he is beautiful'   Yorùbá'

For polysyndetic coordinators, we find that they similarly exhibit very clear placement preferences. In configurations where, for a coordination of two clauses, we see both coordinators surfacing, we see that both coordinators appear in the conjuncts they syntactically belong to (23). We never see configurations where a polysyndetic coordinator appears in a coordinand that it does not belong to.[5]

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[4]Note that the arrows in these representations are not, at this point, intended as a means to indicate that there is necessarily a literal derivational path that links the canonical position with the non-canonical one inside a given conjunct. I will indeed make such a claim in the second part of this work based on a more intricate pattern in the data but for now these arrows are merely intended as a means to indicate the canonical position and the non-canonical one.

[5]I am representing the polysyndetic coordinators here as ADD indicating their use as additive markers used for coordination.

(23)   [A$_1$ A$_2$ A$_3$], =ADD   [B$_1$ B$_2$ B$_3$] =ADD
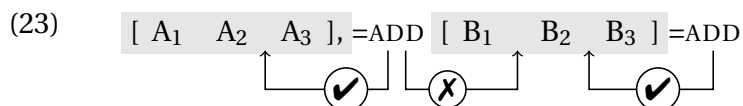
In Udihe, we see that the polysyndetic coordinators mostly appear in the second position within their respective conjuncts even though they can also appear postverbally. Hypothetically, we might expect a pattern where the coordinator that modifies the first conjunct also appears to the right of where we expect it to (similar to the monosyndetic coordinator above). But that does not seem to happen. Both coordinators reliably seem to obey the respective constituency of the respective conjuncts.

(24)   [Zuge-we-**de** čalu-wene-mi] [ima:-we-**de**   čalu-wene-mi] ...
        ice-ACC-FOC melt-CAUS-1SG snow-ACC-FOC melt-CAUS-1SG
        'I melt the ice, I melt the snow, ...'   Udihe, Nikolaeva & Tolskaya (2001, 584)

This empirical generalization holds for all languages with non-canonical polysyndetic coordinator placement. Within my core sample we saw data from Latin, Cherokee, Kalaallisut, Lezgian, Udihe, Khwarshi, Tsez and Sinhala. But even beyond that, this holds for all the other languages that I looked at, most of which come from the Caucasian family, Indo-European and Turkic and Tungusic languages.

In general, the pattern with the polysyndetic coordinators seems to indicate quite clearly that the placement of coordinators obeys some sort of basic syntactic constituency. And in fact, this observation generalizes fairly straightforwardly to the monosyndetic coordinators as well under the commonly shared assumption that monosyndetic coordinators form a constituent with the second conjunct to the exclusion of the first (see amongst many others Ross 1967; Dik 1968; Munn 1993; van Koppen 2005; Benmamoun et al. 2009; Neeleman et al. 2023).

Against this background, I would like to propose the following generalization:

(25)   Generalization 3:

        Shifting coordinators always appear inside the coordinand that they form a constituent with.

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    a.   Monosyndetic coordinators always shift into the second coordinand.

    b.   Polysyndetic coordinators always shifting into the coordinand they modify.

A second difference between monosyndetic and polysyndetic coordinators can be found when we look for correlations with the actual patterns identified in Section 8.1. This is most notable with instances of phonologically determined coordinator placement. All the case studies involving placement after the first phonological word (Latin, Cherokee, Kalaallisut) involved polysyndetic coordinators and the case studies involving placement after the first phonological phrase (Yorùbá, Polish, German) all involved monosyndetic coordinators. Even beyond the core sample, this statement about polysyndetic coordinators shifting to a position after the first phonological word seems to be generally true. As noted in the summary of Chapter 3, Mitrović (2014) specifically discusses quite a number of Indo-European languages of that time period that had a similar pattern of polysyndetic coordinators appearing after the first prosodic word.[6] So, for now, there seems to be quite a number of languages pointing to there being a bidirectional implication for phonologically determined placement patterns. We can summarize this implication as follows:

(26)   Generalization 4:

    For phonologically determined non-canonical placement patterns of coordinators, we find the following:

    a.   Monosyndetic coordinators will always appear after the first phonological phrase.

    b.   Polysyndetic coordinators will always appear after the first phonological word.

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[6]As noted in the summary of Chapter 4, I do not know of other languages exhibiting more cases of φ-COORD placement, which could be for various reasons, but my suspicion is that it is mainly because this pattern is much harder to identify and therefore less likely to be described as such compared to the others.

As for morphosyntactically determined placement patterns we do not find quite such a nice correlation. Both types of coordinators can make use of the XP-COORD pattern. As for the [F]-pattern, however, according to which the coordinator attaches to a specific feature within its coordinand, we can, at least for now, make the tentative statement that in all languages we found with this pattern (Khwarshi, Tsez, Sinhala, Malayalam, Tamil), it was always polysyndetic coordinators that showed that pattern.

(27)   Generalization 5:

Only polysyndetic coordinators can target a specific feature within a given coordinand. Monosyndetic coordinators cannot.

This generalization is admittedly very tentative given that the five languages showing this pattern basically only form two data points given that Khwarshi and Tsez are closely related and Sinhala, Malayalam and Tamil are areally very close. But I will for now put the generalization out there since these generalizations are also intended as invitations to provide counterexamples.

7.4. The role of phonological weight: Light vs heavy coordinators

In this section, I will briefly discuss as to whether there is a correlation between the phonological properties of the coordinators and their shifting patterns. As I will discuss in more detail in the second part of this work, this question is of relevance to the study at hand because there is a long-standing intuition about clitics that their non-canonical placement is at least in part due to them being phonologically deficient. Due to this deficiency, they require a phonological host of some sort and thus displace into their surface position.

However, the case studies in the previous chapters did not provide any informa-

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tion that the phonological properties of the coordinators would show any correlation with their respective placement patterns. In quite a number of case studies, we saw that coordinators with fundamentally different properties would undergo the same shifting pattern. One of the clearest cases in this respect comes from Kalaallisut. In Kalaallisut, we saw that the three coordinators *lu, li* and *luunniit* would all shift to the same position, i.e. the position after the first phonological word.

(28)   ukiuq   aasaq-∅=**lu**
          winter.ABS summer.ABS=COORD
          'Winter and summer'   Sadock (2003, 70)

(29)   [pualasuuq] [pinnirtur=**li**]
          fat   beautiful=ADV
          'fat but beautiful'   Fortescue (1997, 128)

(30)   [isi-ruit]   [ani-guil=**luunniit**]
          go.in.2SG.COND go.out.2SG.COND=OR
          'whether you go in or come out'   Fortescue (1997, 123)

luunniit in (30) can hardly be construed as being phonologically light or deficient in any way but still it shifts in very much the same way that the others do.

A similar point can be made on the basis of Cherokee where the coordinator appears in three different forms depending on the formality of the register and the speech rate. These three forms (*hnóo, hnó* and *hnv̂*) differ specifically in the length of the vowel but still do all shift in the same way.

In the case study about German, we noted that the adversative coordinator *aber* can optionally shift to a position after the first phonological phrase. *Aber* is undoubtedly the most frequent adversative coordinator in German but there are others, like *doch* and *jedoch*. Interestingly though, the monosyllabic version *doch* cannot undergo the same shift as *aber* (31a) whereas the bisyllabic one *jedoch* has to (31b). The respective other position is ungrammatical.

(31)   a.   [Ich will   nach hause], **doch** [Anna will   noch bleiben].
               I   want to   home, but   Anna wants still   stay
               'I want to go home but Anna still wants to stay.'

       b.   [Ich will   nach hause], [Anna will   **jedoch** noch bleiben].
               I   want to   home, Anna wants but   still   stay
               'I want to go home but Anna still wants to stay.'

So, it seems that the coordinator which is arguably phonologically lighter is required to stay behind whereas the one that is heavier has to shift. If the shifting were due to some sort of phonological deficiency, then this would be somewhat surprising; at least if this deficiency is in some way correlated with the phonological properties of the element in question.

Beyond German, Cherokee and Kalaallisut, there is also no obvious reason to believe that the phonological properties of the elements under investigation are the source for them shifting. There is, at least not an immediately obvious reason, why Latin *que* should be analyzed as more phonologically deficient as its canonical counterpart *et* which always appears in between the conjuncts. The same holds for the Khwarshi conjunction *-un/-in*, which undergoes shifting to a non-canonical position whereas its disjunction counterpart *-es* does not.

But even if we do not only consider length or phonological weight, I did not find anything that would suggest itself as a possible correlate of the ability to shift or a shifting pattern. In Section 2.2.3, we noted that there seems to be a correlation between the phonological weight as well as the phonological independence and the parameter of whether you are a monosyndetic coordinator or a polysyndetic one and that correlation clearly also holds for my data. However, there is no evidence of the shifting pattern being correlated with any sort of phonological property.

Based on these observations, I would like to formulate the following generalization:

(32)   Generalization 6:

There is no correlation between the phonological properties of the coordi-
nator and its shifting pattern or its ability to undergo shifting.

In the second, more theoretically oriented part of this book, we will come back to
this generalization and there, it will play an important role in figuring out the actual
motivation for second position placement.

7.5. The role of their semantic function:
Conjunction vs Disjunction vs Adversatives

The final factor that I briefly want to highlight concerns what I called the different
semantic properties of the coordinators. In Section 2.3.2, I discussed that, in this
study, I distinguish between the three basic and most frequent semantic types of
disjunction, adversative conjunction and neutral conjunction. The obvious ques-
tion that then arises is whether placement patterns of the non-canonical coordina-
tors are affected by the differences between adversative and non-adversative con-
junction and by the differences between conjunction and disjunction.

The first thing we notice regarding this question is that none of the syntacto-
semantic contexts is generally prohibited from shifting. In Kalaallisut, we saw all
three coordinators *lu, li* and *luunniit* (i.e. '*and, or, but*') shift to the position after
the first phonological word.

However, the second thing to note is that cases of disjunctions in non-canonical
positions were much less frequent than conjunctions. In fact, we find that disjunc-
tions only seem to show this pattern. We find disjunctions appearing after the first
phonological word (as in Latin, Kalaallisut or possibly Cherokee) but other patterns
of shifting disjunction are not attested in my sample.

And while this might be due to the limited sample size, it is still noticeable that, in

7.5. The role of their semantic function: Conjunction vs Disjunction vs Adversatives

quite a number of languages conjunctions do seem to be able to shift but disjunctions do not. Moreover, we find patterns where one and the same coordinator shifts when it has a conjunctional interpretation but refrains from shifting in a disjunctional configuration. We saw such a pattern in Udihe. Two of the relevant examples are repeated below. In the disjunctional configuration in (33) below, we see that the coordinators appear disjunct-finally but in the conjunctional configuration (34), the appear conjunct-internally.

(33) [Xekui bi:-we-ni-**de**]   [gili bi:-we-ni-**de**]
      hot   be-PRES.PTCP-ACC-3SG-FOC cold be-PRES.PTCP-ACC-3SG-FOC
      akta-masi-mi
      try-DIS-1SG
      'I am checking whether it is hot or cold.'   Nikolaeva & Tolskaya (2001, 661)

(34) [Ni: xokto-ni-**de**   anči] [bui   xokto-ni-**de**   anči].
      man footstep-3SG-FOC no   animal footstep-3SG-FOC no
      literally: 'There aren't man's footsteps and there aren't animal's footsteps.'

      'There are neither a man's footsteps nor an animal's footsteps.'

                                                   Nikolaeva & Tolskaya (2001, 657)

This seems to indicate that there is something about the syntactic or semantic-pragmatic relations of the two coordinands that distinguishes between disjunctions and conjunctions.

A similar asymmetry can be observed within the realm of conjunctions. Again, we see that both neutral and adversative or contrastive conjunction often behave alike in terms of shifting. However, we do observe that there seems to be a general pattern that adversative and contrastive uses are more likely to facilitate shifting than simply neutral contexts. Moreover, we observe that in some cases one and the same coordinator will undergo shifting in an adversative or contrastive context but will not in a neutral context. Above I have discussed cases from Rangi, where, according to Stegen (2011), the position of the coordinator *maa* is determined by whether there is a contrast between the respective conjuncts. Similar patterns are attested

in Turkic languages. In Turkish, for example, the element *de* can appear in between the two conjuncts but after the first XP of the second conjunct when there is a contrastive topic interpretation to the XP. This notion of contrast is so strong that it is sometimes believed to be the underlying syntacto-semantic contribution of *de* (see e.g. Göksel & Ozsoy 2003; Bayırlı 2021).

(35)   a.   Kedi içeri girdi   **de** Ali kapıyı   açtı.
              cat in   enter.PST and Ali door.ACC open.PST
              'The cat entered and Ali opened the door.'   Turkish, Bayırlı (2021, 92)

        b.   Kedi içeri girdi   Ali **de** kapıyı   açtı.
              cat in   enter.PST Ali and door.ACC open.PST
              'The cat entered and, as for Ali, he opened the door.'   İ.K. Bayırlı, p.c.

Based on these observations, I would like to propose the following generalization:[7]

(36)   Generalization 7:

        We find the following semantic asymmetries:

        a.   Conjunctional configurations facilitate shifting more readily than disjunctions.

        b.   Adversative conjunctional configurations facilitate shifting more readily than neutral conjunctions.

7.6. Conclusion

The first part of this book was intended as a description of non-canonical placement patterns of coordinators, a phenomenon that has not received any thorough investigation in the field so far. The methodology of the approach was a qualitative one: I conducted twelve in-depth case studies of languages employing non-canonical placement of coordinators or - as I ended up calling them - shifting coordinators.

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[7]The only notable exception to this pattern comes from Yorùbá where the adversative coordinators appear in their canonical position but the neutral coordinator *sì* shifts.

Apart from these twelve case studies, I compiled a small data base of around 45 languages that seem to show patterns similar to the ones studied here although, admittedly, in many cases the data that were available do not allow for us to be certain at that point.

In all of the case studies, we got a basic impression of how coordination in the language works in general and then studied in more detail how the surface position of the coordinator could be defined. All in all, there seems to be a fair amount of different placement patterns that are all attested crosslinguistically but crucially, it is clearly not the case that everything goes. First, we note that there are quite a number of patterns that seem logically conceivable but do not seem to exist. To name some of the more obvious ones, we did not find any instances where the coordinator was positioned before the last constituent of the conjunct (be it a syntactic or a phonological constituent). Similarly, we did not find cases where the preferred position was defined as a third position of some kind. In parallels to the phonological side, we could expect to find patterns where the coordinator attaches to the first morphosyntactic word of the respective conjuncts. This is also not attested.

Another quite striking observation is that even though there are quite a number of different patterns out there, their availability in many respects correlates with independent factors of the coordinator that we controlled for. We saw that the choice of the conjunct into which the coordinator shifts is determined by its morphosyntactic category as a monosyndetic or a polysyndetic coordinator. The same factor also determines the size of the constituent it attaches to in the case of phonologically determined placement. Monosyndetic coordinators attach to phonological phrases; polysyndetic coordinators attach to phonological words.

These and a number of other generalizations across my sample indicate, in my opinion, that the choice of coordinator placement is, on an abstract level, highly systematic and deserves closer attention. In the second part of this book, I will go on to argue that the phenomenon provides a great testing ground for theories and formal

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models of clitic placement and I will reevaluate many of the above-mentioned gen-
eralizations (as well as some other observations) against the background of a more
theoretical discussion. I will argue in detail that a crosslinguistic investigation of a
constant morphosyntactic category as the one provided in this part of the book, can
solve many of the long-standing questions about clitic placement. This discussion
will allow us to eventually propose unified model of clitic placement in the world's
languages.

Part II.

Clitics and their formal modelling

Introduction

In the first part of this work, I proposed a typology of non-canonical coordinator placement in the world's languages. In a sense, each case study provided us with something of a puzzle. In all cases, we saw that clausal coordinators did not appear in the positions we expect them to. Throughout the first part, I went into quite some detail describing where they appear instead. The second part of this book is more concerned with the questions of how and why they appear in the places that they appear.

As I have alluded to several times by now, the core assumption of the second part of this work will be that shifting coordinators are clause-level clitics and as such, occasionally appear in positions that do not reflect their syntactically or semantically underlying position. In a sense, this means that shifting coordinators are, in the approach that I am pursuing here, *special clitics*.

Unlike the notion of *special clitic* introduced by Zwicky (1970), however, these clitics are not viewed as special as a result of comparing them to their full, non-clitic counterpart. As noted in the introduction to the first part of this book, Zwicky (1970) defined a clitic in English like *'ll* as a *simple clitic* because it behaved in terms of its placement like its full counterpart *will*. In contrast, a clitic was defined as a *special clitic*, when it showed some sort of special behavior in comparison to its full counterpart; in particular when it comes to its placement in the clause.

However, as Zwicky himself and many others noted subsequently, this approach is somewhat problematic because many clitics do not have a full, non-clitic coun-

terpart and so there is no way to classify their behavior as special or simple. This is why, in the approach at hand, we do not rely on the existence of a specific full counterpart. Rather we compare the placement of coordinators to what I take to be their canonical position. As discussed in a lot of detail in Part I of this book, the vast majority of clausal coordinators in the world's languages appears either in between the two conjuncts (for monosyndetic coordinators) or proclitic or enclitic to both conjuncts (for polysyndetic coordinators). So it seems plausible to assume that these are the preferred, canonical positions for the respective categories. And even amongst those cases discussed above, we indeed do see many arguments that the canonical positions are possible as well at least in some contexts (see German or Udihe for example).[8] Further, we do see that in many of the languages above, the non-canonical placement of a given coordinator under discussion was usually also the odd one out. Most languages (see e.g. Latin, Cherokee, Yorùbá, German, Lezgian) do have coordinators that are simply located in their canonical positions. So, what this means is that, under this notion, shifting coordinators can, in a sense, be seen as special clitics if we compare the position of the clitic with its canonical position. This then makes it possible that, for the first time, we can map out the logical range of special clitics in a crosslinguistic study that keeps the category of the element under investigation constant. Thus, in each case, we have a very clear idea what the syntactically and semantically canonical position of a clitic is and as such we can map out the relation between the canonical position and the surface position in a systematic way.

The second part of this work has the following structure. In the first chapter, I will lay out the basic assumption that shifting coordinators are in fact clause-level clitics and should be treated as such. The main argument for this is that the range of empirical patterns of shifting coordinators observed in the first part of this book is to a large extent identical to the range of empirical patterns observed with other

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[8]This is an observation that I will capitalize on in Chapter II.3 below.

clause-level clitics.

Having established that shifting coordinators are clause-level clitics, we can then go on to ask the question what they can tell us about the formal modelling of clitics and in particular second-position clitics. In order to pave the way for an informed discussion about these matters, I will review existing theories of second-position clitics in Chapter 2. Chapter 3 will then go on to discuss various concepts from the literature and review if the empirical evidence from shifting coordinators points towards the adequacy of these concepts or not. To be more precise, I will argue that second-position clitics should be captured by models that are (i) transformational, (ii) cyclic, (iii) distributed and (iv) based on subcategorization. Each of these terms will be made clear throughout the discussion. Chapter 4 goes on to propose what I call the Distributed Integration account: a concrete model of second position placement that has the four assumptions (i-iv) as their basic tenets and demonstrate its application to the observed patterns of shifting coordinators. Towards the end of that chapter, we will also take a step back and discuss some of the broader questions as to why we observe only relatively few empirical patterns compared to those that are logically possible. It will be shown that the account presented in this chapter also proves to be quite restrictive and, for example, correctly excludes the existence of second-to-last position elements. Chapter 5 then extends the framework by taking a closer look at the three case studies that did not fall under the general rubric of second position elements. I will argue that their requirement to attach to a specific element is the result of a diachronic development but, synchronically, we can still model their behavior with the Distributed Integration account. Chapter 6 concludes.

1. Shifting coordinators are clause-level clitics

In this chapter, I will lay out the basic assumption that underlies the argumentation of Part II of this book, namely that shifting coordinators are special clitics and that their non-canonical positioning is due to the same mechanism(s) that put special clitics into their special position(s).

The main argument for this assumption is that the patterns we find with shifting coordinators in clausal coordination are essentially the exact same ones as we do with other element referred to as clause-level clitics. Moreover, we note that apart from the basic distribution, shifting coordinators also exhibit a number of properties that are strongly reminiscent of established patterns of clause-level clitics.

The patterns we identified for shifting coordinators in Part I on this book are the following:

① ω_1-COORD: Coordinators appearing after the first phonological word of a given coordinand

② φ_1-COORD: Coordinators appearing after the first phonological phrase of a given coordinand

③ XP$_1$-COORD: Coordinators appearing after the first syntactic phrase of a given coordinand

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④ [F]-COORD: Coordinators attaching to a specific syntactic feature/category within a given coordinand

As noted above, I would like to argue that these patterns are the exact same patterns we find with clause-level clitics elsewhere. General empirical surveys like Klavans (1995); Anderson (1992, 2005) distinguish two basic types of clitics for a given domain: Second-position clitics and head-anchoring clitics.[1]

Both of these patterns, i.e. second position clitics and head-anchoring clitics also exist with shifting coordinators. Let us start with second position placement, in which, for our cases, the shifting coordinator attaches to the first constituent of a given conjunct. For each of the three patterns, we find that outside of coordinators, there are clear predecessors that exhibit the same patterns.

The shifting coordinators from Ancient Greek exhibiting the ω_1-COORD-pattern were already amongst those for which Wackernagel (1892) introduced the notion of second-position enclitics. The argumentation carries over straightforwardly to Latin, Hittite and Coptic where the pattern is essentially the same. The case of Latin *-que*, which was already discussed in Zwicky (1970), was subsequently used as a go-to-example of a second-position clitic in many descriptive as well as theoretical works (see amongst many others Klavans (1985); Marantz (1988); Anderson (1992); Embick & Noyer (2001); Anderson (2005); Spencer & Luís (2012)).

The same holds, essentially, for other examples of the same placement pattern. For Kalaallisut, Sadock (2003); Anderson (2005); Spencer & Luís (2012) acknowledge straightforwardly that this is a second-position placement pattern that is essentially identical to Latin. For Oklahoma Cherokee, the relevant literature (see e.g. Feeling (1975); Haag (1999); Montgomery-Anderson (2008); Cornelius (2018)) does not draw the immediate parallel to the well-known Latin case but still straightforwardly ac-

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[1] There are of course also those elements that attach in their semantically transparent position at the very edge of the respective domains (like the English possessive *s* that attaches at the right edge of the entire possessive phrase. These arguably also exist for coordinators but are not part of my survey simply for methodological reasons as my sample only included coordinators that do not appear in their canonical, semantically transparent position.

knowledges that the coordinator is a second-position clitic. In Cherokee, this is particularly evident as this language has a whole range of second-position clitics which, like the coordinator, all cluster in second position (DT here refers to delimiter clitic and FC to focus clitic).

(1) [uhna=kwu=tvv=**hno** aji-khehvs-iítóòl-éʔi   jíistvvna].
     there=DT=FC=COORD 3O-chase:CMP-AMB:CMP-NXP crawdad
     'And then he started chasing him (the crawdad).'

<div align="right">Montgomery-Anderson (2008, 555)</div>

It thus seems that at least for this pattern, the literature seems in agreement that these elements should be subsumed under the notion of second-position clitics.

A similar point can be made for at least some of the coordinators following the XP-COORD pattern although here the situation is somewhat obscured by the fact, that many of the patterns at hand employ polysyndetic coordinators, which, in other functions, also can occur in other positions. Many of the respective grammars do list the elements in question under the notion of clitic, mostly for morphophonological reasons or the fact that it can attach to a diverse set of categories. Kornfilt (1997) calls the Turkish element *dA* a coordination postclitic that attaches after the first XP of the second clause, likening it to second-position clitics. Nikolaeva & Tolskaya (2001) call the Udihe counterpart an *enclitic additive particle* and note the positioning after the first XP but do not draw the connection to second-position elements. The same holds for the description of the Lezgian pattern in Haspelmath (1993) and van den Berg (2004) for other Daghestanian languages.

However, given what we generally know about second-position clitics in other domains, it is not really surprising that the position after the first syntactic constituent of a given domain is an available host for coordinator placement as well. Placement of clause-level clitics after the first syntactic phrase is attested for many languages. Examples below come from Czech, Digor Ossetic, Warlpiri.

1. Shifting coordinators are clause-level clitics

(2) Bez   váhání   **by**   pomohla svému bratovi.
     Without hesitation COND.3 help.PTCP her.DAT brother.DAT
     'Without hesitation she would help her brother.'   Czech, Adam (2022)

(3) [mɐ=nɐwɐg   ɐmbal]=**dɐr=babɐj=min**   ʒurdta kušt-i
     POSS.1SG=new friend=EMPH=AGAIN=DAT.1SG told   work-OBL
     wavɐri   tuxxɐaj
     condition-OBL about
     'My new friend too has told be about the work conditions.'

                                             Digor Ossetic, Erschler (2010)

(4) [Maliki wiri-ngki]=**ji**   yalku-rnu.
     dog   big-ERG-1SG.OBJ bite-PST
     'The/a big dog bit me.'   Warlpiri, Legate (2008, 20)

Interestingly, the second position placement patterns that refer to morphosyntactic constituents as the ones above also behave like the respective cases of shifting coordinators in that they morphosyntactic constituent preceding the clitic in question can be quite complex, especially in cases it contains an island. For Digor Ossetic, Erschler (2010) gives the following example with a fairly complex converb clause preceding the second position elements.

(5) [bakujɐj ʒɐwugiʁɐumɐ pojezdi cɐw-gɐj]=**ba=min**   berɐ
     baku.ABL Vladikavkaz.ALL train.OBL go-CONV.ABL=CONTR=DAT.1SG many
     rawɐn-t-i   xezgɐ   ɐrcud-ɐj
     place.PL.OBL wait.CONV come.PST-PST.3SG
     'But travelling by train from Baku to Vladikavkaz, I had to wait (for another
     train) at many places.'   Digor Ossetic, Erschler (2010)

The following example from Czech shows that complex infinitival VPs can precede the second position clitics. In part I, we have seen that, with shifting coordinators, infinitival VP-phrases could be skipped in our studies about morphosyntactically determined placement as in Khwarshi and Lezgian as well:

(6) [Posílat dopisy ti] **budu** pravidelně každý týden.
     send   letters you FUT-AUX regularly   every week
     'Send letters to you I shall regularly every week.'

<div align="right">Czech, Avgustinova & Oliva (1997)</div>

So, I would like to claim that once we control for the specific function of the element in question and only consider cases where the element is used as a clausal coordinator, the patterns we find are straightforward second position effects that should receive an explanation in line with our general conception of other phenomena of this type.

Finally, as for the so-called φ_1-COORD pattern, this might be the least obvious case that we should analyse them as genuine second position effects. This, I think is mainly for two reasons: The first one is that the elements in question are not typically referred to as clitics and the second one is that the pattern itself is less known and convincing cases of this sort of placement have only been put forward relatively recently. Thus, I am, for all I know, the first one to draw the explicit connection that the coordinator placement in Yorùbá, Polish and German are instances of second-position placement.[2] For this reason, the respective case studies in the first part of this book were significantly longer and went into detail specifically showing that alternative treatments in the literature are empirically inadequate and that a treatment of these cases as second position effects is much more favorable. And, I would like to argue that, against the background of emerging typologies of second position effects, we should even expect to find such patterns of shifting coordinators in the world's languages. Ultimately, this can be seen as an argument that shifting coordinators actually show us the full range of possible second position effects (even the empirically less frequent ones) and as such provide us with a unique perspective on

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[2]Note however that for the German pattern, both Ross (1967) and Munn (1993) refer to the process that places *aber* in a non-canonical position as *cliticization* indicating that they had a similar analysis in mind. See also Breitbarth (2019) who draws a connection between the sensitivity of *aber* to prosody, which she notes is reminiscent to general European tendencies for second position placement of weak pronouns.

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the phenomenon in question.

As noted above, second position patterns following a phonological/prosodic phrase have not been reported as frequently. Inkelas (1990) discusses two types of clitics from Hausa and Kivunjo Chaga, which she analyzes as following the first phonological phrase of a given domain. The description of the clitic system in Chamorro indicates a similar placement rule as argued by Chung (2003). Consider the examples below. The examples in (7) show that the clitic attaches after a predicative noun when it is modified by prenominal elements (7a) but not by postnominal elements (7b). With postnominal modifiers, the clause-level clitic attaches in between the noun and the modifier. Note that Chung (2003) argues that the linker *na* in both cases signals that, syntactically, the two elements inside the noun phrase are one constituent.

(7)   a.   {Águaguat na   patgun}$_\varphi$ **gui**.
             naughty   LNK child   he
             'He's a naughty child.'

        b.   {Kao patgon-ña}$_\varphi$ **hao** ädyu na   ma'estra.
             Q   child-AGR   you that LNK teacher
             'Are you that teacher's child?'

Furthermore, Chung (2003) shows that the phrase preceding the clitics can sometimes also be bigger than one syntactic constituent as in (8), where the clause-level clitic of the embedded clause (in brackets) follows both the complementizer and the nominal predicate even though they do not form a syntactic constituent.

(8)   Man-maleffa [{na   mansiudadanu-n Amerikanu}$_\varphi$ **hit** lokkui'].
        AGR-forget   COMP citizens-LNK   American   we also
        'They've forgotten that we are also American citizens.'   Chung (2003)

More recently, Bennett et al. (2016) discuss the placement of pronominal object clitics in Irish and suggest an analysis according to which they also can be displaced as some sort of a second position effect within their domain. In this case, the second

position effect however is not a clausal one. Rather the pronominal object clitics are syntactically generated in a position below the clause-initial verb and the immediately following subject. As Elfner (2012, 2015); Bennett et al. (2016) argue, all the material following the subject of the clause is phrased into a single phonological domain, in which the direct object would be initial. This, according to their analysis, results in a prosodically unfavorable configuration in the case of pronominal objects, which can be repaired with displacing the pronominal object to a position after the first phonological phrase. In (9), we see a simple case where the object is displaced one phrase to the right of its assumed base position (indicated with an underscore).

(9) Rugadh   _ i nGabhla **é**   sa   bhliain 1784.
     bear.PAST.IMPERS in Gabhla   him in.the year   1784
     'He was born in Gabhla in the year 1784.'   Bennett et al. (2016, 171)

As Bennett et al. (2016) argue, this reordering cannot be a syntactic effect because we find cases where the object pronouns appears inside of a syntactic constituent that otherwise cannot be split up. In (10), we see that the pronoun appears linearly inside the embedded non-finite VP *caint a Country Borns* ('talk about Country Borns').

(10) Chloiseadh   sé _ ag   caint **iad** a   Country Borns.
      hear.PST.HABIT he   PROG talk   them on Country Borns
      'He used to hear them talk about Country Borns.'

As Bennett et al. (2016) argue, this instantiates a displacement of the pronominal object to a position after a phonological phrase.[3]

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[3]As noted in the case study about German in the first part of this book, further parallels between the case study from Irish by Bennett et al. (2016) and the German case at hand can be drawn. Like with the placement of *aber* in German, the placement of pronominal object in Irish in some cases appears even further to the right than a "pure" second position effect may suggest. However, in both cases, these patterns can plausibly be attributed to recursive phonological phrases where two (or more) phonological phrases are joined to form another phonological phrase, which can then be subject to the displacement rule. Note also that in both German and Irish, phonological phrasing as well as its potential recursivity gives rise to cases of apparent optionality where the elements in question can displace into various different positions. However, as both Bennett et al. (2016) and myself have argued, these apparent cases of optionality should be reanalysed as cases

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(11) … **iad** {ag caint}$_\varphi$ {a Country Borns}$_\varphi$

Bennett et al. (2016, 172)

Finally, another interesting case study by Belkind (2023) looks at the distribution of the conditional complementizer *ki* in Kazym Khanty and argues that its position is determined by prosodic phrases as well. Belkind (2023) shows that syntactic constituency, while playing a role for the placement of *ki*, cannot be the underlying factor for the placement of *ki* inside the conditional clause. It follows the prosodically prominent phonological phrase as in (12a), where the subject is contrastively focused but in absence of a prosodically prominent phonological phrase, it resorts to attaching to the phonological phrase that subsumes all the preverbal material (12b). In (12b), it follows the so-called preverb that, syntactically, is still part of the verb phrase but prosodically belongs to the preverbal phonological phrases.

(12) a. WөNTER **ki** wөn sort nuχ   taλ-əs   …
          otter   if big pike PREV$_{up}$ drag-PST
          'If THE OTTER has caught the big pike, …'

      b. Wөnter wөn sort nuχ   **ki** taλ-əs   …
          otter   big pike PREV$_{up}$ ki drag-PST
          'If the otter has caught the big pike, …'   Belkind (2023, 27)

(13) … **ki** {WөNTER}$_\varphi$ { wөn sort nuχ taλ-əs}$_\varphi$

Further evidence for the prosodically determined approach to the placement of *ki* comes from cases where *ki* appears inside a complex noun phrase that, as Belkind (2023) shows, cannot be split up by syntactic operations in the same way.

(14) εwij-en   [$_{DP}$ KARTI **ki** jintəp] iλ   pawert-əs] …
      daughter-POSS.2SG   iron   IF needle PREV$_{down}$ drop-PST
      'If the girl has dropped the IRON needle.'   Belkind (2023, 28)

In all of these cases, the phonological phrase is argued to be the correct constituent

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of variable prosodic phrasing rather than a parametrization of the second position effect itself.

for the clitic to attach to. Further, in all of the papers, the discussion is to a large extent similar to the discussion presented in the respective case studies about Yorùbá, German and Polish. For all of the cases it is argued that a syntactic treatment of the distribution of these elements is not adequate because (a) attempts to define a syntactically uniform position of the respective elements are impossible and (b) they sometimes appear inside of phrases that can otherwise not be split up. Finally, all of the accounts above go the additional step and provide evidence that the prosodic structure they assume in order to derive the placement facts of the respective elements also makes sense independently. Arguably, none of these argumentational steps is trivial and as such, identifying such a distributional patterns requires more careful empirical work and extensive background on both the syntax and the prosody of the respective languages. Thus, it does not come as a surprise that, overall, fewer instantiations of this pattern have been described compared to the others. Nonetheless, I take it that a second position pattern in which the first constituent is best described as a phonological phrase is well-established. And, as such, it is not surprising to see that shifting coordinators in some languages make use of this pattern as well.

So, the three second position patterns we found with shifting coordinators instantiate the same second position patterns found elsewhere with clause-level clitics. Moreover even the unattested patterns seem to line up. To my knowledge, the literature contains no robust claims of a second position pattern that attaches to say, the first *morposyntactic* or *grammatical word* of a given domain.[4] Similarly, there are no shifting coordinators that attach to the first *morphosyntactic word* of a given domain. I also found no patterns of shifting coordinators attaching to the second-

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[4]The sole exception being Haag (1999, 2001) who claims that many second position clitics in Oklahoma Cherokee attach to the first morphosyntactic word rather than the phonological one. This assumption has, however, been reanalyzed by Cornelius (2018) who shows that the tonal effects some of these second position clitics trigger (or the absence thereof) should be analyzed as being due to the tonal specification of the clitics themselves rather than due to them attaching at different positions (i.e some attaching to morphosyntactic words and some attaching to phonological words).

to-last position of a given domain, which is something that has also been claimed to not exist elsewhere (pace Klavans 1985, 1995, see the discussion in Marantz 1988; Anderson 2005). Thus, I would like to conclude that the second position patterns we found with shifting coordinators map onto the well-established patterns of second position patterns with other clause-level clitics quite perfectly and should be analyzed as such.

Against the background of this, we can also take a quick look at cases sometimes called *head-anchoring* (see e.g. Kaisse 1985; Nevis 1986; Zwicky 1987; Anderson 1992, 2005), namely clitics that seem to attach to the head of a given domain. Head-anchoring clitics are usually illustrated with examples from Romance languages where, in many cases the pronominal arguments attach to the verb of the clause. The examples from European Portuguese below indicate that it is precisely the verb that the clitics seek to attach to. They usually follow the verb but in some configurations can also precede it but in either case, they will attach to the verb.

(15)   a.   O   Manuel apresentou=**se=lhe**
            the M.   introduced=REFL=DAT.3SG
            'Manuel introduced himself to him/her.'

       b.   Até   o   Manuel **se=lhe**=apresentou
            Even the Manuel REFL=DAT.3SG=introduced
            'Even Manuel introduced himself to him/her.'

                                                European Portuguese, Luis (2004)

At least at first sight it might not be completely clear that pronominal argument clitics are to be viewed as clause-level clitics as one could also view them as the arguments of the verb simply cliticizing to the element that selects them but instances of clitics attaching to auxiliaries rather than lexical verbs seem to suggest otherwise.[5]

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[5]It should be noted however that in lexicalist theories of morphology, there is a long tradition of reanalyzing Romance pronominal clitics as affixal inflection (see for example Miller & Sag 1997; Monachesi 1996; Crysmann 2000). This necessarily leads to some complications as the elements do not behave like affixes in various respects (see in particular Crysmann 2000 for discussion) but it opens the possibility to do away with the label of head-anchoring clitic (see Anderson (2005) for discussion and Weisser (2023) and Chapter II.5.1 for a criticism of that position with regards to shifting coordinators.

(16) As crianças ter=**lhes=iam**   agradecido.
      the children have=1PL.ACC=COND.3PL thanked
      'The children would have thanked us.'   European Portuguese, Luis (2004)

Nevis (1986) also gives two further instantiations of head-anchoring clitics. The first one is what he calls the adverb *-kin* from Finnish, which can take scope over just one constituent as in (18a) or over the entire clause as in (18b). In the latter case, it will attach to the finite verb of that clause.[6]

(18)   a.   Kalle on ostanut=**kin** auton.
            Karl is bought=also car
            'Karl also BOUGHT a car.'

       b.   Kalle on=**kin** ostanut auton.
            Karl is=also bought car
            'Karl also bought a car.'   Finnish, Nevis (1986)

These patterns, I would like to argue, are in a sense parallel to the case studies of shifting coordinators in which the coordinators attached to a specific feature of a given conjunct (i.e. the patterns I dubbed [F]-COORD above). Admittedly, the parallels are a bit more abstract as with the second position patterns above but I think they are nonetheless quite straightforward. The [F]-COORD pattern in Sinhala is essentially that the coordinator seeks to attach to the verb of a given conjunct as well. However, unlike the case of the focus-clitic in Finnish, the Sinhala coordinator is in complementary distribution with the indicative finite morphology. As such, we observe its shifting only with periphrastic constructions involving participles or infinitives. As for Khwarshi, we see the pattern is that the coordinator attaches to the absolutive phrase of a given conjunct if there is one. We know, independently, that

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[6]The second case study Nevis (1986) provides is the Veps polar question marker *-ik* which will also always attach to the verb. Nevis (1986) also notes that *-ik* can also appear in second position but he does not quite note in what contexts this happens.

(17)   defōnha mä voiń-**ik** mändä pimedas?
        village I   can=Q go   dark.INESS
        'Can I go to the village in the dark?'

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the absolutive phrase in the clause of Khwarshi and the related languages Tsez and Hinuq (see e.g. Polinsky & Potsdam (2001); Forker (2013); Polinsky (2015)) functions as a quite prominent pivot which is quite strictly tracked for concord, verbal agreement and adverbial agreement and so it is not surprising that a language might track the absolutive phrase for the purposes of coordinator placement. Finally, for Tsez, we see that that clausal coordinator attaches to the final noun phrase of the clause, which however, does not need to be clause-final but can be followed by a verb.

In Chapter 5, I will argue that what these patterns have in common is that the coordinators have a requirement to appear on a nominal constituent. For Sinhala, I will argue that the non-finite verb forms are partly nominal in nature. For Khwarshi and Tsez, the coordinators both pick out a specific noun phrase but resolve the problem in a slightly different way. While Tsez picks out the closest noun phrase in a linear sense, Khwarshi opts for the prominent one that it also tracks for agreement. So while typical clause-level head-anchoring clitics seem to track the finite verb (at least in Finnish and Romance), the head-anchoring coordinator clitics track a specific noun phrase. In Chapter 5, I argue that this difference is a the remnant of a diachronic process of expanding a nominal coordination marker to a clausal one. A nominal coordinator that syntactically selects for nominal complements is expanded in its usage to clausal complements and its syntactic selectional feature is reinterpreted as a morphological subcategorization feature. In other words, while it originally syntactically selected for a noun phrase, it now only wants to attach to a noun phrase. And the different languages resolve this attachment requirement in different ways. However, what this ultimately means is that the actual target of the head-anchoring clitic is secondary and arises only as the result of the diachronic process; it is not directly correlated to being clause-level clitic. The coordinators in this sense attach to a specific category; it just happens to be a different category than the clause-level clitics we are used to. I would therefore like to argue that [F]-COORD-pattern is an instance of what the literature generally refers to as the head-anchoring

pattern and as such falls into the well-known classfications of clause-level clitics that were already known in the literature. In other words, even when it comes to the notoriously tricky realm of head-anchoring clitics, shifting coordinators seem to exhibit the logical possibilities that we know from other clause-level clitics.

Against that background, I would like to argue that all the puzzles of shifting co-ordinators we encountered in the first part of this book can, on an abstract level, receive the same explanation. They appear in a position that does not correspond to their semantically and syntactically transparent position because they are fall under the rubric often referred to as *special clitics* and, as such, they are subject to specific placement rules. We have seen that these specific placement rules applying to shifting coordinators have the same logical range of possible outcomes as those for other clause-level clitics and also obey the same restrictions. We have seen for example that phonologically determined patterns of shifting coordinators ignore syntactic islands in exactly the same way as other phonologically determined second position clitics do. For morphosyntactically determined placement of shifting co-ordinators, we have seen that syntactic islands were very much respected, which is the exact same pattern we find with other morphosyntactically determined second position clitics (see Czech or Digor Ossetic above).

So, under the assumption that shifting coordinators appear in the positions they appear in because they are second position elements, we find ourselves in the fortunate position that we can now, for the first time, study the properties of clitic placement of a constant morphosyntactic category (namely, coordinators) in a wide range of unrelated languages. This finally allows us to study the above-mentioned specific placement rules of clause-level clitics in a much more systematic way as it allows us to control for a wide range of variables ruling out various confounds. As we will see below, existing classifications or typologies of clitics usually compare various different grammatical categories as well as different syntactic domains and thus only allow for very limited conclusions. In the following Chapter, I review the

most prominent classifications of clause-level clitics along with their theoretical approaches. This will lead up to Chapter 3, where many of the crucial concepts playing a role in these approaches will be evaluated against the evidence that shifting coordinators provide.

2. Previous analyses of clause-level clitics

2.1. Klavans (1985,1995)

The work by Klavans (1985,1995) is, to my knowledge, the first serious attempt to classify and typologize the placement of clitics from a crosslinguistic perspective. One of the core assumptions that underlies this work is the claim that the syntactic and the phonological behavior of clitics are formally independent properties and do not need to correlate. This means that a clitic might syntactically form a constituent with an element to the left and a phonological constituent with an element to its right or vice versa. These kinds of clitics where phonological and syntactic constituency do not match up have been called *ditropic clitics* (see e.g. Embick & Noyer 1999; Cysouw 2005; Spencer & Luís 2012) and will play a role in the discussion of Chapter II.3.4. Two frequently cited examples of this kind are the English auxiliary clitics as in (1), which form a syntactic constituent with the verb phrase to their right but phonologically attach to the subject. In (2), we see the Kwakwala determiners and case markers which, as indicated by the brackets belong to the following nouns but phonologically, as indicated by the '=', they attach to the preceding elements.

(1)   [I [=ll [go to Milwaukee]$_{VP}$]]   Marantz (1988, 260)

2. Previous analyses of clause-level clitics

(2) kw'ix̣ʔid [=ida bəgwanəma] [=x̣=a   q'asa] [=s=is   t'əlwagwayu]
     clubbed =the man   =OBJ=the otter =INSTR=his club
     'The man clubbed the otter with his club'   Anderson (1981)

Klavans proposes the well-known typology of clitic placement, which, building on this observation, proposes that syntactic attachment and phonological attachment are to be captured independently of each other. The three parameters she proposes are the following:

(3)   Klavans' clitic placement parameters:

       a.   Dominance (initial or final)

       b.   Precedence (before or after)

       c.   Liason (proclitic or enclitic)

The first parameter *Dominance* refers to the general placement of the clitic with respect to *its domain*. The second parameter *Precedence* is places the clitic in reference to *its host*, where host refers to the constituent at the respective edge of the domain. It can either be placed with before or after its host. Finally, the third parameter refers to the phonological attachment of the clitic, whether it forms a phonological constituent with the element to its left, in which case it has the value *enclitic* or the element to its right, in which case it is a proclitic.

The Kwakwala determiner in (2) would thus be specified as [Dominance: Initial, Precedence: Before and Liason: Enclitic]: It is located at the left edge of its domain, before its host word but is still enclitic as it does not attach to its syntactic host but rather to the element to its left. In this fashion, Klavans (1985) argues that all eight combinations of values predicted by her typology are attested.

Beyond the typology, Klavans (1985, 1995) also offers an implementation that is couched in a theory of morphology along the lines of Lieber (1980). Klavans treats clitics as phrasal affixes and their only formal difference from affixes is that they are subcategorized to attach at a phrasal level rather than at the lexical level, which

in her formalism is merely a difference between X^0-level vs X'-level. This is shown in (4), which is an abstract representation to indicate an clitic that (a) is initial in its clitic domain X' (Dominance: Initial), (b) attaches to the right of its host word/phrase Y (Precedence: After) and phonologically attaches to the phonological material to its left (Liason: Enclitic).

(4) $_{X'}$[[__]$_Y$ = enclitic]

In other words, the clitics are lexically specified for the values of all three parameters in Klavans' system. Their position in the surface string is a direct result of this specification. As such clitics do not end up in their surface position as the result of a transformation but rather as the result of a lexical specification. If a certain syntactic node is specified for a feature that is expressed by a clitic, the lexical specification of that clitic will result in the surface position without any intermediate steps.

2.2. Marantz (1988)

Building on Marantz (1984), Marantz (1988) provides a theory of cliticization that, on the one hand, models how syntactic structures are mapped to phonological strings and, on the other hand, significantly restricts the logical possibilities of clitic placement compared to Klavans' proposal. Couched in the GB framework of Chomsky (1981), Marantz proposes a Mapping Principle that transforms hierarchical relations formed at S-Structure into phonological strings with just enough flexibility to allow for minimal rebracketing in order to model the above-mentioned ditropic clitics such as the auxiliary in *I'll go to Milwaukee*. The key idea here is that linear adjacency is an associative relation meaning that as long as the linear order is not changed, minimal changes in the respective bracketing are acceptable.

Since second position clitics do, however, include a change of linear order (compared to their assumed underlying syntacto-semantic base position), they must be

modelled by different means. This is where the principle of Morphological Merger given in (5) comes in.

(5)   Morphological Merger:

At any level of syntactic analysis (D-Structure, S-Structure, phonological structure), a relation between X and Y may be replaced by (expressed by) the affixation of the lexical head of X to the lexical head of Y.

In Marantz (1984, 1988), this principle is invoked for a quite a number of seemingly disparate phenomena including the phenomenon of head-anchoring clitics (or simply *head clitics* in his terminology) as well as second position elements. As for head clitics, he assumes "a clitic may appear suffixed or prefixed to the head of the phrase to which it is semantically related." (Marantz 1988, 263).

For the purposes of second position elements, Marantz offers a discussion involving a second position auxiliary in Papago.[1] Like Klavans, Marantz does not discuss the different categorial nature of the first element in the clause and thus both case studies he discusses involve elements after the first phonological word. Accordingly, in both cases, the principle of Morphological Merger applies to the phonological structure. As for the case study of Papago, consider the example in (6), where the second position auxiliary *'o* appears after the first word, which, here, is the clause-initial negation.

(6)   pi='o   iam-hu cikpan g   Huan.
         NEG=AUX there   work   ART John
         'John is not working there.'   Pranka (1983)

---

[1]He also discusses the case of Latin *que* which ultimately receives the same explanation as the Papago auxiliaries. Interestingly, since his account rests on the notion of syntactic relations, which are translated into linear adjacency requirements (something that I glossed over in the discussion in this subsection), Marantz (1988) is forced to say that Latin *que* is not a proper syntactic head in the same way as an auxiliary is but rather some postsyntactically inserted linking morpheme without any syntactic correlate. If Latin *que* were a proper syntactic head, we would assume it to be in a syntactic relation with the first conjunct as well, which, in turn, would require it to be linearly adjacent to it, thereby preventing Merger into the second conjunct.

As Marantz (1988) argues, the syntactic hierarchy generated at S-Structure for this example has the auxiliary in the highest position, and accordingly it will be mapped to the initial position in the phonological structure. In the phonological structure, the auxiliary is rebracketed and now forms a constituent with the following element. Only then does Merger apply and affixes the auxiliary directly to the negation.[2]

(7)   a.   [[['o * pi] * iam-hu * cikpan] * g * Huan] →

          [[[pi+'o] * iam-hu * cikpan] * g * Huan]

Importantly, the application of Merger is triggered by the auxiliary's specification of being a suffix. This means that, unlike in Klavans' system, a second position element *must* attach to the first element, which in turn predicts that ditropic clitics exist but only in their underlying syntactic base position; an observation that I will discuss in detail below in Section II.3.4 as it also seems to hold for coordinators.

So, Marantz' (1988) approach to second position patterns is the first attempt of a transformational treatment in which clitics are reordered at different levels of representation (potentially due to their lexical specification as suffixes). As it includes the discussion of how syntactic structures are mapped to linear strings, it successfully restricts Klavans' system in that it disallows ditropic clitics in derived positions.

2.3. Halpern (1995)

Although his discussion of clausal second position-clitics was mainly restricted to BCS (Bosnian/Serbian/Croatian), Halpern (1995) develops an account of these elements that was very influential and bears significance beyond the specific patterns of one language. The main empirical focus of the debate was the alternation between two different patterns of clausal clitic placement in BCS: According to Halpern, we can find an alternation between clitics being located after the first XP

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[2]In the notation of Marantz (1984, 1988), the asterisk indicates an adjacency relation.

2. Previous analyses of clause-level clitics

and clitics being located after the first prosodic word. That is, unlike the accounts by Klavans or Marantz, where the type of host element is not of greater importance, Halpern (1995) is the first account to systematically distinguish different kinds of second-position placement.

In terms of the theoretical account, Halpern's account is similar to Marantz' in that it is a transformational one. The clitics are base-generated in a certain position in the syntactic structure, which corresponds to their syntactic scope. In the sense of clausal second position clitics, these elements will be base-generated in a clause-initial position. Importantly though, subsequent operations will always create a situation where the clitic ends up in second position: Either there is syntactic movement to a position to the left of the clitic or, if no movement applies, then this will trigger a repair process that dislocates the clitic exactly one prosodic word to the right. This process, which is referred to as *Prosodic Inversion*, is conceived of as a repair mechanism that applies in order to satisfy the clitic's prosodic subcategorization (which Halpern formulates following Inkelas 1990). We can illustrate the logic of the approach as (9) below using the minimal pair from BCS in (8). In (8a), the clitic follows the first syntactic phrase, which Halpern calls the 2D(aughter)-pattern (as the clitic itself becomes the second daughter of its complement domain). In (8b), the clitic follows the first phonological word, which Halpern calls the 2W(ord)-pattern.

(8)   a.   Taj čovek=**je**   voleo Mariju
           that man=AUX.3SG loved Maria.ACC
           'That man loved Maria.'   2D-pattern

      b.   Taj=**je**   čovek voleo Mariju
           that=AUX.3SG man   loved Maria.ACC
           'That man loved Maria.'   2W-pattern, Halpern (1995:16)

The tree in (9), which corresponds to example (8a), illustrates the situation where the clitic follows the first syntactic phrase. The clause level clitic in this example is an auxiliary clitic and as such, Halpern locates it in the clausal head *I*, which is the

clause-initial position in absence of instances of syntactic movement. However, in the tree in (9), the subject NP has moved across *I* to a position in the CP-domain leaving the auxiliary clitic in second position without further operations necessary.

(9)   Syntactic Movement:
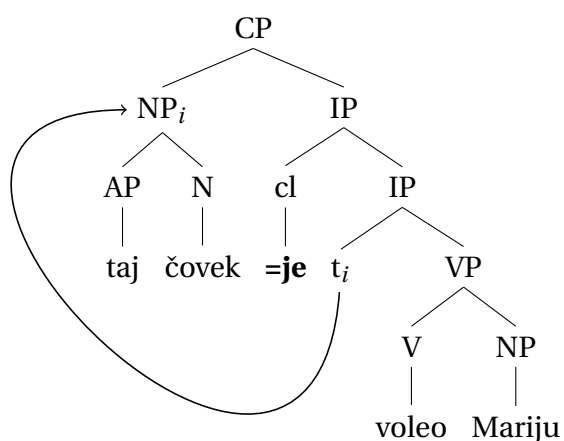
In (10), however, no syntactic movement has applied and thus the syntactic head *I* is still clause-initial. That however, violates the subcategorization of the auxiliary clitic *je* (Halpern's representation of the subcategorization given below in (11)). If no movement has taken place, Prosodic Inversion kicks in as a repair and adjoins the clitic in question to the first prosodic word of its complement. This operation is indicated in (10):

2. Previous analyses of clause-level clitics

(10)   Prosodic Inversion:

```
                    IP
               ┌────┴────┐
              cl         IP
               │      ┌───┴───┐
               │     NP       VP
               │   ┌──┴──┐  ┌──┴──┐
               │  AP    N  V    NP
               │   │    │  │     │
               •  taj=je čovek voleo Mariju
               ┊       ↑
               ┊.......┊
```
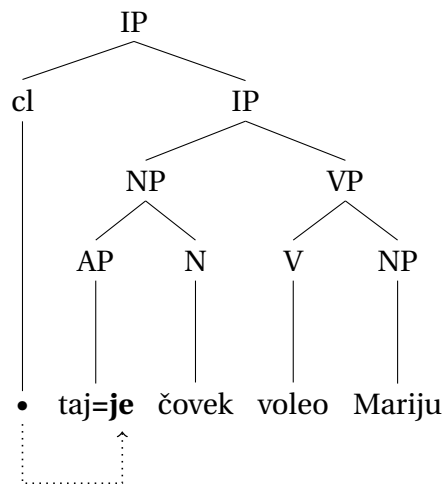
(11)   Subcategorization of *=je*:

[[   ]$_\omega$ =je]$_\omega$

One immediate advantage that this account has is that the two patterns are in complementary distribution in a given configuration. If we were to lexically specify every clitic for it to either follow the first prosodic word or the first syntactic phrase, then we would very likely predict that, in a given configuration, we might find some clitics that appear in the former position while some clitics appear in the second position. This, however, is not found. In the vast majority of cases, clitic systems exhibit a uniform placement pattern within a given language in the sense that all second position clitics of language follow a specific pattern. Moreover, even if a language allows for flexibility of patterns as in BCS or Luiseño (Steele 1976; Halpern 1995) or Warlpiri (Hale 1973; Legate 2008), we will not find a sentence containing several clitics with one half of the clitics being in one position and the other being in the other. This follows from the notion of repair that creates the 2W-pattern. The repair will only ever apply if it is necessary, that is, if no syntactic movement has applied beforehand. Thus, there can never be a single derivation where we find both patterns at the same time. This is arguably an advantage that the present account – as well as other repair-based accounts – has over purely subcategorization based accounts such as Klavans'.

As such, Halpern's account is also the first one that is strictly modular in the sense that the syntax only refers to syntactic constituency and the phonology only refers to phonological constituents. It is not possible to have prosodic inversion to a position after the first syntactic XP and vice versa.

2.4. Bošković (2001)

The account in Bošković (2001), which also focuses on Slavic in general and on BCS in particular, pursues in many ways a different approach than the one by Halpern (1995). One of the core assumptions in the approach by Bošković is that syntax is the only module that has the power of reordering syntactic elements. Thus, an operation like Prosodic Inversion, which allows for the postcyclic phonology to reorder the basic building blocks of a language should not be allowed for.

Empirically, the line of argumentation is based on the tenet that all apparent cases of what Halpern called the 2W-patterns can be derived by syntactic subextraction of the element preceding the clitic (see also Wilder & Ćavar (1994); Progovac (1996)). It is only the widespread availability of Left-Branch extraction in BCS that creates the illusion of 2W-patterns. Thus, the correct derivation for the example (8b) above, which Halpern (1995) derived by means of Prosodic Inversion, is actually a purely syntactic one:[3]

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[3]This syntactic tree does not correspond in some respects to the structures Bošković (2001) adopts. It is merely intended as a parallel illustration to the trees of Halpern's account.

2. Previous analyses of clause-level clitics

(12)   Left-Branch Extraction:
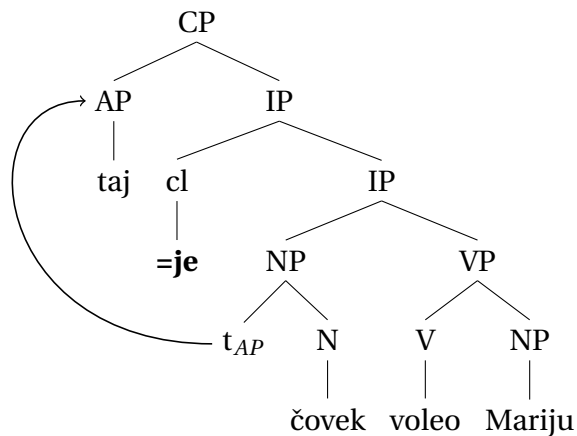
Arguments for the close connection between apparent 2W-placement and Left-Branch extraction (LBE) come from configurations where neither is possible. In BCS, first names in complex names can be optionally inflected for case (otherwise they bear default nominative) (13) but they can undergo LBE only if they are inflected (14):

(13)   a.   Lava   Tolstoja   čitam.
             Leo.ACC Tolstoj.ACC read
             'Leo Tolstoj, I read.'

       b.   Lav   Tolstoja   čitam.
             Leo.NOM Tolstoj.ACC read
             'Leo Tolstoj, I read.'   Bošković (2001, 16)

(14)   a.   Lava   čitam Tolstoja.
             Leo.ACC read   Tolstoj.ACC
             'Leo Tolstoj, I read.'

       b.   *Lav   čitam Tolstoja.
             Leo.NOM read   Tolstoj.ACC
             'Leo Tolstoj, I read.   Bošković (2001, 16)

Crucially, the first names can only act as a host for clitic placement if they are inflected:

(15)   a.   Lava   *sam* Tolstoja   čitala.
             Leo.ACC AUX Tolstoj.ACC read
             'Leo Tolstoj, I read.'

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b. *Lav   sam Tolstoja   čitala.
   Leo.NOM AUX Tolstoj.ACC read
   'Leo Tolstoj, I read.'   Bošković (2001, 16)

Thus, according to the approach by Bošković (2001), it is unequivocally the syntax that provides the clitics with their respective hosts. The phonology (or the PF-branch in Bošković's architecture more generally) still plays a crucial role in the formation of clitic placement as it adds two ingredients to the derivation: First, it gloms the clitic onto its host (via a version of string-vacuous Morphological Merger, Marantz 1988). This operation (a) satisfies the subcategorization feature of clitics, which Bošković formulates as a simplified version of Klavans' parameters. A clitic that is attached to the first constituent of the clause is, by assumption, both initial in its domain and nonetheless suffixal. This rules out instances of clause-initial clitics and has the additional benefit of creating clitic clusters, which can then account for various morphophonological interactions between hosts and clitics as well as amongst clitics.

The second ingredient that the phonology brings to the table in Bošković's account is that, although it cannot reorder syntactic elements, it can distinguish between competing derivations that differ in terms of syntactic movement. In other words, the phonology has the power to decide whether a moved element is pronounced in its higher or in its lower position. The underlying logic is that in some cases clitics are obliged to undergo movement in the syntax but a PF-constraint requires the lower instance of the clitic to be pronounced anyways. This, amongst other things, derives the alternation between strong and weak forms of some pronouns as well as opaque orders inside clitic clusters.

To sum up, Bošković's (2001) account is a clearly transformational one, but one where the transformations are exclusively syntactic. And while it does employ a version of Marantz' (1988) notion of Morphological Merger, it does not use this operation to derive second-position placement. Morphological Merger merely attaches

clitics to their host without changing their order.

Further, the approach is subcategorization-based as it draws on a version of Klavans' lexical specifications of clitics. The system is also cyclic as it assigns the clitics syntactic positions in the tree and then derives their surface positions in a step by step fashion.

2.5. Embick & Noyer (1999, 2001, 2007)

Embick & Noyer (2001, 2007) propose a version of Marantz' (1984,1988) approach, which incorporates the concept of cyclicity and, in addition, firmly locates the proposal in the architecture of Distributed Morphology (Halle & Marantz 1993, 1994). Like Marantz, their account relies on the application of Morphological Merger applying at different stages of the derivation to yield different results. Departing from Marantz however, they assume that all applications of Merger apply in the postsyntax but since they are interleaved with other processes such as Linearization and Vocabulary Insertion, they can either be sensitive to syntactic hierarchy and constituency or to linear order and phonological features. In the case of the former, the instance of Merger is referred to as *Lowering* and dislocates an element attaching to the head of its complement.[4]

(16) Lowering of X^0 to Y^0:

$[_{XP} X^0 \ldots [_{YP} \ldots Y^0]] \rightarrow [_{XP} \ldots [_{YP} \ldots Y^0+X^0]]$

In the case where Merger applies late (i.e. after Vocabulary Insertion and Linearization), it is referred to as Local Dislocation:

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[4]While Embick & Noyer (2001) give the same wording of Morphological Merger as Marantz (1988), it is not immediately obvious how that definition can serve as an abstract underlying source for both (16) and (17) and they do not elaborate on that issue. What seems to be necessary to get this account to work is a definition that abstracts over relations between different grammatical building blocks similar to the one I will provide in Section II.4.2.

(17)   Local Dislocation of X to Y:

       $[\,X * [\,Z * Y\,]] \rightarrow [[_{Z^0}\ Z{+}Y\,] * X\,]$

Similar to Marantz (1988), they maintain the dichotomy that the former derives head-anchoring clitics and the latter is for peripheral clitics as well as second position effects. Embick & Noyer (1999) specifically state that they do not want to derive second position effects after the first XP by lowering an element across a specifier and that such patterns should be derived by syntactic movement. As such, they, like Marantz (1988), can only derive second position patterns after the first phonological word.[5,6]

In order to see the cyclic component that the proposal brings to the table, we can briefly look at their treatment of the shifting coordinator *-que* and how it interacts with other kinds of cliticization. Unlike Marantz (1988), Embick & Noyer (2001) assume that the coordinator is syntactically generated in a medial position in between the conjuncts and then, after the syntactic structure is linearized and filled with phonological content, *que* dislocated to its surface position:

(18)   a.   bon-ī   puer-ī   -que   bon-ae   puell-ae
              good-NOM.PL boy-NOM.PL COORD good-NOM.PL girl-NOM.PL
              'good boys and good girls'

       b.   bon-ī puer-ī bon-ae-que puell-ae

As mentioned above, the approach by Embick & Noyer (2001) is a cyclic approach.

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[5]Embick & Noyer (2001, 2007) do not use the notion of phonological words but rather employ their notion of M-word, which is a more abstract one. M-words are syntactic terminals (X^0), which may have undergone additional transformations such as previous applications of M-Merger. These additional transformations are used to model mismatches between morphosyntactic words and phonological words such as cliticization processes. This way, effects of phonological wordhood can be mimicked.

[6]In Embick & Noyer (2001), footnote 6, they mention that there might be an instance of Morphological Merger that applies even later than Local Dislocation, namely after the formation of prosodic domains and they speculate that Halpern's notion of prosodic inversion is an instance of this but since Halpern's account also only derives second position placement after the first phonological word and not after the first phonological phrase, much more would need to be said to extend the account to the more complex cases.

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Local Dislocation (or Morphological Merger more generally) will always invert elements of the same type. We see that in the example in (18) from the fact that *que* by virtue of being its own "word" will invert its position with the adjacent word. This word can be complex in the sense that it is more than just a morpheme as (18), but it can also be complex in the sense that previous applications of Morphological Merger may have created a complex word. This is shown in the example in (19) where the monosyllabic preposition *in* ('in') cliticizes to the head noun (an instance of string-vacuous Local Dislocation in the theory of Embick & Noyer 2001), before the entire complex is inverted with *que*:

(19)   a.   in rē-bus=que
            in thing-ABL.PL=COORD
            '...and in things...'

        b.   ... [-que [in rebus]] →

        c.   ... [-que [in+rebus]] →

        d.   ... in+rebus=que ...

We see that it is crucial that the structure is built cyclically bottom-up. We will see in the next chapter that the concept of cyclicity will prove very beneficial when it comes to deriving the possible placement patterns of other shifting coordinators as well.

2.6. Anderson (2005)

Anderson's (2005) account of clitics shares the assumption with the one by Klavans that clitics are phrasal affixes and that there can be a uniform morphological account for both phenomena, which essentially only differs at the level of attachment. Anderson even goes one step further drawing a connection between second position clitics, which are linearly located inside the domain they modify and infixes, which are linearly located inside the stem that they modify.

In short, Anderson's (2005) account rests on the idea that clitics are phrasal affixes and second position clitics are phrasal infixes and he proposes a treatment of second position clitics that reflects this parallelism. The leading idea behind Anderson's account is that the concrete positioning of clitics results from the interaction of constraints in an algorithm couched in Optimality Theory (OT). Drawing concrete connections to the OT-approach to infixes by Prince & Smolensky (1993), Anderson suggests that second position clitics are located linearly inside their clitic domain as the result of various interacting constraints. The first set of these interacting constraints are alignment constraints that locate the clitic in question to the left or to the right of its clitic domain (similar to Klavans' *Dominance* parameter). So, a constraint like LEFTMOST(e,D) will, in the unmarked case, have the effect that the clitic *e* will be located as a proclitic to its domain D. However, in some cases this placement in the maximally initial position may violate other, possibly more important constraints that prefer to not have the clitic in an initial position. In the theory of infixation by Prince & Smolensky (1993), these were genuine phonological constraints (like well-formedness constraints on syllables etc), but since there is no obvious phonological motivation for second position clitics to appear inside their domain, Anderson discusses two possibilities: The first, somewhat adhoc solution would be to propose another family of constraints *Non-Initiality*(e,D) that simply penalizes the clitic from appearing domain-initially. The other solution would be to assume that there is a faithfulness constraint called LEFTEDGEFAITH (WORD), which requires the left edge of a word in the input of the derivation to also be the left edge in the output. In other words, this constraint penalizes elements to be at the left edge in general.

Finally, there is a third family of constraints INTEGRITY(X) that derives the variation amongst second position-clitics as it determines which constituent(s) act as the host of a clitic. If INTEGRITY(XP) is ranked high enough, XPs will be skipped but if only INTEGRITY(Word) is high enough, only a phonological word will be skipped.

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The interaction of constraints can be illustrated in (20).[7] So, suppose a phrase D is marked for a feature F(e), which will be expressed with a clitic/phrasal affix e, then the following calculus indicates the placement. The candidate in (20a) simply places the clitic in the initial position, thereby satisfying the constraint LEFTMOST(e,D). However, it violates the higher-ranked constraint NON-INITIALITY(e,D) and is therefore not the ideal candidate. Candidate (20b) places the clitic after the first word of the domain, which satisfies NON-INITIALITY(e,D) but violates the higher-ranked constraint INTEGRITY(XP) as it is located inside an XP that it doesn't belong to. Candidate (20c) places the clitic after the first phrase, which encounters at least two violations of LEFTMOST(e,D) because it is further away from the left edge of D but it is still the ideal candidate as it does not violate the other constraints. Finally, (20d), which locates the clitic one phrase further to the right has the same constraint profile as (20c) but encounters more violations of LEFTMOST(e,D).

(20)

$[\,[\,X_1\,X_2\,...\,]_{XP}\,[\,Y_1\,Y_2\,...\,]_{YP}\,...\,]_{D[F(e)]}$	INTEGRITY(XP)	NON-INIT(e,D)	LEFTMOST(e,D)
a. $[\,\mathbf{e}\,[\,X_1\,X_2\,...\,]_{XP}\,[\,Y_1\,Y_2\,...\,]_{YP}\,...\,]_D$		*!	
b. $[\,[\,X_1\,\mathbf{e}\,X_2\,...\,]_{XP}\,[\,Y_1\,Y_2\,...\,]_{YP}\,...\,]_D$	*!		*
☞ c. $[\,[\,X_1\,X_2\,...\,]_{XP}\,\mathbf{e}\,[\,Y_1\,Y_2\,...\,]_{YP}\,...\,]_D$			**
c. $[\,[\,X_1\,X_2\,...\,]_{XP}\,[\,Y_1\,Y_2\,...\,]_{YP}\,\mathbf{e}\,...\,]_D$			***!*

If, for example, the constraint INTEGRITY(XP) had been ranked lower than the others and INTEGRITY(Word) higher, a positioning after the first phonological word would have been preferable. Similarly, if there had been a high-ranked constraint that penalizes placing a clitic inside a prosodic phrase, say INTEGRITY(φ), then we

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[7]Anderson (2005) himself does not give any tableaux in his book so the discussion is merely my interpretation of how the system is intended to work.

would have gotten a pattern in which clitics are placed after the first prosodic phrase.[8]
Importantly, as this illustration shows, the OT-calculus has access to morphosyntactic as well as phonological constituency at the same time. This has the advantage of a uniform treatment of clitics but arguably comes at the price of being in conflict with strict modularity.

Finally, it should be noted that Anderson's approach is, similar to the infixation account by Prince & Smolensky (1993), mostly a parallel one that does not rely on the notion of cycles to determine clitic placement. In fact, he goes into quite some detail arguing that especially for clitic clusters and the respective interactions within clitic clusters a parallel approach is to be preferred (see however Spencer & Luís (2012) for discussion of this argument). In these cases, the clitic placement is determined by optimizing the entire structure at once. However, as Anderson also notes (Anderson 2005, p134), there can be cases, where a cyclic treatment is to be preferred.

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[8]Interestingly, this system predicts the existence of a system that, to my knowledge has not been described. Suppose both INTEGRITY(φ) and INTEGRITY(XP) were ranked higher than LEFT-MOST(e,D). This then would predict that we could find a language that places a second position clitic after the first position, where a prosodic phrase and a syntactic phrase coincide regardless of how far away from the left edge it would have to move. Staying with the intuition that second position placement is essentially phrasal infixation, this, I think then would qualify as a case of hyperinfixation (see Yu 2003), a hypothetical pattern according to which an infix that is usually edge-oriented is infixed to a position far away from the edge as that results in an ideal phonological profile. The non-existence of cases of hyperinfixation has been used as an argument against analyses of infixation along the lines of Prince & Smolensky (1993) where the trigger for infixation is attributed to an improvement of the prosodic or phonological profile.

3. Towards a model of second position placement

In the previous chapter, I gave a short summary of some of the existing theoretical modellings of second-position elements. As we have seen, these models differ with respect to a number of different dimensions and can be grouped together in various different ways. As a result, I think it makes the most sense to not discuss the validity of the individual theories as a whole but rather in a sort of decomposed state. Thus, I will proceed by discussing the individual analytical choices one by one and, in doing so, arrive at the coherent model of second position placement, which I deem to be the one that is empirically most promising.

3.1. Second position elements are cyclic elements

The point that I want to make in this section is that shifting coordinators - and second position elements more generally, are to be conceived of as cyclic elements. In the previous chapter we have seen that some approaches determine the position of a second position element on the basis of the entire, global structure whereas in other approaches, it was crucial that the position of these elements is calculated only on a smaller subset of the structure. To use a somewhat unusual metaphor, the question is whether second position elements can be thought of as sprinkles. With sprinkles, we first bake the entire cake and then, once it is completely done

3. Towards a model of second position placement

and cooled down, we can decorate it with sprinkles. Similarly, many approaches first build the entire clause or sentence structure to completion and then put second position elements in the correct places. Given that they tend to not interact with other elements in the clause (both morphophonologically as well as syntactically), and that their distribution is often straightforwardly describable in global terms, this approach of second position elements as sprinkles has been fairly influential (see e.g. Klavans (1985, 1995); Chung (2003); Anderson (2005); Selkirk (2009); Elfner (2012); Harizanov (2014); Bennett et al. (2016)).[1] On the other hand, there are approaches like Bošković (2001); Embick & Noyer (2001, 2007), in which clitic placement is decidedly cyclic in the sense that clitics do not have an unusual status from other elements in the clause and are expected to interact with other elements in a regular fashion both in the syntax and in the morphophonology. In what follows, I will put forward two arguments that shifting coordinators are not sprinkles but rather they are cyclic elements whose syntactic position determines the domain in which they can surface and restricts their possibilities as to which distributional patterns they can show. Both arguments rest on respective observations that the some hypothetical targets for the placement of shifting coordinators seem to be unattested crosslinguistically.

We have seen that the available placement patterns for a given element are restricted by constituency. One of the core observations leading to this conclusion was that monosyndetic coordinators always shift into the second conjunct. Languages under investigation here were Yorùbá, German, Polish, Mandarin and Yavapai (Rangi, Makalero and Nupe are other languages with the same pattern). In the summary of Part I of this work, we illustrated the possible placement patterns of monosyndetic coordinators as follows:

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[1]It should be mentioned that some of the approaches listed here do not discuss as to whether the elements in question have cyclic properties simply because the patterns discussed there do not require it. That does not necessarily mean that these approaches are incompatible with a cyclic treatment per se. Anderson (2005) for example specifically notes that some phenomena may require a cyclic treatment but that only requires minimal changes in his model.

(1)   [A   B   C], & [X   Y   Z]
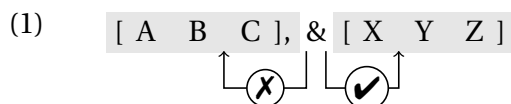
Monosyndetic coordinators have a canonical position between the coordinands and they can only appear inside the second coordinand. The first coordinand seems to be unavailable as a target. Polysyndetic coordinators on the other hand only ever appear inside of the coordinand that they modify. In the following representation, it can be seen that the polysyndetic coordinator on the left can only appear in the first coordinand even though it is linearly in the same medial position as a monosyndetic coordinator above.

(2)   [A   B   C], =ADD [X   Y   Z] =ADD
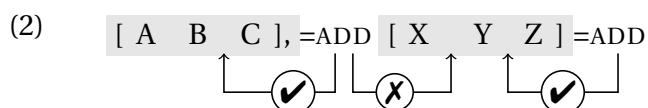
Another way to formulate this generalization is that coordinators always appear inside of the coordinand that they form a constituent with. Depicting the constituency with the standardly assumed tree structures for these configurations, we see that it is always the syntactic complement of a given coordinator that is the available domain. It is standardly assumed that monosyndetic coordinators form a constituent with the second conjunct as illustrated in (3) (with the head & as a shorthand for monosyndetic coordination). That structure has been assumed and argued for by Ross (1967); Dik (1968); Munn (1993); Zhang (2010); Weisser (2015a); Neeleman et al. (2023)) and that assumption will give us the correct application domain for the placement of monosyndetic coordinators. Less work has been done on the syntax of polysyndetic coordination but the structures proposed by Bhatt (2014); Mitrović & Sauerland (2014); Mitrović (2014) all assume that polysyndetic coordinators attach to both conjuncts individually and the two conjuncts are then joined by a usually silent junctor. In what follows, I will abbreviate the polysyndetic coordinators as ADD indicating their use as additive markers (Forker 2016). In both cases, the standardly assumed constituent structures predict the correct placement patterns if

3. Towards a model of second position placement

we assume that the underlying syntactic constituency restricts the domain in which the coordinator can be placed.
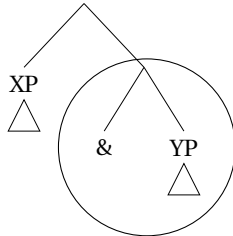
(3)   Monosyndetic coord.:   (4)   Polysyndetic coord.:
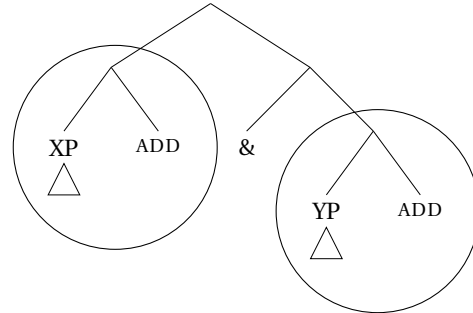
In the next section of this chapter, I will provide a number of arguments that the non-canonical positioning of the coordinators is to be understood as an indirect one. The coordinator is generated in its canonical and semantically transparent base-position and then a transformation applies with the result that the coordinator ends up in second position.

Under the assumption of second position elements being cyclic elements, the above-mentioned placement restrictions are explained without further ado. The structure is built bottom-up and, and the positioning of the coordinator can only take into account the structure at that point in the derivation. The structure above the coordinator is not an available target for it to shift into because it is not yet present when its position is determined. We can illustrate this point with the concrete example of Yorùbá *sì*. As I will argue in Section II.3.5, Yorùbá *sì* has a subcategorization feature requiring its prosodic integration.[2] As a result of that requirement, it dislocates to a position after the first phonological phrase of the second conjunct. It does that because, at the point in the derivation, when its positional requirement is evaluated and its position is determined, the first conjunct is not part of the struc-

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[2]Note, however, that the argument works the exact same way if we assumed that *sì* were to dislocate because it is prosodically deficient and moved in order to find a prosodic host or that it is too weak to act as the first element in the intonation phrase (see the STRONGSTART-based approaches in Section II.3.5).

ture yet. Crucially, we know that the first conjunct cannot be part of the structure yet because otherwise *sì* would have a phonological phrase to its left and the dislocation would not be needed to begin with. *sì* could just stay in situ and integrate into the phonological phrase to its left or possibly even shift into the first conjunct. This however is not an option. We can conclude from this that the coordinator cannot look "upward" in the tree in order to determine its position.[3]

(5)   Placement of *sì*:
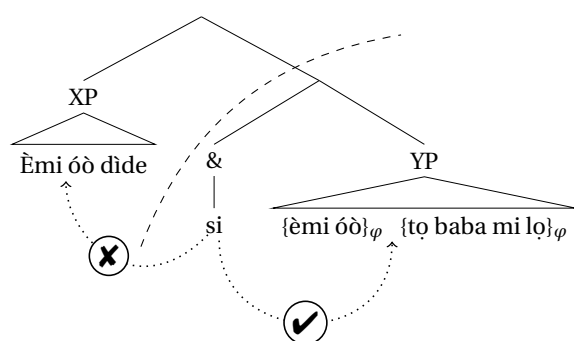
(6)   [Èmi óò   dìde], [èmi óò   **sì**   to baba mi lo] ...
         I   will arise, I   will COORD to father my go
        'I will arise and go to my father...'

<div align="right">cf Ilori 2010, 176, gloss adapted</div>

The second argument is, in a sense, the mirror image of the first one. Above we argued that shifting coordinators cannot look upward in the tree because they are cyclic elements. Similarly, we can also show that they cannot look too far down in the tree. We can do this in two different ways for morphosyntactically determined placement patterns as well as for phonologically determined patterns. For the former, the argumentation references syntactic islands, which we have seen, to play a role for instances of morphosyntactically determined patterns. For morphosyntactically determined second position patterns, the first constituent can be very com-

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[3]One might wonder why some canonically placed coordinators can prosodically integrate into the first conjunct. I discuss this question in more detail in Section II.3.5, where I specifically show that prosodic attachment (i.e. leaning) behaves different from dislocation (i.e. shifting).

3. Towards a model of second position placement

plex containing syntactic islands as in the case of the Lezgian example below, which includes only the second conjunct. Several phrases inside of the conjunct-initial clause could potentially host the coordinator but the phrases inside of the complex the noun phrase including the complement clause counts as one constituent.

(7) ... [Dağustandi-n har   sa xür-e   lap q^{h}san wa ag'alt'aj   pis
     ... Daghestan-GEN every one village-INESS very good   and extremely bad
     adet-ar   awa-j-da-l   sa šak-**ni**   ala-č]
     custom-PL be.in-PTCP-SBST-SRESS one doubt-COORD be.on-NEG
     '... and there is no doubt that there are very good and extremely bad customs

     in every Daghestanian village.'

                              Haspelmath (1993, 366), gloss and translation adapted

A similar example comes from Khwarshi, where we saw that an absolutive noun phrase is the usual target of the coordination marker in every conjunct. However, if the absolutive argument is too deeply embedded, it becomes invisible. In the second conjunct in (8), there is an absolutive but it is embedded inside an infinitival clause and thus invisible for the attachment of the coordinator.

(8) [zamana m-eλ'-aλa] [∅-ešt'-un žahaλ'a-**n**   soyro b-eɣ^w-a]
     time.III   III-go-ANTR I-let-PST.UW again-COORD horse.III III-sell-INF
     'When some time passed, (boy) sent (him) again to sell the horse.'

                              Khalilova (2009, 128)

Similar to the conclusion above, this also tells us that clitics are not positioned on the basis of looking at the entire structure. Some of the structure is too deeply embedded to be taken into account for the placement of the element in question.

(9)   Placement of Khwarshi *-n*:
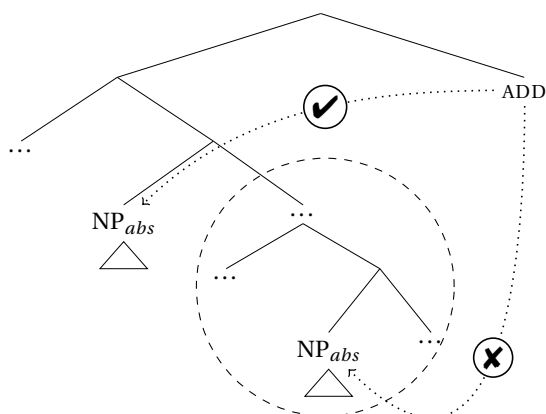
As we have seen, phonologically determined second position elements do not show island effects in the same way, but we can still make a similar argument about them being cyclic elements. Here, the argument comes from language comparison and the observation that there is a correlation between the morphosyntactic type of the coordinator and its available phonologically determined placement patterns.

We have seen that, for phonologically determined placement, there is only two attested patterns: A second-position after the first phonological word or after the first phonological phrase. Interestingly, this choice is not free but completely predictable from the syntactic type. Monosyndetic coordinators will shift after the first phonological phrase (examples were Yorùbá, Polish, German) while polysyndetic coordinators will shift to a position after the first phonological word (examples were Latin, Ancient Greek, Hittite, Kalaallisut, Oklahoma Cherokee).

Comparing the height of the respective coordinators in the syntactic tree with the size of the phonological domain it skips in second-position configurations, this correlation can be conceived of as a cyclic effect. I will give a concrete proposal as to how to derive this effect in a formal model in the next chapter but for now, it suffices to assume that polysyndetic coordinators are, in a sense, part of their respective coordinands whereas monosyndetic ones are not; they are the respective heads

that join the coordinands together. Thus, monosyndetic coordinators are necessarily higher in the respective structure than polysyndetic ones and, as a result, we can rephrase the observation made above as a correlation between the syntactic height and the phonological size of the phonological domain it references.

(10)
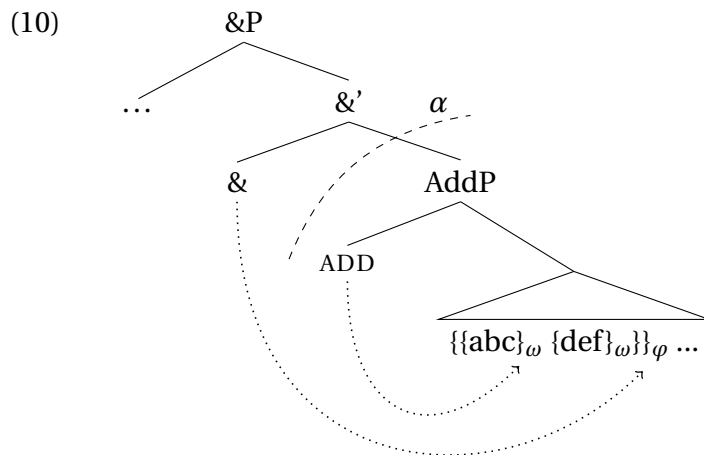
Consider the abstract illustration in (10): Within a given cycle α, elements can reference only prosodic words because, by assumption phonological phrases have not been built yet. Once cycle α is complete, it is possible for elements to make reference phonological phrases.[4]

Again, we see that a cyclic model of coordinator placement makes the better predictions. If we were to calculate the placement of second position elements on the basis of completed structures, there would be no reason why the head ADD should not be able to see the phonological phrases of its complement. In a cyclic system, the answer is straightforward: At the point where ADD is positioned, phonological phrasing is not completed yet.

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[4]Note that the logic of the argument implies that what is required here is not only a cyclic syntax but also a cyclic bottom-up formation of prosodic structure. The reader is referred to Fenger et al. (2024), where the argument is laid out in more detail. See also Fiebig (2025) concerning the size of reduplication expressing verbal number, where a strikingly similar crosslinguistic correlation between the syntactic height of a given element and the size of the phonological domain it has access to is observed.

3.2. Second position elements appear in their surface position due to a transformation

The second debate, which I think, can be informed by looking at shifting coordinators is the one concerning the question if the placement of shifting coordinators and second position elements more generally should be derived by means of a concrete transformation or not. We have seen that a number of approaches suggest specific transformations that yield the result that the element which originally occupies syntactically expected peripheral (i.e. canonical) position ends up in second position. Transformations that yield this kind of effect were syntactic movement (Halpern 1995; Bošković 2001; Legate 2008 and many others) or Prosodic Inversion (Halpern 1995) or Morphological Merger in its various forms (Marantz 1988; Embick & Noyer 2001; Legate 2008). Somewhat simplified, we can represent a transformational accounts as in (11) and (12). The transformation (indicated by the dotted arrows) either displaces a constituent (here XP) to a position preceding the coordinator as in (11). Or it displaces the coordinator itself to a position following an XP as in (12).

(11)   Transformation (synt. mvmt):   (12)   Transformation (Merger etc.):
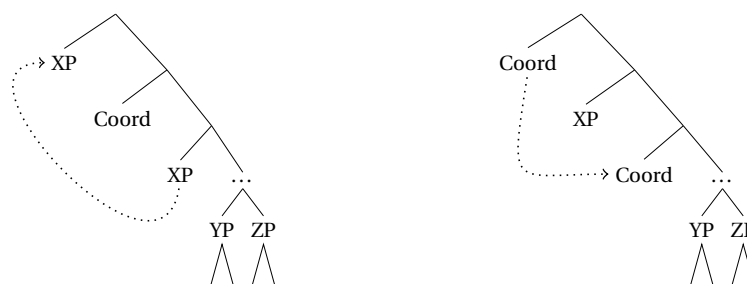
On the other hand, we have approaches like the ones proposed by Klavans (1985, 1995); Miller (1992); Chung (2003); Anderson (2005); Bermudez-Otero & Payne (2008) which have designated algorithms that calculate the surface position of the element within a given domain (as the OT-calculus employed by Anderson 2005). Importantly, unlike the above-mentioned transformations, these algorithms do no dis-

place any of the elements. This is indicated below. We see that some phrase αP is associated with the morphosyntactic feature {+COORD} and as a result, the placement algorithm will place the element in the optimal position (here indicated with a dashed branch in the tree in (13)).

(13)   Base-generation:
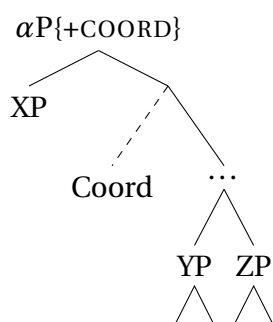
Comparing the trees in (13) with the transformational ones above, it becomes clear that one major difference between the approaches is that in a transformational account, a second position element has an underlying position with respect to the other elements of the clause *and* a surface position.[5] But in a base-generation account, it will only ever have one position. In what follows, I will provide two arguments based on the discussion of shifting coordinators for a transformational view of second position placement. Both arguments make use of the observation just made above. Under a transformational analysis, a second position element has an underlying position and a surface position. Under a non-transformational analysis, it will only ever have one. The first of the two arguments in this section will be based on positional alternations of coordinators, and the second one will be based on the interaction with other grammatical processes and operations.

The first argument itself is based on the fact that, as we have seen in the first part of

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[5]Strictly speaking, it only has one position in a syntactic movement-based approach but the crucial point is that relative to the element in first position, it can be viewed as having two positions: Underlyingly, it precedes the XP in first positions but on the surface, it follows it. The arguments in this section will thus go through for all transformational accounts.

3.2. Second position elements appear in their surface position due to a transformation

the book, many of the coordinators we looked at alternate between a canonical and a non-canonical position. We saw this in Udihe, where the polysyndetic coordinator *de* usually appears in second position after the first XP of the clause but it can, under certain circumstances, also appear in clause-final position.

(14)   ... [(Uti zoŋka mafasa)$_{XP}$-**de**   iñekte-ili]...
        ... this poor old.man-COORD laugh-3SG ...
        '... and the poor old man laughed...'

<div align="right">Udihe, (Nikolaeva & Tolskaya, 2001, 911)</div>

(15)   ... [bue-ni mamasa-ni jaŋca-la-i-**de**]
        ... he-3SG wife-3SG   steer-VBLZ-PTCP-COORD
        '... and his wife was going to steer.

<div align="right">Udihe, (Nikolaeva et al., 2002, 97), gloss adapted</div>

A similar pattern we see can be illustrated with Rangi, where the coordinator *maa* can either appear in the position between the conjuncts as in (16) or in the position after the first morphosyntactic phrase of the second conjunct when it expresses some sort of contrast.

(16)   [Mw-aaka ʉ-mwɨ kw-a-j-áa   na n-jala   mʉnʉmʉʉnʉ]
        3-year   3-one 17-PST-be-HAB with 9-famine too.much   AND_THEN
        [**maa**   N-kʉkʉ   a-ka-sea ...].
        9-chicken 1-CONS-say
        'One year, there was a very bad famine and the chicken said...'

<div align="right">Stegen (2011, 118)</div>

(17)   [Kʉ-fuma Ʉla va-dom-áa   na Haubi too-lʉʉmbya n-dʉʉ
          15-come Ula 2.PST-go-HAB to Haubi ITR-greet   10-relative
        jaachwe]   [njɨr-ii   **maa** va-ka-hʉmʉlʉka]
        10.3SG.POSS 9-way-LOC but 2-CONS-rest
        'From Ula, they went to Haubi to greet his relatives but on the way then, they
        rested.'   Rangi, Bantu (Tanzania), Stegen (2011, 275)

In German, there is optionality as to whether the coordinator is positioned in the canonical position between the two conjuncts or after the first prosodic phrase of

the second one.

(18) [Er will   schon gehen] (**aber**) [(ich will   ihm)_φ (**aber**) noch etwas
      He wants already go   but   I   want him   but   still something
      zeigen].
      show
      'He wants to leave already but I still want to show him sth.'

In Latin, *que*, which usually appears after the first phonological word of the con-
junct, can appear in a canonical position between the conjuncts when the monosyn-
detic coordinator *et/at* is also pronounced.

(19) ... [(sub occasum)_ω=**que** sol-is]
      ... before setting=COORD   sun.GEN
      '.... and before the setting of the sun'

                                        Latin, Caesar, De Bello Gallico 2.11,

(20) [reliqui   sese fug-ae   mandar-unt] at=**que**   [in proxima-s
      remaining REFL flight-ACC gave-PERF.3PL and=COORD in near-ABL
      silva-s   abdid-erunt].
      wood-ABL.PL hide-PERF.3PL
      'The remaining ones fled and hid in the nearest woods.'

                                                  Latin, Caesar, DBG 1.12

Finally, another very common pattern found in many languages is that with clausal
coordination, the coordinator occupies a canonical conjunct-final position but with
nominal coordination, it attaches to the clausal second position. This is illustrated
below with data from Lezgian. In (21), we see an example of the typical clausal sec-
ond position after the first morphosyntactic phrase (here: the noun phrase *wil-er*
('eyes')) whereas in (22) we see that with coordination of noun phrases, the coordi-
nator attaches in the peripheral position at the very end of the respective conjuncts.
Note also, that the second conjunct in (22) contains a possessor and would therefore
be able to host a conjunct-internal second position element in between the posses-
sor and the head noun.

3.2. Second position elements appear in their surface position due to a transformation

(21) [T'ur-ar ğil-er-a   ama] [wil-er-**ni**   q̄ažğanda-l ala.]
      spoon-PL hand-PL-INESS be.still eye-PL-COORD pot-SRESS be.on
      'The spoons are still in their hands and the eyes are on the pot.'

(Haspelmath, 1993, 335)

(22) [Zu buba-**ni**]   [bubadi-n buba-**ni**]   čuban-ar
      I.GEN father-COORD father-GEN father-COORD shepherd-PL
      x̂a-ji-bur   ja
      become-AOR-SBST.PL COP
      'Both my father and my father's father were shepherds.'

(Haspelmath, 1993, 328)

What all of these cases have in common is that a canonical position peripheral to the respective conjunct alternates either freely as in German or context-dependently with a second position of some sort.

Such an alternation is of course easy to derive in a transformational account where the peripheral, canonical position can be taken to be the semantically transparent base-position and the second position is then the result of a transformation of some sort. All that one would need to do is to define the appropriate context in which the transformations apply and in which they do not.

In a base-generation account, the recurring observation of alternations between two positions might be somewhat unexpected at first sight but it can still be captured with additional stipulations. The most obvious solution to adapt to the facts would be to make the above-mentioned placement calculation algorithm sensitive to the differences in morphosyntactic features. Taking the example from Rangi for example, it might be plausible to assume that an OT-calculus in the sense of Anderson (2005) will give a second position as the optimal candidate in case there is a contrast between the conjuncts and a peripheral position between the conjuncts as the optimal candidate if there is no contrast. In a sense, what this means is that, you could simply introduce two placement rules for the coordinator, one which applies in case there is a contrast between the clauses and one which applies if there is not.

So, a priori, both accounts can somehow deal with the alternations between a pe-

3. Towards a model of second position placement

ripheral and a coordinand-internal position. The crucial point about these alternations is that we do not seem to find all logically possible alternations. Combinations which we have seen are the following: We have seen a coordinator that alternates between a conjunct-initial position and a morphosyntactically defined second position (e.g. Rangi, see also the discussion of Yavapai above). We have seen coordinators that alternate between a conjunct-final position and a morphosyntactically defined second position (e.g. Udihe, Lezgian). We have also seen coordinators that alternate between a conjunct-intial and a phonologically defined second position (e.g. Latin, German). Crucially, what we have not seen is a coordinator that alternates between a conjunct-final and a phonologically defined second position. The representations in (23) and (24) illustrate the three attested patterns out of four logically possible ones.

(23)   **Alternations with morphosyntactically determined second-position elements**:
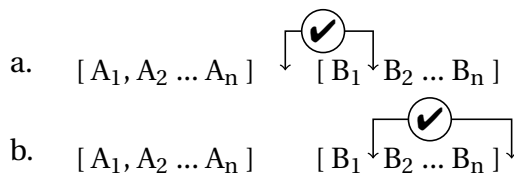
a. $[A_1, A_2 \ldots A_n]$ $[B_1 \; B_2 \ldots B_n]$ ✔

b. $[A_1, A_2 \ldots A_n]$ $[B_1 \; B_2 \ldots B_n]$ ✔

(24)   **Alternation with phonologically determined second-position elements**:

a. $[A_1, A_2 \ldots A_n]$ $[B_1 \; B_2 \ldots B_n]$ ✔

b. $[A_1, A_2 \ldots A_n]$ $[B_1 \; B_2 \ldots B_n]$ ✘
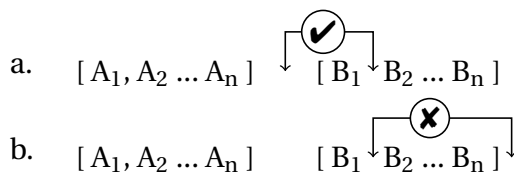
The immediate question that arises is why this should be the case and whether transformational and base-generation approaches can explain this restriction in a straightforward way. In fact, I would like to argue that a base-generation account has no explanation for this asymmetry available whereas under a transformational account, a completely straightforward answer can be found.

3.2. Second position elements appear in their surface position due to a transformation

Let us begin by looking at a transformational account. Above, we assumed that the alternation between peripheral canonical positions and conjunct-internal second position can, in a transformational account, be recast as an alternation between an underlying position and a surface position. In other words, the two positions ultimately instantiate the input and the output of the transformation rule in such an account. And, as such, it is per se not implausible to find that there are restrictions on how far the two positions are apart from each other. Locality considerations play a crucial role in the study of transformations in all grammatical modules. Nonetheless, we know that the concrete notions of locality in the different grammatical modules are of a somewhat different kind. Syntactic locality is usually mostly concerned with constituency and the effects of certain categories that cannot be crossed by a non-local relation. It is defined over hierarchical tree structures intended to represent constituency. Phonological or prosodic locality is however defined in terms of linear order. Consider now, how the three-out-of-four pattern of clitic placement alternations we saw above patterns out if we recast the illustrations above in more accurate representations that reflect the difference between morphosyntactic constituency and linear order. In the case of morphosyntactically defined clitic positions, the locality considerations are the same regardless of whether the underlying position of the clitic is conjunct-initial (25) or conjunct-final (26). In both cases, it would suffice if the coordinator only moved one step down in the tree to "reach" a morphosyntactically defined second position after the first XP. Without going into the details of concrete definitions of the transformation in question, we can assume that a transformational rule that displaces an element to the next head down can be plausibly conceived of as sufficiently local. As such, it is not surprising that we do find that morphosyntactically defined second position clitics alternate a second and a domain-final position.

3. Towards a model of second position placement

(25)   CoordP
         COORD
               XP
                 ...

(26)   CoordP
              COORD
         XP
              ...
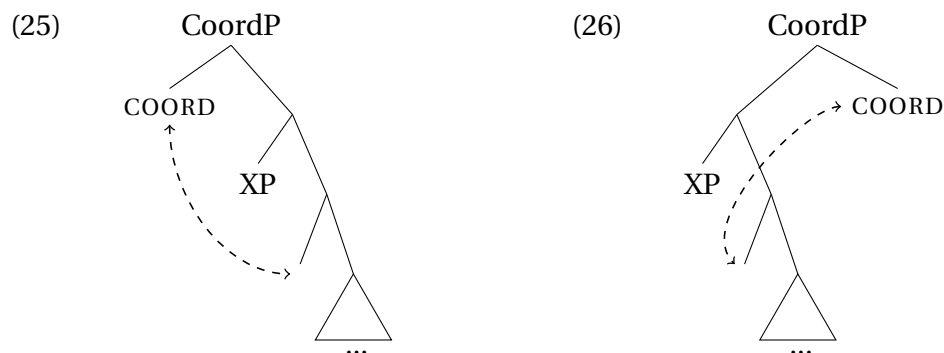
Consider now the situation with cases of phonologically determined clitic placement. In this case, the locality considerations at stake are ones are computed on the basis of linear order. Then, however, it does make a crucial difference in terms of locality whether a coordinator's underlying position is conjunct-initial or conjunct-final. An underlying conjunct-initial position is quite local to reaching a second position of some sort because it only needs to skip one phonological element of a given type (a phonological word or phrase). This is shown in (27). A underlying conjunct-final position is potentially however extremely non-local to a second position when locality is conceived of in linear terms. As such it is not surprising to find that an alternation between a clause-initial position and a second position is possible while an alternation between a conjunct-final position and a second position cannot be derived by means of applying a local transformation.

(27)   COORD ≺ XP ≺ C ≺ SpecTP ≺ T ... ≺

(28)   XP ≺ C SpecTP ≺ T ≺ ... ≺ COORD

Applying this logic has the three-out-of-four pattern we observed above fall out of the transformational account without any additional problems. All that is required in order for this approach to go through is the additional but, in my view, plausible assumption that locality considerations for morphosyntactically defined clitics are computed over (morpho)syntactic phrase structure whereas locality considerations

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for phonologically defined clitics are computed over linear strings. After all, another observation we saw in the first part of this book is that morphosyntactically defined second position clitics do obey syntactic island constraints while phonologically defined second position elements do not.

Importantly however, this logic cannot be carried over to how non-transformational accounts would deal with the placement alternations. Recall that in a non-transformational account, all of the placement patterns are taken to fall out of an algorithm that computes the correct position for a given configuration. In order to derive placement alternations, we would have to make the algorithm sensitive to whatever features govern the alternation between the two positions. But since the two positions are, in a sense, two different outputs of the algorithm, it is not clear at all why locality considerations should hold between the two positions.

Take Anderson's (2005) optimality-theoretic algorithm in which second position elements are placed as the interaction of various constraints. In Section II.2.2.6, we saw that a second position element which is placed after the first XP is derived by saying that the clitic in question wants to be as far to the left as possible but it is more important to be non-initial and to not interrupt an XP. In order to account for the placement alternation, we could, for all I can see, do two things: (i) Either we assume that in the two different contexts the relevant constraints have a different rankings, yielding different outputs. Suppose, we want to derive the alternation in Lezgian where, in coordination of clauses, the coordinator appears after the first XP but in coordination of noun phrases, the coordinator appears to the right of the entire conjunct. In that case, we could say basically say that, the ranking of constraints is different in clause coordination as it is in noun phrase coordination. (ii) The other option is to relativize the constraints to apply only in the given context determining the alternation. In the toy example of Anderson's algorithm, we have seen that the constraints formulated in such a way that they are specific to a given element and a given domain. We could thus say that there is a high-ranked constraint Right-

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MOST(e,D$_{NP}$) and a lower-ranked constraint LEFTMOST(e,D$_{CP}$), which causes the element *e* to be linearized to the left of its domain in the case the domain is a clause (CP) and to the right of it in the case of a noun phrase (NP).

Crucially, neither of these solutions has any systematic way as to how alternations between different positions should be restricted. Any logically possible combination of placement patterns should be attested. And there is certainly no reason why this should correspond to whether the second position element in question is a morphosyntactically determined position or a phonologically determined one. Furthermore, it is noteworthy, that we expect to find many more alternations than we actually do. In very much the same way as we have derived an alternation between a second position and a final position, we could very well derive alternations between two different kinds of second positions. We could imagine a coordinator that goes after the first phonological word of the second conjunct in case it conjoins noun phrases and after the first morphosyntactic phrase if it conjoins clauses (or the other way round). There is, for all I can see, absolutely no way to restrict these patterns and relate them to one another. I take this to be a strong argument in favor of a transformational account of second position placement. The alternations we find and the alternations we do not find are exactly the ones that we expect to exist under a transformational account. The alternations between second positions and conjunct-peripheral positions are exactly the ones we can derive with a restricted set of transformations given a plausible notion of locality, which is sensitive to the differences between phonological/prosodic and syntactic structure. A non-transformational account has, for all I can tell, no way of restricting the possible alternations because they are not derivationally related.

The second argument for a transformational view is based on the interaction of the shifting process with other grammatical processes. As we have seen, under a transformational analysis, the coordinator has an underlying canonical position and then, later, will be displaced to a non-canonical surface position. The best argu-

ments for such a derivational view come from cases of opacity. (i) If the coordinator can be shown to be located in its underlying position for some grammatical processes (i.e. if its shifting can be shown to counterbleed other processes), then this counts as a strong argument for a derivational approach in terms of a transformation. Further, if a coordinator can be shown to not yet be located in its surface position for some grammatical process (i.e. if its shifting can be shown to counterfeed other processes), we have a similarly strong argument for the derivational approach. Fortunately, shifting coordinators provide us with both kinds of arguments for this kind of approach.[6]

The first argument regarding the interaction of processes comes back to the discussion in Part I of how to diagnose whether an element that is located deeply inside the second conjunct is a coordinator to begin with. And one of the diagnostics we used was that it behaves like a coordinator in the sense that it licenses coordination-specific processes in the same way that a regular coordinator does. These can be processes like ATB-movement, Gapping or Right-Node-Raising or many other types of ellipsis. As soon as you can show that these processes are dependent on the presence of a coordinator, you can test whether shifting coordinators license them as well. And, as it turns out, they usually do.

Consider the example from German involving Right-Node-Raising. This process consists of the elision of verbal material of the first coordinand (here represented with a strike-through). As the example shows, this process in German requires the presence of a coordinator. Crucially, the elided material must be at the right edge of the first coordinand, i.e. right next to the coordinator.

(29)   a.   … weil   [Sammi eine Schatzkarte   ~~gemalt hat~~] *(**und**) [Remi eine
                    because Sammi a   treasure.map drawn has   and   Remi a
              Haifamilie   gemalt hat].
              shark.family drawn has
              'because Sammi has drawn a treasure map and Remi a family of sharks.'

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[6]The logic of this kind of argument mimicks the logic used in Kalin (2022), who uses opacity effects of allomorphy choice to argue for a transformational account of infixes.

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    b.   … weil   [Sammi eine Schatzkarte ~~gemalt hat~~] [Remi *(**aber**) eine
           because Sammi a   treasure.map drawn has Remi but   a
           Haifamilie   gemalt hat].
           shark.family drawn has
           'because Sammi has drawn a treasure map and Remi a family of sharks.'

What we find however, is that the process is also licensed by the shifting coordinator *aber*. Note that *aber* can license the process from a position that is, at least potentially, quite non-local in a structural or linear sense.

(30)   … weil   [sie ihm Blumen ~~geschenkt hat~~] [er ihr ohne   mit der
           because she him flowers gifted   has he her without with the
           Wimper zu zucken **aber** nicht einmal ein Lächeln geschenkt hat].
           eyelash to bat   but not   even   a   smile   gifted   has
           'because she gave him flowers but without batting an eye he didn't even give her a smile.'

The most plausible assumption, I think is that, in a derivational sense, the coordinator behaves like a proper coordinator in the syntax and its surface position is derived by a late transformation that however does not have an impact on earlier, syntactic processes. In other words, the displacement of the coordinator counterbleeds licensing of Right-Node-Raising. Other languages in which shifting coordinators license coordination-specific ellipsis processes are Yorùbá (Aremu & Weisser 2024), Oklahoma Cherokee (Feeling 1975), Lezgian (Haspelmath 1995), Polish and Sinhala.

    The second kind of argument is, in a sense, the exact opposite of the situation above. Just as we can show that the coordinator counts, for some processes, to still be in its underlying position, we can also show that for some processes, it does not yet count as being in its surface position. The crucial examples here come from Polish and involve the frequently discussed phenomenon of mobile inflections (see e.g. Booij & Rubach 1987; Borsley & Rivero 1994; Embick 1998; Franks & Bański 1999; Migdalski 2006) that we briefly mentioned in the respective section about Polish. We saw that mobile inflections in Polish can appear on any preverbal constituent of

the clause such as subjects (31a), objects (31b), subordinate complementizers (32a) or adverbs (32b).

(31)   a.   Ty-ś   to widział
               you-2SG it saw

         b.   Ty to-ś   widział
               you it-2SG saw
               'You saw it.'   Embick (1998) citing Dogil (1987)

(32)   a.   Janek powiedział że-ś   pojechał do Warszawy
               Janek said   that-2SG went   to Warsaw
               'Janek said that you went to Warsaw.'   Borsley & Rivero (1994)

         b.   Pewnie-śmy juz   tam byli
               perhaps-1PL already there were
               'Perhaps we have already been there.'

In stark contrast however, this process cannot affect coordinators such as the canonically placed coordinator *ale*. The result is ungrammatical. Crucially, even though *zaś* is linearly contained inside the second conjunct, it behaves just like a prototypical coordinator such as *ale* in (33a). *Zaś* cannot act as a host for the mobile inflections even though its linear position suggests that it should (33b).

(33)   a.   *... ale-śmy my juz   tam byli.
               ... but-1PL we already there were
               'but we have already been there.'

         b.   *... my zaś-my juz   tam byli
               ... we but-1PL already there were
               'but we have already been there.'

In the section about Polish, we took this as an argument for *zaś* being a coordinator but here, we can draw the additional conclusion that this indicates that the process displacing *zaś* in its surface position comes too late for it to be affected by the placement of the mobile inflection. The coordinator is not yet in its surface position when the mobile inflections are placed. In other words, the placement of the coordinator

counterfeeds the placement of the mobile inflection.

Both of these arguments based on interactions provide a strong case for the derivational placement of the coordinators according to which they are base-generated in their canonical position underlyingly but later are displaced to their surface position by some late shifting rule. In addition with the argument coming from the placement alternations above, this provides further evidence for a transformational treatment of coordinators and second position elements more generally.

3.3. Arguments for a postsyntactic, yet distributed treatment

Above, I provided what I believe to be strong arguments in favor of a cyclic, transformational approach to the placement of second position elements. In the preceding chapter, however, we have seen that the existing approaches contained an elaborate discussion about the question which transformations are required to account for the empirical variation we find. In this section, I briefly want to highlight a few implications that shifting coordinators contribute to this discussion.

One of the fundamental questions in this debate is whether syntactic movement is the only possible transformation required to derive second position placement. The brief summary of the argumentations by Halpern (1995) and Bošković (2001) above indicated the two different positions. According to Halpern, certain second positions in BCS (Bosnian/Serbian/Croatian) were derived by means of the additional operation *Prosodic Inversion*, while Bošković (2001) argued that they can nonetheless be derived by means of syntactic movement if one takes into account the intricacies of the underlying syntax.

However, while the argumentation by Bošković (2001) seems convincing for large parts of the inventory of second position elements in BCS, the same argumentation cannot be applied to the phonologically determined placement patterns in this

study. Consider the following example from Latin where the coordinator appears inside the PP in between the preposition and the demonstrative of its head noun.

(34) [Narbo-ne] [circum-**que** ea   loca]   hiema-ndi
      Narbo-ABL around-COORD DEM-ABL place-PL-ACC winter-PTCP
      'wintering in Narbo and around these places'

Caes. De Bello Civili 1.37.1

If we tried to apply the logic by Bošković (2001) to examples of this sort, then that would require us to have moved the preposition away from its head noun across the coordinator.

(35)   Syntactic Movement:
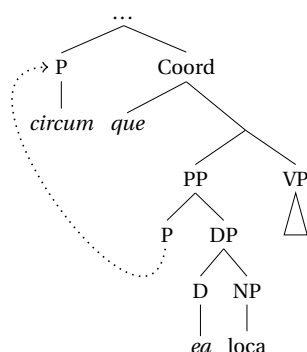
Crucially, this is not a typical syntactic movement process. Apart from the fact that such a movement operation would not conform to what is typically known to be restrictions on syntactic structure building, we can observe that Latin does not allow PPs to be linearized discontinuously (Vincent 1999; Hewson & Bubenik 2006; Ledgeway 2012). In other words, we have quite strong reasons to assume that the alleged syntactic movement transformation in (35) is dubious from a general but also from a language-specific point of view.

   The same argument can be made for Oklahoma Cherokee where the coordinator can appear in between a numeral and the noun and as Montgomery-Anderson (2008, 516f) notes, numerals always have to immediately precede the noun with po-

tentially intervening adjectives.

(36)   [saakwu=**hnóo** iyúwáákhti aji-atuuliísk-vv́ʔi aji-xxhyeèst-i jíistvvna
           one=COORD   time   3O-want-PST   3O-eat.NOM2 crawdad
           wahya].
           wolf
           'And one time wolf wanted to eat the crawdad.'

Montgomery-Anderson (2008, 365)

Even more striking are possibly the case studies where I have argued that the co-ordinator follows the first phonological phrase of the respective clause. These discussions contained numerous cases for which a syntactic movement analysis seems completely impossible. Just to give one example, we saw cases from German where a number of elements including subordinators and various non-constituents preceded the coordinator. In the example in (37), we would need to move three pronouns and a subordinator independently from each other across the coordinator only for them to land in the same order. Moreover, since these come from an adverbial clause, we would also have to move them out of a strong syntactic island.

(37)   ... weil   sie es ihm **aber** versprochen hatte, kam sie mit.
          ... because she it him but   promised   has,   came she with.
          '... but because she had promised it to him, she came along.'

An approach to second position elements in which all kinds of second positions are derived by syntactic movement only thus seems untenable in my opinion. At least phonologically determined second position elements need to be derived by means of a designated additional operation that displaces the element in question from its underlying canonical position to the surface position. In the case of shifting coordinators, we have seen in the previous section that this operation always displaces a coordinator from an underlying initial position to the phonologically defined second position, skipping exactly one phonological word or one phonological phrase. And as we have also seen in the previous section, this operation applies on the basis

of linear order and ignores syntactic constituency as well as syntactic islands. We can thus abstractly represent the effects of the operation as follows:

(38) **Derivation of a phonologically determined second position coordinator**:

$$A_1 \prec A_2 \prec ... \prec A_n \prec \text{COORD} \prec B_1 \prec \text{COORD} \prec B_2 \prec ... \prec B_n$$

The natural follow-up question is whether at least morphosyntactically determined second position elements can uniformly be derived by means of syntactic movement but as it turns out, at least a some of them cannot either. We have already seen the crucial argument for this in the previous section. Syntactic movement accounts like Bošković (2001); Zhang (2006); Legate (2008) and many others posit a syntactic movement transformation of an element into a position higher than the second position element.

And while such an approach may work for languages like Mandarin, crucially, however, moving an XP across the coordinator does not help us with languages like Udihe or Lezgian, which exhibit alternations between a final and a second position. An element that is underlyingly final will not end up in second position by means of XP-movement to a leftward specifier.[7] This is shown in (39). The underlyingly final coordinator remains final despite it being crossed by XP movement to the leftward specifier.

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[7]Gereon Müller (p.c.) suggests an alternative, purely syntactic approach to deriving alternations between a final and a second position: Under this approach the coordinator attaches to the left of the clause it modifies and then either attracts a specific phrase into its specifier or its entire complement CP. The former will lead to a second position placement and the latter to a final position placement. And while this is an interesting alternative, it will for now not follow up on it for two reasons. First, it requires us to have the coordinator head as underlyingly head-initial, which, given the consistently head-final nature of many of the languges, strikes me as implausible. This assumption also has the effect of creating FOFC-violating configurations in various languages (On the Final-over-Final-Condition more generally, see e.g. Biberauer et al. 2014; Sheehan et al. 2017 and references cited therein.) The second reason I will refrain from entertaining this alternative is that I know of no convincing cases of movement of a complement of a head X into X's specifier and in fact such configurations are widely assumed to be impossible (see amongst many others Abels 2003).

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(39)   A failed derivation for the Udihe second position element *dA*:

```
                  ╱╲
                 ╱  ╲
         ┄┄→ XP ╱    ╲
        ┆     ╱       ╲
        ┆    ╱         ╲
        ┆   ╱       Coord
        ┆  ╱          │
        ┆ XP   ⋯      dA
        ┆    ╱╲
        ┆   YP ZP
        ┄┄┄┄┄△  △
```
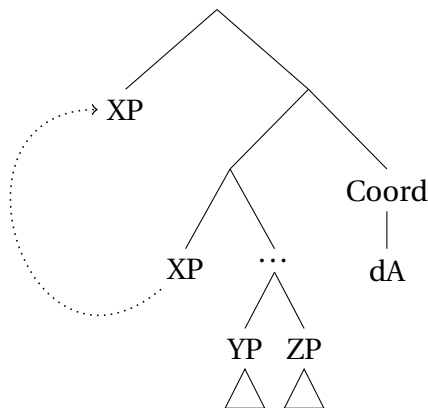
What this means is that for the alternations of a final and a second position, by far the most natural solution is to assume that the alternation between a second position and the final position of the coordinator is derived by means of dislocating of the coordinator itself.

(40)   A successful derivation for the Udihe second position clitic *dA*::

```
              ╱╲
             ╱  ╲
            ╱   Coord
           ╱  ┄┄
      XP ┄┄┄ ╱
        ┆   ╱ ╲
        ⌐  Coord  ⋯
           │    ╱╲
           dA  YP ZP
              △  △
```
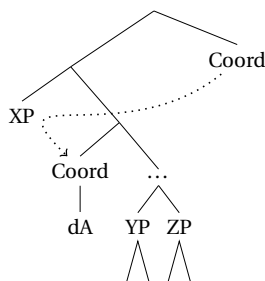
The remaining question is whether a solution along the lines above is sufficient to derive all kinds of second position elements. My take on this is that even if it were the case that a derivation like (40) could derive all patterns technically, it might still be preferable to not generalize its application to all instances of second position elements. In other words, I definitely do not want to make the claim that second position effects must exclusively be derived by postsyntactic means and that a syntactic treatment of a second position system in a given language is definitely wrong. I think in light of the data above, I think it is evident that the syntax cannot derive

all the patterns we encounter in the world's languages but that certainly does not mean that, in some language, syntactic movement is not the right way to model second position effects. After all, from all we know about syntactic structure building, certain second position effects are clearly predicted.

It remains an open question, however, how to diagnose unambiguously syntactic second position effects. One possible line of argumentation would be that cases in which the position of a element is due to the information-structural properties of the entire configuration rather than due to a given lexical requirement of the morpheme in question, then it must be syntactic. After all, standardly, postsyntactic operations are typically invoked to satisfy certain requirement of heads and exponents rather than information-structural properties. What that would predict would be that cases like Rangi, Mandarin or possibly Turkish, where the position of the coordinator depends on the notion of contrast between the two conjuncts or the question as to whether there is a contrastive topic in a given conjunct, would be due to syntactic movement.[8]

Thus, I do not claim that syntactic movement approaches should never be in-

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[8]This makes an interesting prediction that patterns of shifting coordinators that are due to information-structural properties of the configuration can only ever alternate between a conjunct-initial and a second position in the way that Rangi does. On the basis of my limited sample, this is borne out. Languages like Lezgian, Khwarshi and Udihe show an alternation between a final and a second position that does not seem to be conditioned by topic and focus properties of individual elements. But languages like Rangi, Turkish (Kornfilt 1996; Göksel & Ozsoy 2003; Göksel & Kerslake 2005; Bayırlı 2021) or Mandarin (Zhang 2006), in which the element preceding the coordinator can clearly be shown to exhibit topical properties, all alternate between a initial and a second position. I take this to be an encouraging finding but it of course needs to be investigated in more detail.

(41) a. Kedi içeri girdi   **de** Ali kapıyı   açtı.
          cat in   enter.PST and Ali door.ACC open.PST
          'The cat entered and Ali opened the door.'   Turkish, Bayırlı (2021, 92)
      b. Kedi içeri girdi   Ali **de** kapıyı   açtı.
          cat in   enter.PST Ali and door.ACC open.PST
          'The cat entered and, as for Ali, he opened the door.'   İ.K. Bayırlı, p.c.

(42) Baoyu yāo   tiàowǔ, **ke(shi)** wǒ **ke(shi)** yáo   huí-jiā.
      Baoyu want dance   but   I but   want return-home
      'Baoyu wants to dance, but I want to go home.'   Mandarin, Zhang (2006, 182)

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voked to model second position effects but in what follows, I will assume that there is sufficient evidence that for most of the case studies in my core sample, they can be shown to be inadequate. Against this background, it thus becomes clear, that we need a new account that allows us to derive at least a subset of morphosyntactically determined second position patterns by means of a postsyntactic transformational rule. As we have seen in Chapter 2, in all of the previous accounts (Marantz 1988; Schütze 1994; Halpern 1995; Bošković 2001; Embick & Noyer 2001; Legate 2008), morphosyntactically determined second positions always had to be derived by syntactic movement and syntactic movement only.

Nonetheless of course, we need to maintain the basic dichotomy between morphosyntactically determined second position placement and phonologically determined second position placement. After all, we just used their differences in behavior to argue for a transformational account in the previous section. As we have seen, the two types of patterns differ with respect to (i) whether they are placed in reference to syntactic or prosodic constituents, (ii) whether they were placed on the basis of linear order or hierarchical structure and (iii) whether they can be underlyingly final or not and (iv) whether they obeyed syntactic islands or not.

(43)

	Morphosyntactically determined 2nd position	Phonologically determined 2nd position
Target constituent	XP	ω, φ
Sensitive to	Syn. Hierarchy	Linear Order
Underlying Position	Initial or Final	Only Initial
Islands	Obeys Islands	Ignores Islands

So, of course we want to maintain this clear clustering of properties between the two types of second position placement. And despite the fact that we have just argued that syntactic movement cannot be the driving force behind all cases of morphosyn-

tactically determined second position patterns, we need to acknowledge that the properties listed in the left column in (43) look a lot more syntactic than the ones on the right. Nonetheless, the two patterns are clearly too different and the property clusters are too distinct to just lump them together.

We want to do justice to the fact that there seem to be two types of second position placement which come with a well-defined profile of properties that we want to derive. Yet, of course, we do not simply want to define two completely different operations, one of which is responsible for one pattern while the other operation is responsible for the other pattern. That would (a) be conceptually unappealing because we do want to keep the morphological toolbox as small as possible and (b) it would also not do justice to the fact that despite all their differences the two patterns of second position placement undeniably share one underlying core.

The solution that I will put forward to solve this tension is, in a sense, the solution put forward by Embick & Noyer (2001), which was, to a certain extent, already anticipated in Marantz (1988). Couched in the architecture of Distributed Morphology is the assumption that the main task of the postsyntactic morphological module is to translate the syntactic hierarchy of abstract categories into a linear string of phonological segments in a derivational, step-wise fashion. At the beginning of the postsyntactic module, the structures still look very much like syntactic trees and at the end they resemble phonological strings. That provides us with the logical option that second position placement is one and the same transformation applying at different stages of the postsyntactic derivation. If it applies early on, the result will be a morphosyntactically determined second position and if it applies late, it will be a phonologically determined second position pattern. This is what I refer to as a distributed treatment of second position elements and why the approach I will put forward in Chapter 4 is called the Distributed Integration approach.

3.4. Second position elements attach to the first element

In the previous section, I have provided an argument that at least a subset of morphosyntactically determined second positions must be derived by a postsyntactic shifting operation that dislocates the element in question from its canonical conjunct-peripheral position into the position after the first syntactic phrase of its domain. In this section, I will make that notion a little bit more precise and discuss the concrete target of that transformation. To be more concrete, I will argue that the transformation that place second position elements in their surface position will need to directly attach them to the first position.

As discussed in the previous chapter, the literature is divided concerning the question of whether second position elements obligatorily form a constituent with the element they precede or not. Most notably, Klavans (1985, 1995) argues that these are independent parameters. According to her typology, the parameter called *Precedence* decides whether an element surfaces in peripheral or second(-to-last) position and another parameter called *Liason* determines whether the element forms a phonological constituent with the element to its left or to its right. Since these parameters are formally independent, we also predict the existence of a second position element that form a constituent with the element to its right. However, the existence of such elements has been disputed widely in the literature and the few tentative examples Klavans gives have been reanalyzed in a convincing way (see Marantz 1988; Sadock 1991; Spencer 1991; Embick & Noyer 1999).[9]

In the study at hand, virtually all the examples of second position elements can be shown to phonologically attach to the element to their left. The case study on Oklahoma Cherokee for example discussed the intricate interactions of the coordinators inherent tone with the boundary tones on the preceding word. In many

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[9]It should be noted that the literature does not quite agree exactly on which of her types are attested and which are not.

other languages in the sample, we find that the second position coordinator shows surface allomorphy depending on whether the element it follows ends in a vowel or a consonant. A case in point is the alternation between *-in* and *-n* in Khwarshi. Similarly, we find languages, in which the coordinators undergo vowel harmony or consonant assimilation with the element they follow. An instance of vowel harmony from Udihe is shown below where the coordinator takes the form *da* in the first conjunct but *de* in the second. The choice is conditioned by the preceding vowel (which, in turn, is conditioned by the root-final vowel).

(44) Bi men-e zele-i bagdi-e-mi [aja-wa-**da**]   [ge:-we-**de**].
      me REF-0 life-REF live-PST-1SG good-ACC-FOC evil-ACC-FOC
      'I have experienced good and evil in my life.'

<div align="right">Nikolaeva & Tolskaya (2001, 772), gloss adapted</div>

In cases where the second position was defined in reference to prosodic phrases, the phonological attachment is necessarily less tight but in most cases the directionality of the attachment is still visible. In German, second position *aber* is phrased with the material preceding it. Having a pause before *aber* as in (45a) is very odd, but a pause after it (45b) is much more natural.

(45)   a. *[Sammi springt noch durchs   Zimmer] [Remi ‖ **aber** liegt schon
           Sammi jumps still through.the room   Remi but lies already
           im Bett].
           in bed.
           'Sammi is still jumping through the room but Remi is already in bed.'

       b. [Sammi springt noch durchs   Zimmer] [Remi **aber** ‖ liegt schon
           Sammi jumps still through.the room   Remi but   lies already
           im Bett].
           in bed.
           'Sammi is still jumping through the room but Remi is already in bed.'

Against the background of the different models we have encountered in the preceding chapter, it is important to note that the of phonological attachment to the left

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holds for both phonologically and morphosyntactically determined second position elements. As for phonologically determined second position placement, it does not really come as a surprise because all of the existing models in which a second position element is integrated directly into the prosodic structure the general assumption is that it is adjoined directly to the host of the clitic preceding it (see e.g. Selkirk 1995; Anderson 2005 for a discussion of the different options).

For morphosyntactically determined second position placement, it might be a little bit more surprising since this does not necessarily fall out of the standard analyses. The syntactic movement approach which has an XP move across an element for it to end up in second position would – at least without further assumptions – predict that the second position element should rather form a constituent with its complement. The same holds for a hypothetical analysis, in which a clause-initial element is lowered one head down across a specifier.[10]

(46)   Morphological Merger:
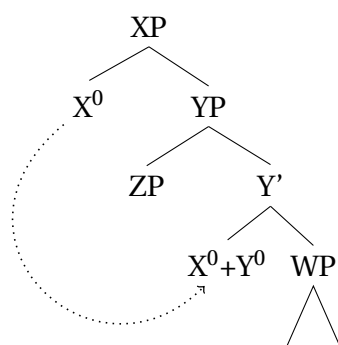
So, all in all, we conclude that shifting coordinators confirm the observation made by Marantz (1988); Sadock (1991); Embick & Noyer (1999) that Klavans' typology is too permissive and that second position elements never form a syntactic or prosodic constituent with the material they precede. In other words, second position coordi-

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[10]As noted in the discussion of the respective approaches, the Merger-based approaches in Marantz (1988); Embick & Noyer (2001) do not assume that second position after an morphosyntactic constituent is due to Lowering, which is why I call this a hypothetical approach. So, while I agree that Merger is not the right operation to account for this pattern, it is still instructive to see why.

nators are never ditropic.

As we have seen, this poses a strong contrast with coordinators in canonical positions which can be ditropic. Consider the examples from Stilo (2004) involving the coordinator *=o* in Colloquial Persian, which phonologically attaches to the first conjunct as shown in (47).

(47) maerdom-án-e xoda-šenas=o   motædæyyen
      people-PL-EZ   god-knowing=and religious
      'God-fearing and religious people'

<div align="right">Colloquial Persian, (Stilo, 2004, 285)</div>

Importantly, the phonological attachment to the first conjunct does not mirror the syntactic constituency because as we see in (48), syntactic reordering of constituents shows quite clearly that the coordinator forms a constituent with the second conjunct. In (48), the second conjunct is extraposed along with the coordinator to a postverbal position. The coordinator then will then attach to the verb as this is the element to its left.

(48) be in do nahie pænir mí-foruš-ænd=o pæšm
      to this two region cheese T/A-sell-3PL=and wool
      'They sell cheese to these two regions and wool.'

<div align="right">Colloquial Persian, (Stilo, 2004, 281)</div>

In their canonical base position, coordinators can have conflicting constituency requirements concerning phonological and syntactic constituency but in their derived position, they cannot. What this means is that it is by far the most plausible assumption that the transformation that places second position elements in their surface position directly attaches them to the first position. In the next chapter, I will introduce the operation INTEGRATION that reflects this finding directly and allows us to capture it in a restricted way.

3.5. Arguments for subcategorization

In this section, I discuss the question of why the coordinators (or second position elements more generally) appear in a non-canonical position. The literature has by and large given two possible answers to that question. One of the long-standing intuitions about non-canonical placement and in particular second position elements is that they do not appear in their canonical position because they require a phonological or prosodic host and their canonical position does not provide one. This intuition goes back to the earliest treatments of so-called special clitics in Zwicky (1970) and can be illustrated as in (49). An enclitic CL whose position is initial to the domain Δ cannot lean onto something to its left (because its initial) and therefore it has to be pronounced in the second position where it follows A and therefore has a host it can lean onto.

(49)   =CL [$_Δ$ A   B   C   …]

Note that this sort of intuition does not necessarily need to be understood in a derivational way. We can also implement this in a parallel, non-transformational way by saying that the position following A is the closest to the canonical position that provides for a prosodic host and therefore is the optimal one where the clitic will be pronounced. Note also, that that kind of approach does not only apply to phonologically determined patterns. In some frameworks, the status of a given affix as prefix or suffix is encoded as a morphological diacritic, which would allow us to say that in the morphology (or possibly even the syntax, depending on one's assumption about the morpho-syntax interface) something goes wrong when an element that is a morphological suffix appears in a domain-initial position.

A more recent implementation of a similar idea makes use of an optimality-theoretic constraint called STRONGSTART (see amongst others Selkirk (2009); Elfner (2012); Harizanov (2014); Bennett et al. (2016)), which assumes that the clitic itself can-

not be prosodified in its canonical, initial position as there is a constraint against prosodic domains starting with a phonologically weak element. Here, the clitic itself, due to its phonological deficiency (in a relative sense), creates a prosodically disfavored structure, which can be repaired by postposing the clitic to a non-initial position.

The alternative approach denies a straightforward connection between the ability of the clitic to appear in a non-canonical position from its phonological deficiency. This view has been most prominently advocated by Klavans (1985, 1995), who argues at length that phonological leaning and positional placement are to be seen independent variables. Under such an approach, the ability of the clitic to appear in a non-canonical position is usually due to the clitic itself subcategorizing for a specific element to its left or to its right (see amongst many others Lieber (1980); Klavans (1985, 1995); Inkelas (1990); Anderson (1992); Halpern (1995); Chung (2003); Anderson (2005); Kalin & Rolle (2023)). Depending on the type of clitic pattern this can either be a prosodic or a morphosyntactic element. This subcategorization feature is directly encoded into the lexical entry of the element in question. Using the notation of Inkelas (1990) and Halpern (1995), we can write the subcategorization of Latin *que* as follows:

(50)   Subcategorization of =*que*:

$[\, [\quad]_\omega$ =que $]_\omega$

The element =*que* requires a phonological constituent of the size ω (i.e. a phonological word) to its left and also phonologically attaches to it (indicated by the '=').The main difference under this approach is that the clitic appears in a non-canonical position because it is lexically specified to do so and not because its appearance in the canonical position would create problems in the prosody.[11]

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[11]As noted above, the entire discussion about whether second position placement is due to active (morpho-)phonological constraints (such as STRONGSTART) that seek to improve the prosodic representation or due to lexical specification is, as Anderson (2005) points out, in close parallelism

3. Towards a model of second position placement

In what follows, I will provide three arguments favoring the subcategorization approach.

The first argument is maximally simple and can be reduced to the simple observation, made in Chapter I.7.4, that, throughout my sample, there are no clear indications that the coordinators shifting are phonologically deficient or phonologically light enough to create a prosodically deviant structure. In many languages, we find evidence that phonological weight does not seem to play a role in the shifting pattern in the sense that (a) coordinators with very different phonological profile or weight undergo shifting or (b) that coordinators with similar phonological profile pattern differently when it comes to shifting.

Let us start with the first configuration according to which coordinators with very different phonological profile or weight undergo shifting. A clear case in point can be made with the data from Kalaallisut, where the three coordinators *lu,li* and *lu-unniit* in Kalaallisut all exhibit the same shifting pattern to a position after the first phonological word. Given the radically different phonological profile of *li/lu* and *luunniit*, it seems quite implausible to assume that the shifting itself is due to the phonology of the exponents. Furthermore, it seems far-fetched to assume that *lu-unniit* is phonologically deficient in some way.

A somewhat similar case can be made on the basis of Oklahoma Cherokee, where we saw that the coordinator appears in three different forms based on grades of phonological reduction: *hnóo, hnó* and *hnv́*, with *v* being the transcription of a maximally reduced vowel. Nonetheless they all shift to the position after the first phonological word. In Mandarin, the adversative conjunction can be realized as the bisyllabic *keshi* or as the monosyllabic *ke* which does not have an impact on its shifting behavior (Zhang 2006). Both variants are acceptable in the canonical and the non-

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to the phenomenon of infixation, where it is similarly unclear whether a given affix ends up inside of the stem to improve the phonological profile or simply because of its lexical specification (see Prince & Smolensky 1993; Yu 2007; Kalin 2022 and references cited therein for discussion). It should be noted, however, that I will ultimately end up arguing for the exact opposite position from Anderson (2005) and argue that an approach based on lexical specification in the sense of Yu (2007) and Kalin (2022) is more adequate.

canonical position. Phonological weight, prosodic deficiency of some sort or the ability to function as its own proper phonological word does not seem to have an impact on the placement pattern.

(51) Baoyu yāo tiàowǔ, **ke(shi)** wǒ **ke(shi)** yáo huí-jiā.
      Baoyu want dance but   I   but   want return-home
      'Baoyu wants to dance, but I want to go home.'

<div align="right">Mandarin, Zhang (2006, 182)</div>

As for the second configuration, according to coordinators with similar phonological profile pattern differently when it comes to shifting. Here, we can stay with Mandarin for a second to see that another adversative conjunction *danshi*, which does not differ significantly in terms of its phonology from *keshi*, does not undergo shifting.

(52) Baoyu yāo tiàowǔ, (**danshi**) wǒ **(*danshi)** yáo huí-jiā.
      Baoyu want dance but   I   but   want return-home
      'Baoyu wants to dance, but I want to go home.'

<div align="right">Mandarin, Zhang (2006, 183)</div>

There is no reason why, phonologically speaking, *keshi* should undergo shifting but *danshi* should not. A similar point can be made with the minimal pair between conjunction and disjunction from Udihe. The conjunction *-dA* will usually undergo shifting to the second position but its disjunctive counterpart *-es* will not. The latter will stay in the disjunct-final position. And while *-dA* and *-es* do not quite have the same profile phonologically, it is not quite obvious that that difference can be made precise to predict that the difference in terms of their shifting pattern.

We also find configurations of this sort with phonologically determined placement patterns. In Chapter I.7.4, I discussed the quite striking case in point from German where the minimal pair of *doch* and *jedoch* differ in asmuch the latter is a shifting coordinator but the former is not. *Doch* and *jedoch* form a clear minimal

pair in the sense that, phonologically speaking, the latter is a superset of the former. Nonetheless, it is the latter that obligatorily undergoes shifting while the former does not. It would be really implausible to classify the heavier one as deficient in comparison with the former. Minimal pairs of this sort make it very unlikely that the shifting itself is due to a difference in the necessity of the clitic to have a phonological host or due to a difference in whether the resulting configurations violate STRONGSTART.

The second argument against an approach where the position of the clitic is due to its search for a phonological or morphological comes from the alternations between a conjunct-peripheral and a conjunct-internal position. Of particular interest are the alternations between second position and conjunct-final position. We have seen these examples from Udihe and Lezgian and, with a minor caveat, from Khwarshi. One of the crucial minimal pairs from Udihe is repeated below.

(53)   ... [(Uti zoŋka mafasa)$_{XP}$-**de**   iñekte-ili]...
       ... this   poor   old.man-COORD laugh-3SG   ...
       '... and the poor old man laughed...'

<div align="right">Udihe, (Nikolaeva & Tolskaya, 2001, 911)</div>

(54)   ... [bue-ni mamasa-ni jaŋca-la-i-**de**]
       ... he-3SG wife-3SG   steer-VBLZ-PTCP-COORD
       '... and his wife was going to steer.

<div align="right">Udihe, (Nikolaeva et al., 2002, 97), gloss adapted</div>

In the course of the discussion above, I argued that alternations between a conjunct-peripheral position and a conjunct-internal position are most adequately captured as alternations between an underlying position and a derived position and in terms of a transformational account. But of course, it is quite straightforward to see that this transformation cannot be triggered by the phonological or morphological requirement of the coordinator to be realized as a suffix. In its base position, it is already a suffix. There would be no reason to "repair" the morphological or prosodic

configuration and put the clitic into a position that does not correspond to its base position. Similarly, it is clear that the coordinator in a conjunct-final position would not violate STRONGSTART and thus, again no prosodically disfavored configuration would be created and thus the need for the displacement of the clitic would never arise. In general, alternations as the one above do not seem to involve cases where displacing the clitic to the second position can plausibly be viewed as morphologically or phonologically improving in a straightforward way.

The third and final argument for a subcategorization-based approach and against an approach where the position of the clitic is due to its search for a phonological or morphological host comes from the observation that the occurrence of the clitic in a non-canonical position obeys different properties from its attachment to a prosodic host. Throughout the discussion about ditropic clitics, we have seen the example from Colloquial Persian, in which the coordinator prosodically attaches to material preceding it but clearly forms a syntactic constituent with the material following it. Another example comes from Hakha Lai, a Tibeto Burman language. Peterson & VanBik (2004) discuss the distribution of the clausal coordinator ʔ*ií* and provide arguments to the conclusion that despite it being a monosyndetic coordinator (unlike the nominal coordinator *lée*) ʔ*ií* phonologically attaches to the preceding element:

(55) làwthlawpaa=niʔ ʔaàr ʔa-dooy=ʔ**ií**   sayaàpaa=niʔ
      farmer=ERG   chicken 3SG.SUBJ-chase=COORD teacher=ERG
      ʔa-thlaʔy.
      3SG.SUBJ-catch
      'The farmer chased the chicken and the teacher caught it.'

Peterson & VanBik (2004, 335)

However, they also note that the element can occur initial to an utterance in which the first conjunct is elided or after what they call paragraphic shifts indicating that regarding basic constituency, it belongs to the second conjunct.

Thus, in terms of phonological bracketing, coordinators can attach to the right or

to the left ignoring syntactic constituency. This, however, is in stark contrast to their shifting behavior. As we have seen in Sections I.7.3 and II.3.1, the direction of shifting always obeys syntactic constituency. We saw that monosyndetic coordinators always shift into the second conjunct. Polysyndetic coordinators on the other hand shift into the coordinand that they modify.

What this means is that phonological attachment and directionality of shifting have different properties. The latter is sensitive to constituency while the former is not. This, in turn, indicates that *leaning* (i.e phonological attachment) and *shifting* (i.e. displacement) are two different processes and cannot be reduced to the same process. It seems that we need one process that puts the element in a non-canonical position and another that allows elements to phonologically attach to adjacent material.[12] Thus, along with the argumentation provided by Klavans (1985, 1995), we conclude that the property of a given element to undergo shifting cannot be predicted from its phonological makeup or its property of being a prefix or a suffix alone. In turn, this suggests that certain elements must be lexically specified to (be able) to undergo shifting. This points to a subcategorization-based approach.

3.6. Conclusion

The model we have arrived at at the end of this chapter has the following properties. It is (a) a transformational model of second position placement, in which second position elements are base-generated in their semantically transparent, canonical position. The second position effects that they show will be the result of a transformation. Further, (b) the model is cyclic in the sense that the syntactic structure (as well as the phonological structure) is built bottom-up and that some logically possible patterns of shifting coordinators are crucially unattested as the position of a given element is calculated at a certain point of the derivation in which not the en-

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[12]This conclusion parallels the observations in Marantz (1988), albeit for somewhat different reasons.

tire structure is available. In addition, (c) I argue for a postsyntactic, yet distributed account, according to which we want to derive some patterns on the basic of morphosyntactic structure and some on the basis of prosodic structure. Nonetheless, we want to express that it is one underlying operation that leads to second position patterns of both types. Finally, (d), I have argued that this operation arises due to subcategorization requirements of specific elements rather than due to optimization of the syntactic or phonological structure. I will present the model in detail in the next chapter.

4. A formal account of second position elements

In this chapter, I will propose a unified account of second position placement patterns found in my sample, which include cases of coordinators shifting to a second position either be defined in terms of morphosyntactic constituency or in terms of phonological or prosodic constituency. In the former case, the second position element will be located after the first syntactic phrase (XP), in the latter case it will be located either after the first phonological word or the first prosodic phrase. As we have seen, the choice between morphosyntactically and phonologically determined placement patterns is largely arbitrary and does not correlate with any other properties of the elements in question. The choice between the two phonologically determined second position placement patterns however correlates with their syntactic type: Monosyndetic coordinators always shift to a position after the first prosodic phrase whereas polysyndetic ones always shift to a position after the first phonological word.

4.1. The analysis in a nutshell

The previous chapter has already paved the way to tackle some of the challenges that a formal model of shifting coordinators – and second position elements more generally – faces. We want a uniform transformational model that applies cyclically

but is still flexible enough to derive the property clusters of morphosyntactically determined second position placement and phonologically determined second position placement in what I called a distributed way.

Here's, in a nutshell, how the model I will present in this chapter looks like. I am assuming a derivational, postsyntactic model of morphology in which abstract syntactic hierarchical structure is mapped onto linear strings of phonological segments. Particularly crucial for the model I am adopting are the two steps of Spell-Out and Vocabulary Insertion. The former describes the mapping of syntactic structure to the postsyntax. The latter describes the mapping of abstract syntactic hierarchical structure to linear strings with phonological content and prosodic constituency.

Against the background of this model of grammar, I propose that second position placement arises due to a transformation I call INTEGRATION. This transformation dislocates an element from its underlying position to an integrated position inside of its complement domain. The exact target position of INTEGRATION depends on its timing of application as the operation can either apply at Spell-Out, or at Vocabulary Insertion. Since the INTEGRATION transformation is formulated in a way that abstracts over different relations between linguistic elements (c-command or precedence), the results of the transformation differ radically depending on when it applies. If it applies at Spell-Out, the result will be that it refers to syntactic constituency and obeys syntactic islands. If it applies at the point of Vocabulary Insertion, which is a process I assume to include also linearization and cyclic mapping to prosodic structure, INTEGRATION will refer to prosodic constituency and ignore syntactic islands (as the structure, by now, merely corresponds to prosodically organized constituents).

The difference between morphosyntactically determined second position placement and phonologically determined second position placement then essentially boils down to a difference in the timing of INTEGRATION and its concomitant interactions with other processes such as linearization or the creation of prosodic struc-

ture. In the model this difference is caused by the locus of the subcategorization-feature, which triggers INTEGRATION. This feature is, unlike other subcategorization features, radically underspecified. It does not select for a specific category or a constituent of a specific size. It merely requires the element it bears to appear in an integrated, non-peripheral position. I will represent this feature with the double-arrows indicating that all it wants is to appear in a non-peripheral position: $[\Rightarrow\Leftarrow]$.

This essentially models the property of second position elements sometimes known as the promiscuity property (Zwicky & Pullum 1983; Spencer & Luís 2012), i.e. to not be picky about the type of their host. The presence of this feature on a linguistic element triggers INTEGRATION of that element as soon as possible. Crucially, I assume that feature can be located either on a syntactic head or on an exponent. In the former case, this will result in the application of INTEGRATION at Spell-Out and in the latter case, this will result in the application of INTEGRATION at Vocabulary Insertion. The reason is that exponents are only inserted into the structure upon Vocabulary Insertion and thus, an INTEGRATION feature that is present on an exponent will not be present during Spell-Out but only at Vocabulary Insertion. As noted above, the difference between morphosyntactically determined patterns and phonologically determined patterns does not correlate with other properties of the elements in question. In the system at hand, this falls out because it is not predictable per se whether the INTEGRATION feature is present on a given syntactic head or on an exponent.

As noted above, the difference between the two types of phonologically determined placement patterns is on the other hand fully predictable from the morphosyntactic category of the coordinator. This will be made to follow from the cyclic property of Vocabulary Insertion. Vocabulary Insertion applies cyclically in a bottom-up fashion, inserts exponents into a given terminal node and, in the process, linearizes the syntactic tree and parses it into prosodic structure. As soon as that bottom-up insertion/prosodification hits a cyclic node (for example a CP-node), it will map

it onto the corresponding prosodic constituent (for example a *ι*). The creation of this new prosodic constituent will have an immediate impact on the possible targets of subsequent instances of INTEGRATION. Thus, the different prosodic targets of different types of shifting coordinators arise as the result of the relative position of the coordinator with respect a given cyclic node.

4.2. The Distributed Integration model of second position elements

The formal model of second position placement that I want to propose in this chapter is couched in a so-called inverted Y-model of grammar, a version of Minimalist Syntax (Chomsky 1995 et seq.) which draws on a very reduced, non-generative lexicon. The structures built in the syntax then feed into a postsyntactic Logical Form (LF) and Phonological Form (PF). For the purposes at hand, it is going to be the PF-branch that we will be mostly concerned with as that comprises, by assumption, a postsyntactic morphological module, in which the crucial operations apply.[1]

(1)   Lexicon
              |
            Syntax
           /   \
        PF   LF
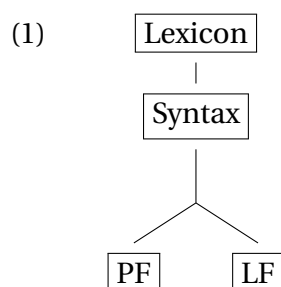
The point in the derivation, where the structures built in the syntax are shipped off to LF and PF alike, I will refer to as *Spell-Out*. As I will argue in the next sections, Spell-Out ships the syntactic structures off to the respective interfaces (LF and PF) and, in the course of it, applies some changes to the structure already so

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[1]Of course, there are many interesting things to say about the LF-side of coordinate structures but for the discussion involving shifting coordinators, the LF side does not seem to matter to much as shifting coordinators are interpreted just like the ones that remain in canonical position.

that the morphology (and presumably the rules at LF) can apply to this structure more readily. I assume further that Spell-Out is cyclic in the sense that syntax only builds certain chunks of the derivation and then ships them off to the interfaces piece-by-piece (see e.g. Uriagereka 1999; Chomsky 2000, 2001a and much subsequent literature). As we are dealing with instances of clausal conjunction mostly, it will be particularly important for our purposes, that clauses are such chunks. The syntax builds the structure and as soon as it hits a clause-boundary, it ships the clause off to LF and PF. Section II.4.3.1 will illustrate the cyclic spell-out property in more detail.

I adopt a model of morphology along the lines of Distributed Morphology (Halle & Marantz 1994; Harley & Noyer 1999; Embick 2010; Bobaljik 2012; Arregi & Nevins 2012; Kalin 2022; Kalin & Weisser 2024). The assumption of this framework provides for a number of beneficial assumptions that will play into the discussion in this chapter but I want to stress that, apart from a number of specific assumptions, which I will highlight below, it is not the point of the current chapter to argue for or against a framework of morphology or for a certain architecture of grammar as a whole. I suspect that many of the findings I derive in this chapter can be modelled in competing theories as well but this remains to be seen. The point of this chapter is to show that the architecture of grammar assumed in a framework like Distributed Morphology is of the right kind to derive the patterns we find with second position placement.

The first major assumption is that the syntax is the sole source of structure-building. Grammatical features, which are bundled in certain ways, are combined and arranged in specific ways according to the rules of syntax of a given language.[2] This includes the arrangement of morphemes inside complex words. Unlike lexicalist

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[2] In large parts due to the methodological choice of studying clausal coordinators, we fortunately do not need to go into a lot of detail how these rules of syntax look like and to what extent they can vary from language to language. As discussed in part I of this book, coordination structures do not exhibit a large amount of crosslinguistic variation (compared to other elements) and to the extent that they do, we understand and can control for it fairly well. I will say a few words about my assumptions concerning the syntax of coordinate structures in Section II.4.3.1

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frameworks in which complex words are built in an entirely different module (i.e. a generative lexicon) and in accordance to a different set of rules, Distributed Morphology does not assume that words are built in a fundamentally different way than phrases and, in many cases, rejects the assumption that a clear, non-trivial definition of what a word is can be found. It should come as no surprise that this assumption pays off when looking at a topic like "clitics", which are undeniably one of the biggest problems for any attempt to define what a word is. In fact, lexicalist frameworks have struggled quite significantly trying to find a coherent set of diagnostics as to which clitics belong into the lexicon and which do not (for different attempts of a classification see Zwicky 1977; Zwicky & Pullum 1983; Miller 1992; Monachesi 1996; Miller & Sag 1997; Crysmann 2000). For the cases of shifting coordinators for example, I have the impression that some of the elements in this sample would be classified as affixes and others as bound words or clitics but such a viewpoint would, as far as I can tell, stand in the way of a coherent approach to this phenomenon. It seems to me to be very clear that in particular all of the case studies involving a second position placement pattern fall very neatly into a uniform, coherent picture yielding the full typological range of second position elements. And I do not think a lexicalist view, in which some shifting coordinators are put in their position in a generative lexicon and others in the syntax, would allow us to derive that coherent picture.

The second assumption that plays a role in the approach to follow in this chapter is that of *Late Insertion*. In Distributed Morphology, the assumption is that syntax applies purely on the basis of abstract syntactic feature bundles devoid of phonological content. The phonological content is only inserted in the course of the phonological derivation, namely by means of the Vocabulary Insertion operation. I will discuss the intricacies what I assume Vocabulary Insertion to do in the next subsection. Late Insertion approaches have, like all realizational theories (e.g. Beard 1995; Stump 2001), the advantage that we can separate the building of morpho-

logical structure from its concrete phonological realization. As noted above, one of the core assumptions of this approach is that the trigger of the transformation that puts a second position element in its surface position, can either be located on the abstract morphosyntactic head (i.e. the grammatical morpheme) or on its exponent (i.e. its phonological realization). This distinction is crucial in my approach as it is what underlies the distinction between morphosyntactically determined second position elements and phonologically determined ones. But when it comes to deriving the behavior of clitics, the advantages of a Late Insertion-based approach arguably go beyond its realizational character (see also Kalin & Weisser 2024). In the course of the discussion about second position placement being due to a transformation (Section II.3.3), we saw some opacity effects of the transformation that second position elements undergo. Syntactically, they interact with other elements in their canonical base position (e.g. they license ATB-movement, RNR, etc.) but phonologically, they only ever interact with the material in their surface position (e.g. they undergo vowel harmony or phonologically predictable allomorphy in their surface position). This falls out as completely expected in a Late Insertion-based approach because the phonological features will only be inserted in their surface position. Under an Early-Insertion approach, the inaccessibility of the phonological features needs to be stipulated in addition.

The third major assumption that the approach at hand will make use of is the fact that Distributed Morphology is a derivational framework and allows for a limited number of structure-manipulating operations.[3] I suppose, it has become clear by

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[3]See e.g. Marantz (1988); Bonet (1991); Halle & Marantz (1994); Embick & Noyer (2001, 2007); Kramer (2010); Embick (2010); Arregi & Nevins (2012); Myler (2013); Guseva & Weisser (2018); Fenger (2020); Georgieva et al. (2021); Hewett (2023); Keine & Müller (to appear) and many others. I want to note that it is very much an open question whether these operations are necessary and in fact it would be my hope that they are not and that the DM-toolbox can be reduced at least to a certain extent, either by subsuming several of these operations into one or by reanalyzing some of the phenomena as being due to syntactic processes after all (see e.g. Bjorkman (2011); Myler (2017); Harizanov & Gribanova (2019); Arregi & Pietraszko (2021); Streffer (2025)). In this sense, the work at hand also attempts to make a step forward as it tries to unify morphosyntactically determined displacement and phonologically determined displacement as being due to the same abstract rule, with all differences being due to derivational timing. Embick & Noyer (2001, 2007) claim in several places that the two operations they propose (*Lowering* and *Local Dislocation*)

4. A formal account of second position elements

now that the core assumption of this work is one postsyntactic operation that manipulates the syntactic structure in such a way that it displaces a coordinator from its canonical, syntactically transparent position, into a second position of some sort. Furthermore, it is similarly important that the framework at hand is derivational in the sense that the second position transformation can apply at different points in the derivation and depending on its timing, interacts with other postsyntactic operations in specific ways. Particularly crucial for the proposal at hand is that there is an early stage of the postsyntactic derivation (following Spell-Out), in which the structure is still organized in terms of hierarchical, syntactic structure that allows us to calculate c-command relations and there is a late stage of the postsyntactic derivation (following Vocabulary Insertion) in which the structure organized in terms of prosodic categories that are ordered in linear terms to each other.

The final property of the framework that will play out in favor of our approach is what Marantz (2010); Kalin & Weisser (2024) call the *recycling* property of Distributed Morphology. In the syntax, the structure is built incrementally bottom-up but the actual exponence of that structure again starts at the bottom of the syntactic tree and applies bottom up again (Bobaljik 2000; Paster 2006, 2009; Embick 2010; Kalin 2022; Kalin & Weisser 2024).[4] Bottom-up Vocabulary Insertion will prove crucial to derive cylicity effects of the INTEGRATION operation we saw in Section II.3.1 and constrain its application in such a way that it makes the correct empirical predictions. The next subsection will illustrate the intricacies of bottom-up Vocabulary Insertion in more detail.

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should be conceived of as instantiations of Marantz' (1988) abstract *Merger*-operation applying at different points in the derivation. However, it is far from clear if this is actually the same operation as they do not give a concrete definition that would allow us to abstract over Lowering and Local Dislocation. As we will see below, the implementation I propose in this work is very straightforward and rests on one abstract rule and shows how it applies in different contexts. I take this to be a clear step forward.

[4]The assumption that morphological exponence or realization applies from the root outward is of course not only present in Distributed Morphology but in many other morphological frameworks as well: Kiparsky (1982, 2000); Anderson (1982, 1996); Wunderlich (1996); Stump (2001); Starke (2009); Caha (2009); Müller (2021).

4.2.1. The postsyntactic architecture and timing of

INTEGRATION

In the previous subsection, I have already discussed the most important concepts of the underlying framework I adopt. In this subsection, I will now go on to illustrate the two crucial operations, Spell-Out and Vocabulary Insertion, in more detail. As mentioned in the discussion above, I assume a postsyntactic module of morphology. The starting point of this module is the mapping procedure I refer to as Spell-Out. It maps the syntactic structure to the postsyntax. The end point of the postsyntactic derivation is the mapping procedure I refer to as Vocabulary Insertion. It maps the syntactic hierarchical structure to prosodic structure that is organized in linear terms. After Vocabulary Insertion (or possibly even in the course of it, see Kalin 2022), the phonological operations apply. The organization of the postsyntactic module looks like this:

(2)

Syn ⤳⤳⤳ ⊢⟶⟶⟶ ⤳⤳ Phon

Spell-Out

Vocabulary

Insertion
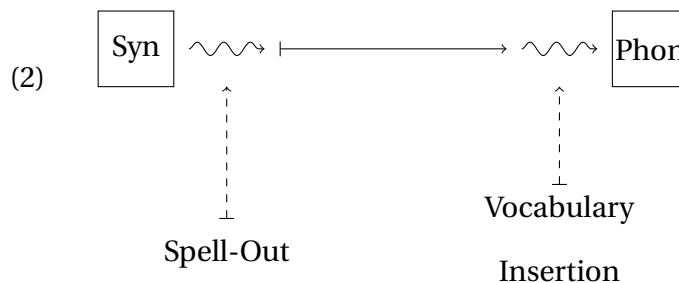
The mapping procedure Spell-Out takes a specific chunk of the syntactic derivation and ships it to the postsyntactic morphological module. In doing so, it defines the application domain of morphological and certain phonological processes. I further assume that, in some cases, Spell-Out accomodates minimal changes to the syntactic structure that will facilitate the application of morphological processes. It has for example been noticed that, in many cases, certain covert projections, which are required for syntactic processes, do not seem to be present for postsyntactic morphological processes. For this reason, works like Embick (2010); Arregi & Nevins (2012); Moskal (2015); Fenger (2020); Fenger & Weisser (2024) devise pruning or obliteration

operations that dispense with certain morphosyntactic heads either based on featural or phonological markedness. In what follows, I assume that certain unmarked projections that to not bear morphosyntactic features are not mapped to the post-syntactic derivation to begin with. Other potential changes that could possibly be modelled as part of the Spell-Out mapping procedure are mismatches between syntactic and morphological kinds of markedness (see e.g. Noyer 1992; Harbour 2003; Trommer 2016; Weisser to appear) that require some sort of default insertion different kinds of markedness-targeted or markedness-triggered neutralization (Nevins 2011). None of these operations that could be conceived of as part of Spell-Out is crucial for the theoretical model at hand and thus I leave it open for now how this works. What is crucial however, is that during Spell-Out syntactic relations are retained and as such c-command between different elements in a given domain can be calculated. Similarly, we still observe syntactic island effects during Spell-Out because all the information required to identify a syntactic island is still present. In some proposals, the property of being a syntactic island follows from certain nodes, features or specific c-command relations in the tree, in others from the notion of cyclic spell-out (see amongst many others Huang 1982; Uriagereka 1999; Nunes & Uriagereka 2000; Stepanov 2007; Müller 2010; Sheehan 2010, 2013; Bošković 2016a; Privoznov 2021) or a combination of the two but in either case, it is crucial that all of the required information is present at the stage of Spell-Out. As such, we expect transformations applying at Spell-Out to obey syntactic islands.

The second important mapping procedure is *Vocabulary Insertion* (VI). Traditionally, VI refers to the application of rules that insert phonological information into terminal nodes in the tree.[5] Under the conceptualization of VI that I am assuming

---

[5]The literature contains a debate as to whether VI replaces morphosyntactic features with phonological and lexical ones or whether VI additionally endows the terminal node with phonological features (see e.g. Bobaljik (2000); Gribanova & Harizanov (2015); Rolle (2021)). The debate usually circles around the fact whether morphosyntactic features are still available after VI and as such can be accessed by subsequent steps of VI. This, then corresponds to the empirical observation as to whether morphosyntactically determined allomorphy can be inward or not. I will for now make the latter assumption according to which morphosyntactic features are not overwritten by phonological features. Not too much hinges on that decision for the present purposes but see

here, VI however does not only insert phonological content. Rather, it is a cyclic, bottom-up mapping procedure that (a) concatenates the node in question with the previously inserted material, (b) inserts phonological material into the terminal node in a given cycle, and (c) maps the resulting structures onto prosodic constituents whenever it hits a cyclic node.[6] For the purposes of this work, I will assume that the crucial cyclic nodes are CP, vP, DP and PP. CPs map to intonation phrases (ι), all of the others map to prosodic phrases (φ).[7]

I will illustrate the step-wise, cyclic nature of VI with the following toy example that sketches the somewhat simplified derivation of the complex vP *Johnny idolize every star*, for which I will assume a morphosyntactic tree structure as in (3)[8] and Vocabulary Items in (4).

(3)

(4)   a. $[\sqrt{\ }] \leftrightarrow$ idol

b. $[v] \leftrightarrow$ -ize

c. $[D] \leftrightarrow$ every

d. $[N] \leftrightarrow$ star

e. $[N] \leftrightarrow$ Johnny

---

chapter II.5.2 for an argument that at least basic categorical distinctions must be present after VI. In accordance with that decision I will represent Vocabulary Items with a correspondence arrow, $\leftrightarrow$, rather than an arrow indicating rewriting $\rightarrow$.

[6]This conceptualization of VI as a sequence of cyclically applying operations comes very close to what Kalin (2022) does in order to derive infix placement. Very much in the same spirit than the account at hand, Kalin argues that infixes are cyclic elements that are base-generated in a transparent, affixal position and arrive in their non-transparent, infixal position as the result of a displacement transformation. In Kalin's framework, VI (or in her terminology, *Realization*, consists of successive application of (a) concatenation, (b) exponent choice, (c) exponent insertion, (d) the infixation transformation and (e) application of cyclic phonology. It should also be noted that the concept of cyclic bottom-up creation of prosodic structure was employed by Inkelas (1990) already, where some of the advantages for clitic placement have already been explored.

[7]Especially for the lower clausal cycle, the literature contains a big debate as to whether (a) it is universal and (b) whether vP is actually the correct boundary or whether it is Aspect, or some other head. None of this matters too much for the purposes of this work as we are mostly concerned with clausal coordination. I take it to be largely uncontroversial that clause boundaries instantiate some sort of locality domain that will, in one way or another be mapped onto an intonation phrase. See the discussion below as to how direct the mapping should be conceived of.

[8]Recall that, by assumption, some syntactic projections are not mapped to the postsyntax, which is why I do not represent the VP in the tree structure here because it is headed only by the trace of V, which has, in the syntax moved to v.
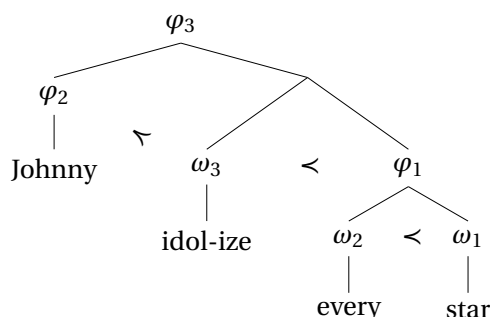
4. A formal account of second position elements

VI applies bottom-up and thus we start with the lowest terminal node, the N-head. We insert the phonological material (here, simplified as orthography *star*). The N-head, being an X^0 category, is mapped to a phonological word (here: ω_1). The determiner is next: It is concatenated as preceding this ω_1, inserted and mapped to an ω (here: ω_2). In the tree in (5), concatenation is indicated with a $\prec$-symbol. The entire DP, being a cyclic node is mapped to a phonological phrase φ_1.[9] Next, the verb root $\sqrt{}$ is inserted. Immediately after, VI to ν applies. The combination of the verb root and ν is mapped onto an ω (here: ω_3). Finally, ω_3 is concatenated with φ_1 and the syntactic structure corresponds to a v', which is not a cyclic node and therefore will not be mapped to a prosodic category. Next, we insert the specifier, which - being a DP - is a φ-phrase on its own (φ_2). Since its sister has not been mapped to a prosodic category, φ_2 is linearized with respect to the first element within its sister (ω_3). Since the entire category is a cyclic node (vP), it will be mapped to a φ-phrase.[10]

---

[9]In this toy example, I abstract away from the fact that, strictly speaking, the DP *every star* being a phase has already undergone VI on a previous cycle. I assume that what actually underlies the notion of cyclic node is precisely the fact that they have undergone VI on a previous cycle. What this means is that VI also stitches the different cycles back together and in order for them to form one coherent prosodic structure (see Pak 2008).

[10]Overall, I will stay agnostic as to how direct this mapping from syntactic nodes onto prosodic constituents is. The literature contains an elaborate debate about this issue. Some approaches contend that this sort of mapping is extremely direct and inviolable such that there is a straightforward one-to-one correlation from syntactic category domain to prosodic constituent. Such approaches, known as direct mapping approaches, argue that we can actually dispense with concepts like φ or ω as these then become merely notational variants of the respective syntactic cycle (see e.g. Kaisse 1985; Odden 1987; Wagner 2005; Pak 2008; Newell 2008; Newell & Piggott 2014; D'Alessandro & Scheer 2015; Shwayder 2015; Fenger 2020; Harðarsson 2021). So-called indirect mapping approaches on the other hand argue that the assumption of a one-to-one mapping is too strong of a claim and that we occasional grave mismatches between the syntactic and the prosodic structure (see e.g. Selkirk 2000, 2009, 2011; Truckenbrodt 2002, 2005; Elfner 2012; Myrberg 2013; Elfner 2015; Bennett et al. 2016; Cheng & Downing 2016). I also do not necessarily rule out the possibility that, in some languages, each step of mapping can be influenced by additional constraints (e.g. EQUAL SISTERS or BINARITY) of the type that the above-mentioned literature has proposed. However, for the purposes of the discussion here, I will – mainly due to reasons of space – only be concerned with cases where the mapping is more or less straightforward. As such, I think that upon closer inspection, Direct- and Indirect Mapping approaches are in actual practice much closer than they are typically portrayed to be (see also the discussion in Wagner 2010; Selkirk 2011; Bennett & Elfner 2019). Direct mapping approaches often also allow for some minimal amount of context-sensitivity or allow for a restricted number of processes that can meddle with the underlying structure to accommodate mismatches (see e.g. Pak (2008); Fenger (2020); Harðarsson (2021); Fenger & Weisser (2024)) when it comes to the concrete mapping.

(5)

$$
\begin{array}{c}
\varphi_3 \\
\varphi_2 \quad\quad \text{\textcurvearrowright} \quad \omega_3 \quad \prec \quad \varphi_1 \\
\text{Johnny} \quad\quad \text{idol-ize} \quad \omega_2 \prec \omega_1 \\
\text{every} \quad \text{star}
\end{array}
$$

The mapping procedure that I take Vocabulary Insertion to be translated the syntactic tree into a set of precedence statements that hold over prosodic constituents. As I alluded to above, I assume that the INTEGRATION transformation that causes displacement of an element into second position can either apply at Spell-Out or at Vocabulary Insertion with fundamentally different results. The syntactic tree was organized in terms of structural relations (c-command) over syntactic categories (XPs) whereas the prosodic tree is organized in terms of linear relations (precedence) of prosodic constituents (φ,ω, etc.). One consequence of this is that syntactic islands hold at Spell-Out as islands are usually conceived of as a combination of the category of a given element and its structural relations (adjunct status vs argument status, specifier vs complement position etc.; see e.g.Huang (1982); Uriagereka (1999); Nunes & Uriagereka (2000); Stepanov (2007); Müller (2010); Sheehan (2010, 2013); Bošković (2016a); Privoznov (2021)). But islands do no longer hold during Vocabulary Insertion. In the next section, I will lay out in more detail how the timing of INTEGRATION has different effects.

4.2.2. The underspecified subcategorization feature and the INTEGRATION transformation

As argued for in Chapter II.3, second position placement should be conceived of as being due to subcategorization of the elements in question. I will assume that being subcategorized for second position is merely a special case of syntactic or prosodic

integration. We know, for example, that some elements are simple leaners in the sense that they integrate into a certain prosodic constituent because they cannot stand on their own and happen to end up next to that category. These elements are what Zwicky (1970) called *simple clitics*. English monosyllabic unaccented prepositions or English *'s* marking possessos simply attach at the edge of a given phrase, largely irrespective of the syntactic or prosodic properties of that element. Nonetheless, it can be shown that they morphophonologically interact with their host to a certain degree. Zwicky (1987) for example shows that the possessive 'S is suppressed by the presence of another affix that is realized as *s* (6) but not by roots ending in *s* (7).

(6)　　a.　anyone who likes kids's ideas

　　　　b.　*anyone who hurries's ideas

　　　　c.　*everyone at Harry's's ideas

(7)　　a.　the bus's doors

　　　　b.　Thomas's ideas

In other words, we have good reason to believe that some elements simply lean onto an adjacent element and are integrated into them to a certain degree. This property needs to be encoded on the element in question somehow and there is various ways to do that. Nevis (1986); Zwicky (1987) for example specify elements for the GPSG-style FOOT FEATURE [LAST] in the case of possessive affixes. I will use a simple arrow feature $[\Rightarrow]$ or $[\Leftarrow]$ on a given grammatical element to encode its direction of integration. In that sense, we could say that English *and* is actually specified for $[\Rightarrow]$ because it is usually prosodically integrated into the second conjunct.[11] Correspondingly, a left-leaning coordinator like the Persian coordinator *o* in (8) would be specified with

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[11]An alternative is to say that, in absence of an integration feature, a functional head like the coordination head that *and* expones is simply integrated into its syntactic complement and thereby maintains constituency.

the feature $[\circlearrowleft]$.[12]

(8)   maerdom-án-e xoda-šenas=o   motædæyyen
       people-PL-EZ   god-knowing=and religious
       'God-fearing and religious people'

Colloquial Persian, Stilo (2004, 285)

Second position elements show similar effects in the sense that they seem to form a constituent of some sort with the first element. However, their requirement seems to be that they need to be integrated in a non-peripheral position. I will encode this as follows: A second position element will bear the feature: $[\circlearrowright\circlearrowleft]$. This has several benefits: First, it captures what Zwicky called the promiscuity property, namely the fact that the categorical nature of the host is not important. The second position element does not subcategorize for a specific category (be it prosodic or syntactic) but rather, it merely requires to be integrated in a non-peripheral position. In a sense, it is a maximally underspecified subcategorization with respect to the category of its host. Secondly, formalizing it in this way allows us to capture that second position elements will not lean to the element to their right. In Chapter II.2, we discussed in detail that works like Marantz (1988); Sadock (1991); Spencer (1991); Embick & Noyer (1999) have argued at length that such elements are, pace Klavans (1985, 1995), not attested. This follows from the implementation of integration features if, as the notation suggests, $[\circlearrowright\circlearrowleft]$ is a superset of $[\circlearrowright]$. As a result, a grammatical element cannot have a requirement to be integrated in a non-peripheral position *and*, in addition, to be right-leaning. As we will see below, the formalization of the INTEGRATION transformation will ensure that second position elements are always left leaning. Third, it makes no specific reference to second position, which, as I will

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[12]Note that these simple leaners, which, in the current bottom-up prosodification system are modelled by the $[\circlearrowright]$ or $[\circlearrowleft]$-feature need, in some cases, to be able to delay their prosodic integration if the element that they attach to is prosodified in the following step. An English auxiliary clitic, which is located in T, wants to lean onto the subject (e.g. in *I'll go to the movies*), it needs to delay the application of the prosodic integration one step. I do not take such minimal delays to be problematic.

4. A formal account of second position elements

illustrate below, allows us to derive without additional assumptions as to why we find second position elements but no phenomena like third position elements or second-to-last position elements.

One crucial assumption that I will make is that the INTEGRATION feature $[\Rightarrow\Leftarrow]$ can be located on a syntactic head or on an exponent. In other words, sometimes it is a property of an abstract syntactic terminal that it requires integration and sometimes it is a property of individual exponents.[13] This will be important for what is to come and will ultimately be the crucial factor that determines the differences between morphosyntactically determined second position elements and phonologically determined second position elements. The reason is that this integration feature will need to be resolved at the first possible point. If it is present on a syntactic terminal node, then it will be satisfied by means of INTEGRATION upon Spell-Out but if it only enters the derivation late because it is only located on an exponent that is inserted late, then it will only be satisfied by means of INTEGRATION upon Vocabulary Insertion.

Having introduced the triggering feature, I can now go on to discuss the heart of the proposal, namely the concrete implementation of the transformation that results in second position placement of elements bearing the $[\Rightarrow\Leftarrow]$-feature. Informally speaking, the operation simply dislocates an element to a position that follows the highest or first element within the constituent it is adjacent to. Crucially, adjacency can be understood in one of two ways depending on whether we are at Spell-Out or at the point of Vocabulary Insertion. When the operation applies at Spell-Out, the crucial relation will be c-command and the adjacency is a type of Structural Adjacency. And when it applies at Vocabulary Insertion the crucial rela-

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[13]I believe that this is also true for simple *leaners*. In some cases, it is a property of a syntactic head that it leans onto an adjacent element and in some cases it is a property of a given exponent. The monosyllabic, semantically bleached prepositions in English (*to, of*, etc.) all lean onto their complement in the default case. In the spirit of Abels (2012), we can say that this is because they occupy a uniform syntactic position (p^0) whereas semantically less bleached prepositions (e.g. *behind*) occupy a different position (P^0), which is an assumption required for differences with respect to adverb placement and P-stranding anyway.

tion will be the kind of linear precedence statements, which were introduced in the previous subsection. The kind of adjacency we will find then is Linear Adjacency.[14]

The formal definition of INTEGRATION is given in (10) and ADJACENCY is defined as in (11):

(10)   INTEGRATION:

An element X bearing a $[\diamond\!\diamond]$-feature that is adjacent to an element Y can be adjoined to an element Z within Y if there is no element within Y that is adjacent to Z.

(11)   ADJACENCY:

X is adjacent to Y if there is a relation ρ such that X ρ Y and there is no element Z such that X ρ Z and Z ρ Y.

(ρ: C-command or Precedence)

Let me briefly illustrate the workings of the definition above with two abstract examples. Consider the tree in (12) below. Suppose we have a syntactic tree as in (12), where the terminal node X bears a $[\diamond\!\diamond]$-feature, which triggers the application of

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[14]The literature on postsyntactic processes contains an elaborate debate as to whether the locality considerations that constrain them are structural or linear in nature. Bobaljik (1995, 2000, 2012); Moskal (2015); Smith et al. (2018); Georgieva et al. (2021) all investigate phenomena that seem to require a notion of structural adjacency in very much the same way that we did here. Embick (2010); Arregi & Nevins (2012); Shwayder (2015); Myler (2017); Guseva & Weisser (2018); Ostrove (2018) on the other hand argue for a linear notion of adjacency. The definition used in this work argues that this apparent conundrum can be solved by abstracting over the set of relations ρ. And depending on the timing of a given operation, we might end up with two related notions of adjacency as the ones below.

(9)   ADJACENCY:

a.   Structural Adjacency (relevant at Spell-Out):
An element X is structurally adjacent to an element Y if X c-commands Y and there is no element Z such that X c-commands Z and Z c-commands Y.

b.   Linear adjacency (relevant at Vocabulary Insertion):
An element X is linearly adjacent to an element Y if X precedes Y and there is no element Z such that X precedes Z and Z precedes Y.

I take this to be a significant step forward in establishing a baseline of ordering effects in the postsyntactic module.

4. A formal account of second position elements

INTEGRATION at the next possible point. The mapping procedure of Spell-Out is the first point in the derivation where INTEGRATION can apply. In the tree below, X bears an $[\Rightarrow\Leftarrow]$-feature. At the point of Spell-Out, c-command is the crucial notion. X c-commands YP (without intervener) and thus X will be dislocated to adjoin to the highest constituent within YP, which is WP.[15]

(12)
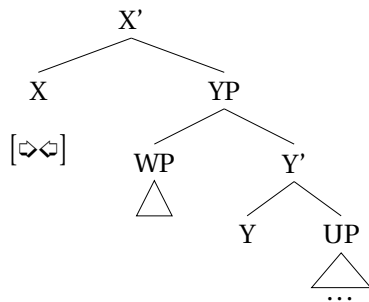
(13)
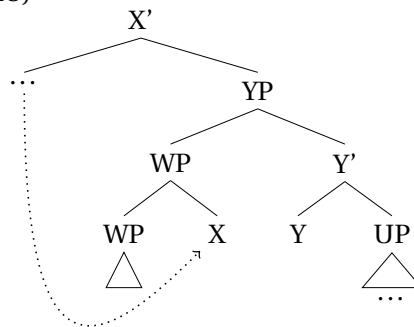
Importantly, we note that the crucial relation here is c-command. Thus the relative linear order of X and YP does not matter. For morphosyntactically determined second position placement, it does not matter if the underlying position is head-initial or head-final. As discussed in the previous chapter, this is a welcome prediction. I will illustrate that below in Section II.4.4.1 in more detail. Another welcome prediction is that the algorithm attaches the second position element directly to the specifier of YP rather than to its head Y. Section II.4.4.2 briefly highlights this advantage and shows that, unlike other approaches, it avoids the syntax-prosody mismatch and makes the right predictions for the non-existence of ditropic second position elements.

Let us now suppose that the head X in the tree in (12) did not have a $[\Rightarrow\Leftarrow]$-feature

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[15]In the definition in (10), the notion of 'highest within YP' is defined as there being no element that c-commands it. This presupposes that the intermediate phrase level Y' does not count as a potentially c-commanding node in the relevant sense. This can be made precise in various ways. Quite plausibly, we can say that intermediate levels are not different from either the minimal or the maximal projection in the relevant sense. If Y' and YP for example are extensionally identical for the purposes of the definition at hand, then it is plausible to assume that Y' cannot count as a c-commanding node of WP because YP already dominates WP. Another solution to the same problem would be to assume, as in Kayne (1994), specifiers are adjuncts, in which case, there would be no intermediate level and there are just segments of YP.

and that only the exponent that will eventually be inserted into X bore the feature. The $[\Rightarrow\Leftarrow]$-feature comes into the derivation upon Vocabulary Insertion by means of the Vocabulary Item in (14).

(14) $[X] \leftrightarrow$ /xyz/ $[\Rightarrow\Leftarrow]$

So, at the point where Vocabulary Insertion applies to X, its complement has already been mapped to a linearly ordered prosodic structure. Let us assume that YP was a cyclic node and was mapped to the prosodic constituent α. Then, the structure immediately before application of INTEGRATION would look like (15). We have inserted the exponent /xyz/ $[\Rightarrow\Leftarrow]$ into X and have generated a precedence statement with α.

(15)
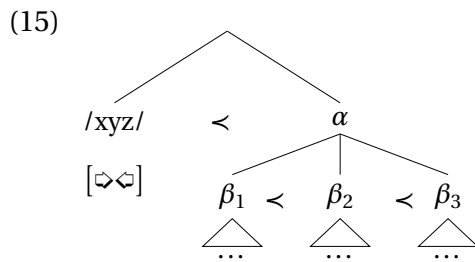
The result of Integration will then look like this. Since, at the point of Vocabulary Insertion, linear precedence statements are the decisive relation, X (or rather the contents of X, namely /xyz/) will be dislocated to a position after what is linearly the first element inside of the linearly adjacent prosodic constituent. In the tree above, /xyz/ is linearly adjacent to α because they are in a precedence relation (without intervener). As a result, INTEGRATION will displace /xyz/ to a position after the first prosodic constituent within α.[16]

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[16]Arguably, depending on its phonological makeup, the exponent /xyz/ will have been mapped to a corresponding prosodic constituent. I will abstract away from that in the representations here for the sake of a simpler illustration.

4. A formal account of second position elements

(16)
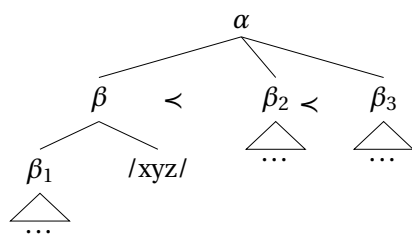
In both derivations, we get a second position placement of X (or its exponent) but the properties of that position are different. In the case where the $[\triangleright\triangleleft]$-feature was located on the syntactic node X, the result was that X ended up in a second position following the highest phrase within its sister node YP. In the case where the $[\triangleright\triangleleft]$-feature was on the exponent /xyz/, the result was that /xyz/ ended up after the first prosodic constituent of the element that it originally preceded (α). The following table gives a short overview of the correlating factors.

(17)   Overview of the properties of INTEGRATION:

	Morphosyn. 2nd Pos	Phonolog. 2nd Pos
Trigger	$[\triangleright\triangleleft]$ on a Head	$[\triangleright\triangleleft]$ on an Exponent
Timing	Spell-Out	Vocabulary Insertion
Adjacency	Structural	Linear
Islands	Apply	Don't apply
Target Constituent	XP	$\varphi,\omega,...$

In the following section, I will illustrate in detail how this distinction helps us derive the properties of shifting coordinators and how further correlations such as the correlation between the syntactic type (monosyndetic vs polysyndetic) and the target size of the phonological constituent (ω vs φ) can be derived. Section II.4.3.2 will then review some of the additional advantages of the proposal in a more systematic way.

Before we move on, one note is in order about the derivations above. The INTE-GRATION operation, informally speaking adjoins an element X to the first or highest

element within its sister. It does, however, not specify whether this is right-adjunction or left-adjunction. As the reader may easily confirm looking at the trees above, it is only right-adjunction that will result in a second position placement. The question is why that is. The most straightforward answer to this question is that left-adjunction would not result in a case of proper integration because the element bearing the $[\Rightarrow\Leftarrow]$-feature would still end up at the corresponding edge of the constituent. So maybe, it is part of the feature specification itself that an $[\Rightarrow\Leftarrow]$-feature will always result in right-adjunction. Upon closer inspection, we do not even need to make that stipulation. Even if we do not restrict the INTEGRATION transformation to universally resulting in right-adjunction, then we would not make any problematic predictions. The reason is that even though only right-adjunction results in a second position placement, it is by no means required. It may be that left-adjunction is an option in the world's languages but those languages then simply do not show second position placement but simply initial placement of the element in question and prosodic integration at a minimally lower level. This is shown below. Having a $[\Rightarrow\Leftarrow]$-feature on an element X would be extremely close to having a $[\Rightarrow]$-feature on the same element. The only difference would be the height of attachment of X. This is shown in (18).

(18) Having a $[\Rightarrow]$-feature on /xyz/::

(19) Having a $[\Rightarrow\Leftarrow]$-feature on /xyz/ with left-adjunction:
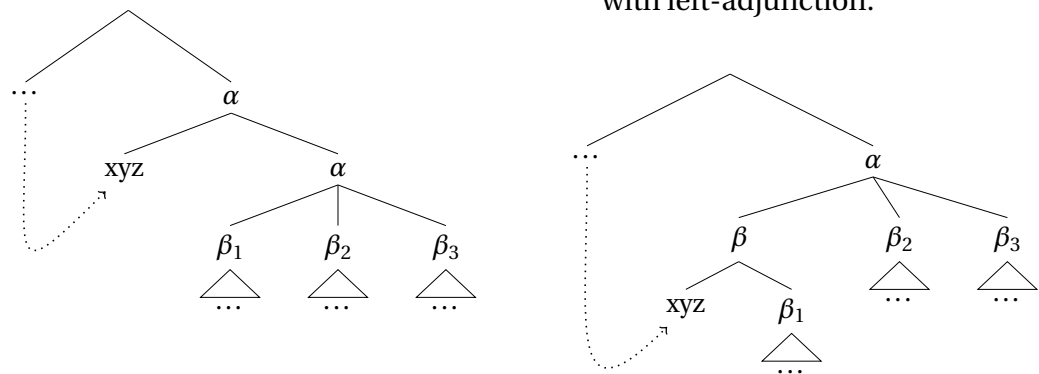
I am convinced that a closer investigation of morphophonological properties of

leaners in the world's languages would show cases where such leaners attach to prosodic constituents of different sizes. So, even if we allow for INTEGRATION resulting in left adjunction, this is not a problem. It is just the case that languages exhibiting second position placement will have right-adjunction.

4.3. Applying the theory to shifting coordinators

In this section, I will illustrate how we can derive the concrete second position placement of shifting coordinators. First, I will introduce the required assumptions about the syntax of clausal coordination structures and then, in Section II.4.3.1. move on to present the derivations for each pattern.

4.3.1. The syntax of coordination and its relation to Cyclic Spell-Out

The syntax of coordination that I will adopt for the purposes of this work is completely standard and, to my knowledge, uncontroversial. As already noted in Chapter II.3.1, I will assume that monosyndetic coordinators form a constituent with the second coordinand to the exclusion of the first. This assumption goes back to the observations in Ross (1967) and Dik (1968) (although Dik 1968 still assumed a flat ternary branching structure himself) and has since been adopted by the vast majority of researchers on the topic.[17] For polysyndetic coordinators, I assume that they attach individually to every coordinand as was for example proposed by Bhatt (2014); Mitrović (2014); Mitrović & Sauerland (2014). In the case of the polysyndetic coordination patterns, the individual clauses headed by the coordinator are then linked by a - often covert - monosyndetic coordinator. Whether monosynde-

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[17]See amongst many others Munn (1993); Zoerner (1995); Zwart (2005); Benmamoun et al. (2009); Zhang (2010); Marušič et al. (2015); Weisser (2015a); Neeleman et al. (2023); Schwarzer & Weisser (2023, 2024). See however, Johannessen (1998) for a claim to the opposite for some languages but Weisser (2020b) for a reanalysis of her case-related arguments. See also Progovac (1998a,b); Nevins & Weisser (2019) for overviews.

tic coordinators require the presence of a polysyndetic coordinator is, on the other hand, an open question, which the current work does not answer.[18] The following tree structure illustrates the syntactic structure I adopt for clausal coordination. The monosyndetic coordinator, I will represent as *&* and the polysyndetic coordinators, I will represent as ADD, referencing their function of additive markers.[19]

(20)   The syntax of coordination:
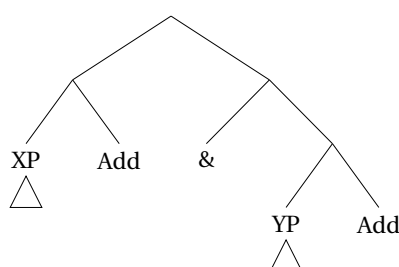
Another thing that is important are the relevant cyclic domains at play in this type of structure. In the discussion of polysyndetic coordination marking in Section 2.3.2 of Part I as well as in the course of several case studies in Part I, we noted that unlike monosyndetic coordination markers, polysyndetic ones usually also function as focus-related particles. Most, if not all of them, have at least a function as additive focus markers (meaning *also*) and some of them also take on other focus-related meanings such as *even* (see Forker (2016) for a typological overview and ideas about grammaticalization pathways in this area). This of course is not a coincidence and we want our theory to be able to capture that. What I thus assume is that polysyndetic coordination markers are actually instantiations of additive focus markers that take maximally high scope in their respective conjuncts. I will thus assume that, in

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[18]Recall that Spell-Out deletes empty nodes from the structure so even if there were a non-overt additive phrase in the left periphery in the syntax, we would not expect postsyntactic processes to reference it.

[19]Since the non-terminal nodes in tree in (20) do not have any labels, a note is in order about them. Nothing in the current model hinges on whether coordination structure is formed via complementation or adjunction, etc. It not important whether it is the &-head that takes the coordinands as complement/specifier (see Zoerner 1995; Johannessen 1998; Weisser 2015a; Schwarzer & Weisser 2023 or whether these structures are formed by adjunction in some sense (see Munn 1993; Zhang 2010; Neeleman et al. 2023). All that matters is that the constituency here is as depicted in (20).

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the case of clausal coordination, these additive markers are part of the left periphery of the respective clauses and as such basically take scope over the entire conjunct.

   In the previous section, I mentioned that I assume a model of Cyclic Spell-out, in which the syntactic derivation is shipped off to the postsyntax in well-defined chunks (i.e. phases). I assume that these phases do correspond in a more or less direct way to the cyclic domains of the syntax-prosody mapping I discussed above. For the syntax of coordination, I assume following Weisser (2015a); Bošković (2016b, 2020a); Bošković (2020c); Bošković (2020b) that the individual conjuncts are phasal domains and will be sent to Spell-Out as a whole. Crucially, since the polysyndetic coordinators are a proper part of the respective conjuncts, they end up in a different phasal domain than the monosyndetic ones.

(21)   The phasal domains of coordination:
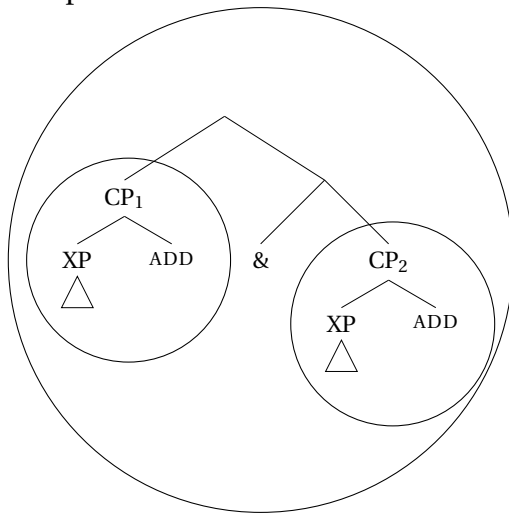
As noted above, I assume a model of Cyclic Spell-Out in which phases are sent to PF in their entirety (as opposed to just the complement).[20] For purposes of morphology or mapping to prosody, it does not make a lot of sense to separate a phase head from its complement. After all a subordinator is part of the subordinate clause for purposes of prosodic phrasing as is a determiner usually prosodically integrated into the noun phrase it syntactically belongs to. What that entails is that Spell-Out

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[20]See amongst many others, Uriagereka 1999; Holmberg 1999; Fox & Pesetsky 2005; Marvin 2003; Svenonius 2004; Bošković 2014.

of a given phase necessarily needs to be delayed by one step in syntactic terms be-
cause it might be that certain processes like successive-cyclic movement need to
apply before the lower phase is shipped to PF. For concreteness, I assume in the
spirit of Chomsky (2001b) that a given phase is spelled out once the phase head
of the next higher head has been merged and had a chance to induce operations
like successive-cyclic movement which span different domains. For the purposes of
the tree in (21), I assume for the sake of concreteness following Bošković (2020a);
Bošković (2020c) that coordination in its entirety is also a phase. The result is that
upon merging of the monosyndetic coordinator &, the lower conjunct undergoes
Spell-Out.

With these assumptions in place, we can now go on to look at some of the concrete
derivations.

4.3.2. Looking at the derivations

At this point, we have set up all of the ingredients for the model of second position
coordinators to work out. This section illustrates the respective patterns and high-
lights how the different assumptions interact.

Let us start with morphosyntactically determined second position placement. In
this case, second position elements target the first XP of their complement. This
pattern is available both for monosyndetic as well as polysyndetic coordinators.
Consider the following example from the case study on Udihe, which indicates a
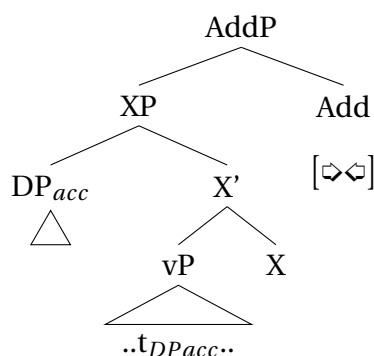polysyndetic coordinator *de* after the first XP of every conjunct.

(22) [Zuge-we-**de** čalu-wene-mi] [ima:-we-**de**   čalu-wene-mi]
       ice-ACC-ADD melt-CAUS-1SG snow-ACC-ADD melt-CAUS-1SG
       [o:kto-**de**   bagdi-wana-mi] ...
       grass-ACC-ADD grow-CAUS-1SG
       'I melt the ice, I melt the snow, I make the grass grow...'

                              Nikolaeva & Tolskaya (2001, 584), gloss adapted

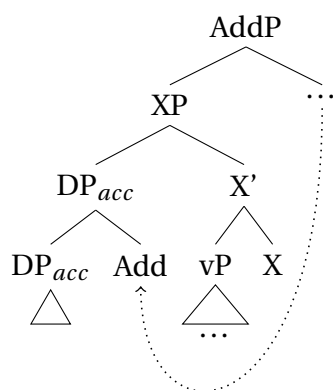*4. A formal account of second position elements*

As we have discussed in Chapter 2, the position of the polysyndetic coordinator in Udihe alternates between second and final position, which is why I assume that it is underlyingly conjunct-final. As for the rest of the assumptions about the syntactic structure of Udihe, I will assume that the direct object DP_{acc} has moved out of the VP into the specifier of a higher projection (here: XP).

(23)　　The structure before Spell-Out:

```
                    AddP
             ╱            ╲
           XP              Add
        ╱      ╲          [▷◁]
    DP_acc      X'
      △       ╱    ╲
            vP       X
          ╱    ╲
       ..t_DPacc..
```

The additive head has an $[▷◁]$-feature, which will trigger INTEGRATION at Spell-Out. According to the definition of INTEGRATION and ADJACENCY, ADD is structurally adjacent to XP and within XP, DP_{acc} is the highest constituent because it is not asymmetrically c-commanded by anything. As a result, INTEGRATION can right-adjoin *Add* to DP_{acc} yielding the following result:
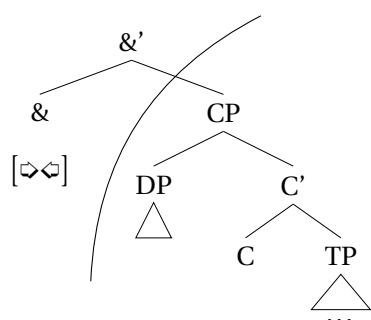
(24)　　INTEGRATION:

```
                   AddP
              ╱          ╲
            XP             ···
          ╱    ╲            ⋮
      DP_acc     X'         ⋮
     ╱    ╲     ╱   ╲       ⋮
  DP_acc  Add  vP    X      ⋮
    △         △
             ···
```

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Consider now a monosyndetic coordinator exhibiting the same pattern. (25) shows and example from Yavapai, where the monosyndetic coordinator *pe:* appears after the first XP of the second conjunct.

(25)   [Maria hayko-v-c   yu-m] [Lupi **pe:** ʔpa:-v-c   yu-m]
        Maria Anglo-DEM-SUBJ be-ALLO Lupi CONJ Indian-DEM-SUBJ be-ALLO
        'Maria is an Anglo and Lupi is an Indian.'   Kendall (1976, 158)

The only difference to the configuration above involving polysyndetic coordinators is that the base and the target position of the coordinator are, in this case, separated by a phase boundary as indicated below. This phase boundary, however, by assumption does not affect the INTEGRATION transformation applying upon Spell-Out. As noted above, I assume that complete phases are sent to PF, which requires a bit of a delayed Spell-Out, in which a phase is spelled out only when the next higher phase head is merged. Thus, & is already present upon Spell-Out of the second conjunct and, in case it bears a $[\Rightarrow\Leftarrow]$-feature, it will undergo INTEGRATION.
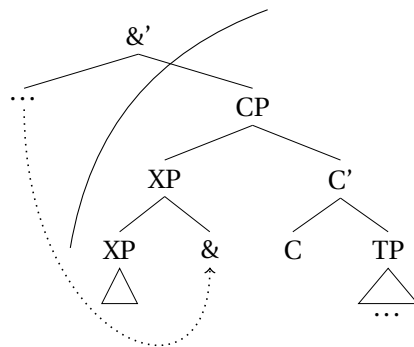
(26)   The structure before Spell-Out:

As in the derivation of the polysyndetic coordinator, the &-head will target the highest XP inside of its sister (CP) and attach to it. The result is shown in (27).

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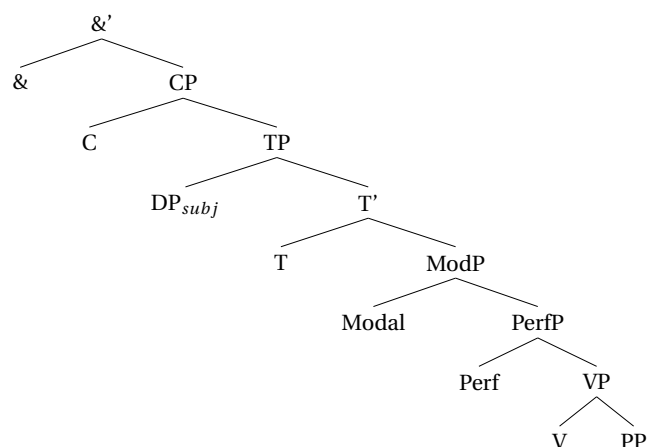(27)   The result of INTEGRATION:

Let us move on to prosodically determined patterns then. In these cases, there was a correlation between the syntactic type (monosyndetic vs polysyndetic) and the target of the second position placement (φ vs ω). We can start with a shifting monosyndetic coordinator like the one from Yorùbá in the example in (28).

(28)   ... Ọlá ò   bá   **sì**   lọ sí Èkó.
         ... Ola should have COORD go to Lagos
         '...and Ola should have gone to Lagos.'

Without making any controversial claims about the syntax of Yorùbá, we can plausibly schematize the syntactic tree as in (29). The coordinator that will eventually be realized as *sì* is merged in its semantically transparent, clause-external position whereas the rest of the clause appears in a straightforward head-initial order. In line with standard accounts of Yorùbá (see Ilori 2010), the subject has moved to SpecTP.

(29)   The structure before Spell-Out:

```
                        &'
            ┌───────────┴───────────┐
            &                       CP
                        ┌───────────┴───────────┐
                        C                       TP
                                    ┌───────────┴───────────┐
                                  DP_subj                   T'
                                            ┌───────────────┴───────┐
                                            T                      ModP
                                                        ┌───────────┴───────┐
                                                      Modal               PerfP
                                                                ┌───────────┴───┐
                                                              Perf             VP
                                                                        ┌───────┴───┐
                                                                        V          PP
```

In the respective section about the case study from Yorùbá, we have argued that prosodic phrasing of a simple clause in Yorùbá is such that material below the vP are prosodified inside one prosodic phrase. And all the material above the respective boundary is combined in a prosodic phrase as well. I will not go into detail as to how exactly the mapping of the syntactic tree to the prosodic one in (30) proceeds but a couple of comments are in order. First, I want to note that empty elements like the C-head in the tree in (29) are of course not projected in the prosody. Nonetheless, it is important that the information that the complement is a complete clause (i.e. a CP) is retained because, by assumption, it is a CP that is mapped onto an intonation phrase (ι). Further, a note is in order as to why the perfect and the modal particle are prosodified with the subject. I do not claim to have a definitive solution to this but various solutions come to mind. It seems clear that all of these particles do not project their own prosodic phrase but consistently seem to be left-leaning for the purposes of the prosody. Given what we have said above for simple leaners, it could be that all of the syntactic heads in the Yorùbá middle field are specified to be left-leaning $[\circlearrowleft]$ and as such will be prosodified to the subject. Thus, the prosodic structure of the tree in (29) looks like the one in (30), which depicts the situation at Vocabulary Insertion of &. Its complement has been mapped to a ι with two φs as daughters.
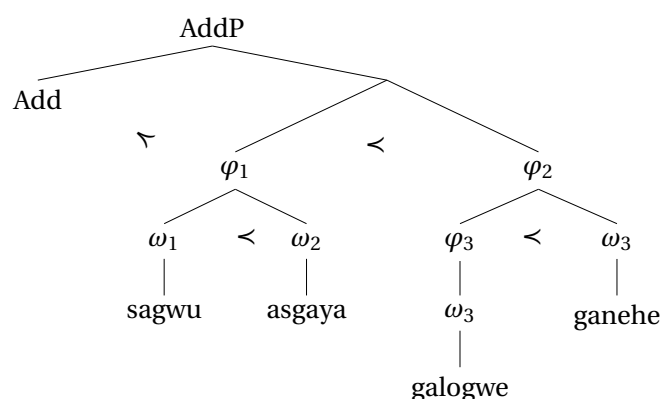
4. A formal account of second position elements

(30)   The structure before Vocabulary Insertion of &:

$$
\begin{array}{c}
\text{\&'} \\
\diagup \quad | \quad \diagdown \\
\text{\&} \quad \prec \quad \iota \\
\quad\quad \diagup \quad | \quad \diagdown \\
\quad\quad \varphi_1 \quad \prec \quad \varphi_2 \\
\quad\quad \overline{\text{Ọlá ò bá}} \quad \overline{\text{lọ sí Èkó}}
\end{array}
$$

The Vocabulary Item we insert in & bears a $[\rhd\lhd]$-feature (31) and thus requires IN-TEGRATION. According to the definition of INTEGRATION and ADJACENCY, *sì* will be right-adjoined to what is linearly the first daughter of the element *sì* immediately precedes. *sì* immediately precedes ι and within ι nothing precedes φ_1. The result of integration then look like (32). The shifting coordinator right-adjoins to the first prosodic phrase.

(31) $[\&] \leftrightarrow /s\grave{i}/ \left[\rhd\lhd\right]$

(32)   The result of INTEGRATION:

$$
\begin{array}{c}
\iota \\
\diagup \quad\quad\quad \diagdown \\
\varphi_1 \quad\quad \prec \quad\quad \varphi_2 \\
\diagup | \diagdown \quad\quad\quad \overline{\text{lọ sí Èkó}} \\
\varphi_1 \prec s\grave{i} \\
\overline{\text{Ọlá ò bá}}
\end{array}
$$

The last combination that we have yet to go through concerns a polysyndetic coordinator that undergoes phonologically determined second position placement. An example comes from Oklahoma Cherokee. Cherokee has extremely free word order with respect to the different order of arguments as well as the verb. Feeling (1975) and Montgomery-Anderson (2008) both indicate that the unmarked word order is SOV, which can however be obscured by many different factors such as animacy or information-structure. Let us for now then consider the first conjunct of the exam-

ple in (33), which exhibits SOV word order.

(33)   [sagwu=**hno** asgaya galogwe ganehe] [soʔi=**hnv** hla].
        One=and   man   gun   had   other=and not.
        'One man had a gun and the other one didn't.'   Feeling 1975:354

Of course, I cannot offer a detailed analysis of the Cherokee clause but for the sake of concreteness we can for now entertain the idea that, in the unmarked order, both verb and object remain VP-internal and the subject occupies a higher position to their left (possibly SpecTP). Based on this, we can for now hypothesize that the prosodic structure at the point of Vocabulary Insertion of *Add* looks like (34). Importantly, as the coordinator in question is a polysyndetic one, which is part of the left periphery of the respective conjunct, the top node of the prosodic structure has not yet been mapped to a prosodic unit. That will only happen once the CP is complete. As a result, the additive head is linearized with respect to the first element inside its complement, namely the φ-phrase containing the subject.

(34)   The structure before Vocabulary Insertion of Add:

(35)   [Add] $\leftrightarrow$ /hno/ $\left[\rhd \lhd \right]$

Next, the Vocabulary Item in (35) is inserted into the corresponding terminal node in the structure in (34). Since the exponent bears the subcategorization feature $\left[\rhd \lhd \right]$, it requires INTEGRATION. The application of INTEGRATION proceeds as it did above:

the exponent in question is right-adjoined to the first daughter of the element it immediately precedes. The additive node, in which now the exponent /hno/ has been inserted precedes φ_1. The first element within φ_1 is ω_1. As a result, *hno* is right-adjoined to ω_1.

(36)   The result of INTEGRATION:
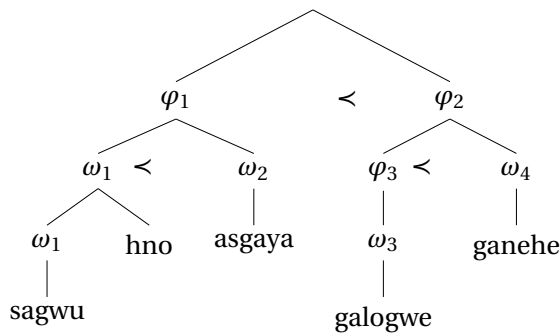
The result of this application of INTEGRATION is that the element in question is displaced to a position after the first prosodic word. Note that the derivation proceeded as it did in the case of displacement to a position after the first prosodic phrase. All of the technical machinery remained as is: The triggering feature $[\Rightarrow\Leftarrow]$ was the exactly the same, the linearization algorithm remained the same and the INTEGRATION transformation remained the same. It was only the underlying position of & as opposed to Add that resulted in a different second position pattern. Since Add is located inside the CP, it will dislocate to the position after the first prosodic word if it bears a $[\Rightarrow\Leftarrow]$-feature and since & is located outside of the CP, it will dislocate to a position after the first prosodic phrase. We thus have derived the bidirectional correlation between the syntactic height of the coordinator and the size of the phonological domain that is skipped in order to arrive at a second position. The correlation emerged as a side-effect of the cyclic property of the account pursued here. The INTEGRATION transformation applying to ADD applies at an earlier cycle than the one applying to &. It thus has access to smaller domains.

At this point, we went through the four crucial combinations, which yielded three

possible second position patterns as depicted in (37):

(37)

	&	Add
SMALLCAPS INTEGRATION at Spell-Out	XP_1	XP_1
SMALLCAPS INTEGRATION at Vocab Insert.	φ_1	ω_1

This is an exhaustive list of the second position placement patterns we found for shifted coordinators in Part I of this book. We further derived the attested correlation (or the absence of a correlation) between syntactic type and the respective second position pattern. As noted in the previous section, this model also derives the correlation between the respective second position pattern and the question whether the placement is island sensitive. Morphosyntactically determined second position elements will obey syntactic islands while prosodically determined second position elements will not. In the model at hand this follows from the fact that the former will be displaced upon Spell-Out, a point in the derivation where syntactic category labels are still intact and the respective syntactic relations (such as adjunct/argument distinction, etc.) can be read off of the tree. The latter type is derived at the point of Vocabulary Insertion, where the crucial subset of the structure has already been mapped to prosodic structure. In the course of this mapping, crucial information to determine potential island status of certain elements has been lost and, as such, cannot serve as a restricting factor for the manipulation of the structure.

In the next section, I will explore some more advantages of the current model that deserve to be mentioned such as the absence of second-to-last position effects or additional advantages of the different timing of INTEGRATION.

4.4. Further advantages of the Distributed Integration model

In this section, I will highlight that the current model of second position placement has a number of further properties we identified as emprically adequate in Chapter 3 of Part II of this book.

4.4.1. The three out of four pattern of alternations

In the previous section, I have demonstrated that the Distributed Integration model can derive (a) the correlation between the syntactic type and the second position pattern and (b) the correlation between the second position pattern and whether or not a given second position element ignores islands or not. In this very short section, I want to highlight that the current model also derives another correlation, namely the correlation between the second position placement pattern and possible underlying positions as evidenced by the placement alternations in some of the case studies. In Section 3.3.2 of the second part of this work, I have spent some time illustrating that quite a number of languages investigated in Part I of this work show placement alternations of the respective coordinators that should be interpreted as holding between an underlying position and a surface position. We saw three out of the four logically possible placement alternations were attested and one was crucially unattested. In that section, we represented that correlation as follows:

(38)   **Alternations with morphosyntactically determined second-position elements**:
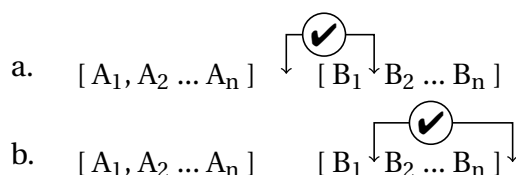
a. $[A_1, A_2 \ldots A_n]$ $[B_1 \ B_2 \ldots B_n]$

b. $[A_1, A_2 \ldots A_n]$ $[B_1 \ B_2 \ldots B_n]$

(39)   **Alternation with phonologically determined second-position elements**:

a. $[\,A_1, A_2 \ldots A_n\,]$ $[\,B_1\;B_2 \ldots B_n\,]$

b. $[\,A_1, A_2 \ldots A_n\,]$ $[\,B_1\;B_2 \ldots B_n\,]$
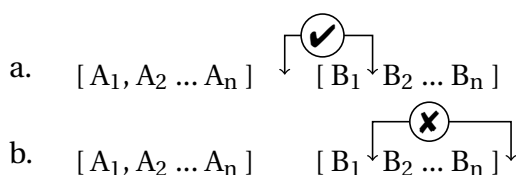
In the course of that discussion, we arrived at the conclusion that this correlation should be interpreted as follows:

(40)   Phonologically determined second position elements require an underlying domain-initial position. Morphosyntactically determined second position elements do not, they can be underlyingly domain-initial or domain-final.

The derivations in the previous section have made it clear that the current model of second position placement derives this correlation without further ado. During the derivation of the morphosyntactically determined second position elements, we saw one case study from Udihe, where the second position element is underlyingly domain-final and one from Yavapai, where it is underlyingly domain-initial. In both cases, the application of INTEGRATION resulted in a second position following the first XP. The reason for this is clear. Morphosyntactically determined second position is derived via INTEGRATION applying at Spell-Out. At that point, the crucial relation between the respective grammatical objects is c-command. C-command relations are insensitive for whether the respective structures are head-initial or head-final.

The situation is different for phonologically determined second position elements. The reason is that the notion of ADJACENCY is defined in a non-symmetric way such that it is only the preceding/c-commanding element that may undergo INTEGRATION. Unlike c-command, however, linear precedence of course references linear order of elements which means that it is only the linearly preceding element that can undergo INTEGRATION. Hence, domain-final elements can never end up in a

different position by means of INTEGRATION applying at the point of Vocabulary Insertion. I take this to be a strong argument for the Distributed Integration approach.

4.4.2. Phonological attachment and ditropic clitics

In Section 3.4 I have argued that we want our model of second position elements and possibly "special clitics" more generally to reflect two properties:

(41)   Second position elements always phonologically attach to the first element of the domain. This is independent of the type of second position elements.

(42)   An element can be ditropic only in its base position, never in a position that is the result of a non-syntactic dislocation operation. Second position elements are never ditropic.

Let us first address the property in (41). It is not hard to see that this property falls out of a the current model in a straightforward way. The second position elements that arrive in their surface position by means of INTEGRATION are always directly adjoined to the first or the highest constituent of the relevant domain. Unlike in other accounts where second position elements occupy a functional head in the left periphery and this observation remains largely unaddressed, it is an integral part of the INTEGRATION transformation and thus does not need any additional stipulations.

As for the second property in (42), we find that "simple ditropic" clitics appearing in their base position, can be derived by means of leaning using the $[\Rightarrow]$ or $[\Leftarrow]$ features. During the derivation of the prosodic structure of the Yorùbá clause, we already saw that the particles in the middle field of the Yorùbá clause are all prosodified with the subject even though they syntactically speaking modify the verb phrase. This is, in a sense, the same situation as with the English auxiliary clitics discussed in Section 3.4 (e.g. *I [=ll [go to the movies]]*). We can assume that these elements are specified for $[\Leftarrow]$ and are thus left-leaning in terms of their phonological

attachment.

A second position element on the other hand is specified for $[\rhd\lhd]$ and since $[\rhd\lhd]$ and $[\lhd]$ are very similar requirements concerning integration and in fact, $[\rhd\lhd]$ is a superset of the requirements of $[\lhd]$, it is plausible to assume that a given element cannot be specified for both. Second position placement will also satisfy a $[\lhd]$ feature so there would be no reason to reattach to something else. So, arguably having $[\rhd\lhd]$ and $[\lhd]$ (or $[\rhd\lhd]$ and $[\rhd]$) on the same grammatical element does not make much sense.[21]

The fact that the $[\rhd\lhd]$-feature is a superset of the simple leaning features $[\rhd]$ and $[\lhd]$ makes exactly the right predictions. In their base position, elements may lean onto elements that they do not necessarily form a constituent with but once they have undergone postsyntactic dislocation, they cannot do so anymore.

4.4.3. Interaction of INTEGRATION with other postsyntactic processes and clitic clusters

One of the crucial arguments presented in Chapter 3 for a transformational account of second position placement was their interaction with other grammatical processes. We have seen that shifting coordinators always behave like proper coordinators for the purposes of syntax in that they license coordination-specific syntactic processes in the same way that non-shifting coordinators do. In the current approach, this follows straightforwardly as the coordinators are only ever displaced

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[21]Hypothetically, we might entertain a situation where a given syntactic terminal X is specified for $[\rhd\lhd]$ and the corresponding exponent /x/ that is inserted into that element is additionally specified for an integration feature of some sort. However, this will not result in a problem. In that case, the syntactic terminal X will be right-adjoined to the specifier of its complement where it will be prosodified. However, in that position it will be too deeply embedded to prosodically reassociate. As we have just seen in the previous subsection, an $[\rhd\lhd]$-feature on an exponent will not have any effect if it does not precede anything. A rightward adjunct to an XP does not precede anything and as such neither a $[\rhd]$ nor a $[\rhd\lhd]$-feature will have any effect. Having a $[\lhd]$-feature on an rightward specifier on the other hand is possible and it will simply lead to a situation where the second position element indeed leans onto the first element. In fact, we can see the effects of a derivation like this below in Sinhala where we do, in fact, find an interaction between a leaning feature on a head and an integration feature on the respective exponent.

after the syntax is completed. The interaction in question is a one of counterbleed-ing. INTEGRATION applies too late to bleed genuine syntactic processes of any kind.

Another interaction we briefly discussed came from Polish where the so-called mobile affixes could attach to virtually any preverbal category but it could not at-tach to the shifting coordinator *zaś* even though that linearly appeared in the same position.

(43) a. Pewnie-śmy juz   tam byli
          perhaps-1PL already there were
          'Perhaps we have already been there.'

      b. *... my zaś-my juz   tam byli
          ... we but-1PL already there were
          'but we have already been there.'

The logic that we alluded to was that dislocation of the coordinator came too late to feed the placement of the mobile affix. This then is an interaction of counterfeeding. In the current approach, this interaction also falls out as predicted. The shifting co-ordinator *zaś* attaches to the first prosodic phrase and therefore it is according to the account at hand displaced at the point of Vocabulary Insertion. I will not provide an account of Polish mobile affixes here but I want to note that largely regardless of how this placement happens, we make the right predictions. Even if we assume that the placement of mobile affixes is a postsyntactic process as argued in Embick (1998), it still precedes the displacement of the coordinator. Since the placement of mobile affixes is not an exponent-specific process but rather a head-specific process (all agreement affixes can undergo it), it will need to apply before Vocabulary Insertion and as such it will apply before dislocation of *zaś*.[22]

The final phenomenon that I want to mention is the placement of shifting coor-dinators inside of complex clitic clusters. In the typology in part I, I have not inves-tigated clitic clusters systematically, mostly because only a handful of languages in

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[22]Moreover, even if it were a process applying at Vocabulary Insertion, it would still apply to early to follow displacement of *zaś* because Vocabulary Insertion applies bottom-up and thus the clause-internal agreement node would be inserted before the clause-external conjunction.

the core sample have complex clitic clusters of the relevant type. But we can still draw some preliminary conclusions based on these few languages. Interestingly, all of these languages all show the same pattern in the sense that the shifting coordinators are always the last element in the clitic cluster. We see this in Oklahoma Cherokee in (44) where it follows the other two second position clitics both of which have a focus related meaning.

(44)   [uhna=kwu=tvv=**hno** aji-khehvs-iítóòl-éʔi   jíistvvna].
         there=DT=FC=COORD 3O-chase:CMP-AMB:CMP-NXP crawdad
         'And then he started chasing him (the crawdad).'   Montgomery-Anderson

         (2008, 555)

As discussed in the previous section where we derived the phonological phrasing of Yorùbá, the weak middle field particles also all precede the shifting coordinator *sì*. For Khwarshi and Tsez we find that, in the function of a clausal coordinator, the relevant elements always attach after other information-structure related particles like the contrastive topic particle *yoɬi* (45). Interestingly, in cases of nominal coordination, the order is reversed. Then, the topic particle follows the coordinator (46).

(45)   ɬi   ħaλ-a-yoɬi-**n**   y-et-as   yedu.
         water.ABS.IV drink-INF-CONTR.TOP-COORD II-want-FUT DEM.ABS.II
         'But/and I may need this at least for drinking water.'   Tsez, Polinsky (2015)

(46)   Ziru-**n**   ke'ť'u-**n**-yoɬi,   …
         fox.ABS.III-COORD cat.ABS.III-AND-CONTR.TOP
         'As for the fox and the cat, …'   Tsez, Polinsky (2015)

So, even though we only have a handful of data to build on, for now it is remarkable that clausal coordinators in this respect all behave the same and, moreover, all behave exactly as we expect them too. As discussed in Section II.4.3., the assumption here is that the clausal coordinators in these configurations are always the highest element in the structure and, as such, should undergo displacement last because

the crucial configurations are evaluated bottom-up. As such it is not surprising that they also end up in the final position of the clitic cluster. It is simply a matter of cyclicity. This is particularly evident in the case of Tsez above, where we saw that the order of the coordinator and the contrastive topic marker is determined by the relevant syntactic scope. In (45), the clausal coordinator takes scope over the contrastive topic marker which is part of the respective clause. In the case of the nominal coordinator, the conjunction of two nouns is in the scope of the contrastive topic marker and as such, the morphemes appear in the other order.

I think this presents another argument for the DISTRIBUTED INTEGRATION approach because especially in the light of the fact that clitic clusters are often taken to be a poster child of arbitrary morpheme specific ordering, the approach at hand and in particular its cyclic nature offers an explanation for a recurring pattern of shifting coordinators appearing in cluster-final position.

4.4.4. The absence of second-to-last position effects

In the previous section, we saw that the DISTRIBUTED INTEGRATION approach can derive all the attested patterns of second position placement. In this section, I want to briefly highlight the fact that the account is also restrictive enough to exclude similar patterns which are nonetheless empirically unattested. The two hypothetical but unattested patterns I want to discuss in this regard are the following:

(47)   There are no elements in the world's languages that can be characterized as third-(or forth-, fifth-, etc.)position elements in a given domain.

(48)   There are no elements in the world's languages that are characterized as second-to-last position elements.

The first unattested pattern in (47) is straightforwardly excluded in the current theory. In other theories, where second position elements occupy a functional head in

the left periphery and we might expect there to be a configuration where exactly two higher heads have some EPP property that requires a specifier. In the theory at hand, the second position element is directly attached to the first element inside its complement to satisfy the $[\Rightarrow\Leftarrow]$-feature. And since the displacement triggered by that feature necessarily follows all syntactic movement, we also do not expect there to be a situation where subsequent syntactic movement over the coordinator might lead to a third position.[23]

The second unattested pattern deserves a closer look as it is maybe not immediately clear as to why it is unattested. Let me first clarify what I mean by second-to-last position elements. There are some elements in the world's languages that quite exlusively occur in second-to-last position. Many head-final languages have certain elements that immediately precede the verb always rendering them in second-to-last position. Crucially, this pattern differs fundamentally from so-called second position elements as the latter are promiscuous in the sense that they can appear with different kinds of hosts. Thus, these elements are plausibly better analyzed as universally verb (or verb phrase)-adjacent rather than universally appearing in second-to-last position. I do not know of a second-to-last position with a syntactically flexible last position.

Importantly, the Distributed Integration model does not predict there to be such a thing as an element that predictably shows up in a second-to-last position. Regardless of whether INTEGRATION applies at Spell-Out or at Vocabulary Insertion, it will not lead to such a pattern. In the case of the former, it will attach to the highest XP in a given domain. This will plausibly be a specifier of a functional projection, which are standardly taken to be universally to the left of their head and its respec-

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[23]Note that the notion of a hypothetical third-position element must be conceived of as relative to the base position of a given element or its assumed "clitic domain" in Klavans' (1985) terminology. If conceived of in global terms, this statement becomes rather vacuous because depending on one's perspective. Take the shifting coordinator in Yorùbá for example. In global terms, it follows (i) the first conjunct in its entirety and (ii) the first prosodic phrase of the second conjunct. Thus, we might view this as a third-position effect rendering the statement in (47) vacuous. However, upon closer inspection, it makes much more sense to view it as a second position element inside a given cycle.

tive complement.[24] In case, INTEGRATION applies at Vocabulary Insertion, the element in question will only ever show up in second position because the crucial relation (i.e. precedence) is asymmetric in nature. The element in question needs to be underlyingly initial in order for INTEGRATION to apply. And crucially, if it is underlyingly initial, the target position will inevitably be after the linearly adjacent element. I want to note that I take this to be a strong argument for the Distributed Integration approach. Competing postsyntactic approaches in terms of Local Dislocation à la Embick & Noyer (2001) have no way of predicting the absence of second-to-last position effects. Local Dislocation simply changes the linear order of two adjacent elements and as such it should be easily applicable in cases where an underlyingly clause-final element inverts with the element preceding it regardless of what it is. But since the absence of such effects is a quite robust finding (see the discussion in Anderson 2005), we want to know why that is.

In this section, I have discussed a number of additional arguments that speak in favor of the Distributed Integration approach and show that it does not only succeed in deriving the basic typology of second position placement but that it also makes very promising predictions beyond this area. It has proven to be very restrictive in the sense that it (a) derives the non-trivial implications between the underlying and the surface positions and (b) in that it rules out unattested patterns of third-, fourth-, etc. position elements or second-to-last position elements. Further,

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[24]Depending on one's theoretical assumptions, we might expect that a rightward adjunct that is higher than all other XPs could possibly attract a morphosyntactically determined second position element. It is clear however that such patterns will never be predictable and consistent as the occurrence of a rightward adjunct in a given domain cannot be enforced by the syntax as adjuncts are, per definition, optional. Having said that, it may be hypothetically possible to find cases of second position elements that exceptionally appear on a right-peripheral adverb in some cases. I am not aware of such cases - neither of second position coordinators nor other second position elements. Notably, however, it seems to me that, similar to specifiers, high adjuncts, have a strong tendency to be left-peripheral. Languages like English allow for rightward adjuncts in certain lower domains such as the vP/VP but higher adjuncts are consistently to the left. The same holds for many head-final languages like Udmurt, which has low aspectual adjuncts that go to the right (see discussion in Georgieva et al. 2021) but which have no rightward adjuncts in the higher domain. In fact, I do not know of a language that has rightward clause-level adjuncts. And while I cannot offer an explanation for this observation, it ties in nicely with the discussion here. Any explanation as to why higher clause-level adjuncts adjoin to the left of their sister will do for the purposes of this work.

we note that the Distributed Integration approach makes the correct predictions for ordering interactions with other grammatical processes and in terms of phonological constituency.

5. A formal account of target-specific integrated elements

In the previous chapter, I have proposed an account of the three different second position patterns we observed in Part I of this book. The account had the following basic assumptions: (i) It was subcategorization-based, (ii) it was transformational, (iii) it was cyclic and (iv) it was a distributed approach. In this chapter, I will address the three remaining case studies that did not fall under the general rubric of second position elements, namely Khwarshi, Tsez, and Sinhala and show how the DISTRIBUTED INTEGRATION account can potentially be extended to cover cases of this sort as well. The chapter is organized as follows: In Section 5.1, I will offer some discussion about what these patterns have in common and where they differ and what these observations suggest in terms of a formal model. In Section 5.2, I will then go more into detail about the three individual patterns and provide concrete proposals for the three patterns in question. I will first discuss the differences between Tsez and Khwarshi, which will be shown to differ only in one of the formal aspects of the model we have seen in the previous chapter: In Khwarshi, the crucial subcategorization feature is located on a morphosyntactic head whereas in Tsez, it is located on the respective exponent. Virtually all other differences of the respective patterns of the two languages fall out from this distinction. On the basis of this discussion, I will

offer a discussion of Sinhala, where, as I will argue, the crucial integration operation interacts with another process in the language, namely the process of verb cluster formation. Finally, Section 5.3 offers some additional discussion of some loose ends and open questions.

5.1. Nominal targets - diachronic explanation, synchronic modelling

Three of the case studies we saw in Part I of this book have not yet received an explanation or at least an attempt of formal modelling: Khwarshi, Tsez and Sinhala. In Khwarshi, we found the pattern that the polysyndetic shifting coordinator *-n/-ɨn/-un* specifically targeted the absolutive noun phrase of a given conjunct. In Tsez, a closely related language, the respective cognate behaved very similarly and yet intriguingly different. The Tsez polysyndetic coordinator *-n/-no* attached to what was linearly the rightmost noun phrase in a given conjunct. Unlike in Khwarshi, where infinitival clauses were opaque to the placement of the coordinator, the Tsez coordinator could shift into such syntactically opaque domains. Finally, in Sinhala, the coordinator attached exclusively to nominalized verb forms inside the conjunct-final verb cluster.

The defining criterion that sets these case studies apart from the rest of those we discussed above is that in all three of them, the coordinators seek out a specific element inside of a given conjunct to attach to. In Chapter 1 of Part II of this book, I have related this pattern to the notion of *head-anchoring clitics* in the literature (see Kaisse 1985; Nevis 1986; Zwicky 1987; Anderson 1992). These elements take scope over an entire domain but attach to a specific element within that domain. The Finnish clause-level particles discussed in Chapter 1 for example take scope over the entire clause but attach to the matrix verb. The same holds for the so-called verbal clitics in Romance for example.

One of the recurring intuition that also led to the label *head-anchoring* is that these elements specifically attach to the verb because the verb is, in some sense, the head of the respective clause. And while we may view this as a plausible intuition as to why it is specifically the verb that seems to be the target for these elements in Finnish or Romance, it is not immediately clear however how informative this intuition actually is. After all, in order to turn this into an empirically testable proposal, term *head* would need to be defined in some way. This does not strike me as a trivial task as many frameworks do not assume at this point that the verb is necessarily the head of a given clause. Moreover, we would possibly expect alternations in the sense that Romance clitics attach to the complementizer in embedded clauses, etc. contrary to fact.

In the light of the patterns from Khwarshi, Tsez and Sinhala, the above-mentioned intuition about the target of cliticization being the head of a given constituent seems even harder to maintain. It is not immediately obvious in what sense the absolutive noun phrase in Khwarshi (or the rightmost noun phrase in Tsez) is the "head" of a given conjunct. It is true that absolutive or preverbal noun phrases are somewhat prominent in Tsezic languages inasmuch they can trigger long-distance agreement etc but it still would be odd to call them the head of a given clause. For this reason, I think that the above-mentioned intuition is not quite adequate and it does not make sense to speak of *head-anchoring clitics*. I therefore decided to call the *target-specific integrated elements* as this term does not commit to a statement as to whether the target is the head of a given constituent.

But now that we have refuted the long-standing intuition about the target element being the head of a given constituent, the obvious follow-up question is what we should replace it with. Why do the shifting coordinators in Khwarshi, Tsez or Sinhala seek out specifically the categories that they attach to? The answer that I will argue for will be that, unlike with cases of second position placement, the target of attachment is not per se defined by the grammatical structure or the grammat-

5. A formal account of target-specific integrated elements

ical process that places the element in question in the structure but rather in the diachrony.

Shifting coordinators in Khwarshi, Tsez or Sinhala all have in common that they want to attach to a nominal category. And while this plays out in different ways in the three languages, it is an important observation that already points to the reason for their placement. Further, the shifting coordinators in Khwarshi, Tsez and Sinhala are all polysyndetic ones that are identical with so-called additive markers that can be used in focus-related contexts in the respective languages. And while we have observed that the coordinators in clause-level contexts behave differently from the ones in nominal coordinator contexts, it is clear that these are arguably closely related uses. In fact, Forker (2016) argues at length that the use of additive markers for purposes of clausal coordination is a well-known diachronic grammaticalization path. What was formerly an additive coordination marker restricted to coordinate nouns is extended to also cover cases of clausal conjunction. And it is plausible that, in the course of this process, the former syntactic selection restriction was reinterpreted as an attachment restriction. In other words, originally the additive markers selected for a nominal complement but as a result of the grammaticalization they then no longer selected for a nominal complement but mainly required a nominal element to attach to. We can represent this as in (1) below.[1]

(1) $[\bullet N \bullet] \rightsquigarrow [\triangleright N \triangleleft]$

In what follows, I will assume that the non-canonical attachment of the target-specific integration patterns is caused by this feature that is, in a sense, a remnant of a former syntactic selection restriction.[2] Coming back to the question discussed above,

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[1] The bullet notation indicates syntactic selection, the integration arrows we introduced in the previous chapter indicate the attachment relation and the squiggly arrow indicates a grammaticalization path.

[2] This is somewhat of an oversimplification as we will see below. In fact, I will assume that in Khwarshi, the crucial category that the coordinator seeks to attach to is a DP (as the framework that I am adopting to model these patterns usually assumes that nominal arguments are DPs), while in Tsez and in Sinhala on the other hand, as we will see below, the process is indeed as

this means that the attachment site of the coordinator is not determined by the grammatical system directly but rather only by the fact that at some point in the past, there was a grammatical, purely syntactic, selection restriction that has, over time, been reinterpreted as an attachment restriction. If the clausal coordinator had grammaticalized from some other element, we might expect it to attach to some other element in the structure.

So, against the background of this discussion, I will assume that the coordinators in Khwarshi, Tsez and Sinhala bear the same target-specific feature [⇨N⇦] that causes them to attach to the closest nominal element. If this were all there is to it, however, we would expect the three languages to all exhibit the same pattern. In the following section, I will take a closer look at the respective patterns and argue that the differences between the three patterns stem from (a) independent differences between the three languages or (b) from independent parameters that we already saw in the previous section. The difference between Tsez and Khwarshi will arise as the difference between whether the subcategorization-feature is located on a syntactic head or a given exponent in very much the same way than before. The intricate Sinhala pattern will be modelled as a combination of a more general strategy of how the language deals with postverbal particles and an exponent-specific [⇨N⇦]-feature that causes the attachment to nominalized verb forms only.

5.2. A closer look at the individual patterns

5.2.1. Khwarshi & Tsez - Structural vs linear targets

Let us begin by comparing Khwarshi and Tsez. Since these are two closely related languages of the Tsezic branch, it makes sense to assume that we do not want to posit radically different underlying structures or processes to accommodate the different behavior of the two languages but rather to keep the difference between them

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sketched above.

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as small as possible and ideally restricted to only the phenomenon under investigation.

One of the core differences that we have encountered in the respective descriptive sections of the two languages is that, in Tsez, we have seen that the placement of the coordinator *-n* does not seem to obey syntactic islands or other opaque domains. In fact, Polinsky (2015) states that "this function of *–n(o)* is dependent on linear order only and is not sensitive to constituency; for example, it can attach to a subconstituent of a light verb, to a clausal constituent, or to a subconstituent of a discontinuous noun phrase." Consider the following example where the rightmost noun phrase is contained in an infinitival phrase.

(2) [Mi-**n**   y-ex-a]   zow-s.
     2SG.ABS(.II)-and II-die-INF be.PST-PST.WIT
     'And you would have been meant to die.'   Polinsky (2015, 227)[3]

Compare this now with the following example from Khwarshi where the absolutive noun phrase is located inside of the infinitival clause but does not seem to be accessible for the placement of *-n*.

(3) ...∅-ešt'-un žahaλ'a-**n**   [soyro   b-eɣ^w-a   ]
     I-let-PST.UW again-COORD horse.III III-sell-INF
     '... and (boy) sent (him) again to sell the horse.'

                    Khalilova (2009, 128), bracketing of the infinitival clause mine

The correlation of whether an element is sensitive to hiearchical structure or linear order and whether an element is able to shift into syntactically opaque domains is something that we have already seen in the chapter on second position elements and their formal modelling. Second position elements which had their [⟳⟲]-feature on a syntactic terminal head were placed on the basis of syntactic structure (i.e.

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[3]The bracketing is taken over from Polinsky (2015) and indicates the infinitival clause rather than the coordinand (as in the rest of this work). I only added the boldface of the coordinator *n* in this example.

c-command) and second position elements which had their $[\Rightarrow\Leftarrow]$-feature on the respective exponent were placed on the basis of linear order (i.e. precedence). This correlated with whether the respective elements obeyed syntactic islands or not. Against this background, I will make the assumption that, in the case of the target-specific integration feature is located on a syntactic terminal head in Khwarshi and on the respective exponent realizing that head in Tsez.

In the introduction to this chapter, I introduced the notation of $[\Rightarrow N\Leftarrow]$ for the target-specific integration feature. This, as I had already mentioned then, was a slight oversimplification to better illustrate the intuition behind the grammatical-ization process in a framework-neutral way. The framework I am adopting usually assumes nominal arguments to be of the category DP.[4] In what follows, I will assume that in Khwarshi, where the target-specific integration feature is located on a head, the requirement to attach to a noun was grammaticalized as $[\Rightarrow D\Leftarrow]$-feature. In Tsez, I assume the feature is grammaticalized as $[\Rightarrow N\Leftarrow]$. The precise reasons for this sub-tle distinction will become clear in the course of the derivations below. But for now, we can summarize the difference that emerge from the locus of the INTEGRATION feature in the two languages for now as follows:

(4)

	Integration Feature	Relation	Islands
Khwarshi	On ADD-head	C-Command	Obeyed
Tsez	On ADD-exponent	Precedence	Ignored

Interestingly, the observation that the placement of the polysyndetic coordinator in Khwarshi obeys islands while it ignores islands in Tsez also paves a way to answering

[4]It should of course be mentioned that there is a large debate as to whether the so-called DP hypoth-esis (see Abney 1987) is empirically favorable over the competing NP-hypothesis (see Carstens 2017; Bruening 2019; Salzmann 2020), whether the categorical identity is a language-specific pa-rameter (see Bošković 2005, 2008 et seq) or whether it correlates with semantic properties of the nominal Massam (2001); Chung & Ladusaw (2004); Dayal (2011); Baker & Vinokurova (2010); Baker (2015); Driemel (2023). I will not discuss the intricacies of all these possibilities here and leave open the possibility as to how these approaches are compatible with the proposal at hand and in particular the assumption of the existence of KPs introduced below.

the question why it specifically seeks out the absolutive DP in Khwarshi whereas it is satisfied with any DP in Tsez. Going back to the discussion of case marking in Travis & Lamontagne (1992); Bayer et al. (2001); Bittner & Hale (1996), many people have assumed that overtly case-marked nouns actually have an additional projection on top of them, referred to as K(ase)P(hrase).

Let us thus assume that case-marked noun phrases in Khwarshi and Tsez are of type KP and that that KP - being the highest functional projection in the nominal domain - is actually the locality domain. In a sense, the K-layer is thus comparable to a postposition, which, given the general properties of the two languages, makes a lot of sense. Both Tsez and Khwarshi feature an extreme inventory of case markers. For Khwarshi, Khalilova (2009) speaks of fifty-one case markers which are composed of eight grammatical cases plus forty-three local cases, which, in turn, are composed of seven orientation suffixes and six directional suffixes. The following gives an example of a combination of an oblique stem, a superessive spatial case marker ɣ'o ('on') and a terminative directional suffix q'a ('to, till').[5]

(5) ɣ'u-n-ɣ'o-q'a
     roof-OBL-SUP-TERM
     'till the roof'   Khalilova (2009, 90)

So, assuming that case-marked nominal phrases are headed by a KP-layer and K is the head of a cyclic domain, we know why the polysyndetic coordinator bearing a [⇨D⇦]-feature can only see absolutive noun phrase in Khwarshi as it is the only one in which the DP not embedded too deep. We saw that the absolutive noun phrase is inaccessible in Khwarshi if it is embedded inside an infinitive and similarly it is also inaccessible if it is embedded inside of a KP.[6]

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[5]It might even be plausible to assume that the architecture of a KP in these languages is more elaborate and that there is more than one projection involved. This does not actually matter for the purposes of what I have to say here.

[6]Note that it does not matter for the present purposes whether we assume that the KP is not syntactically present to begin with absolutive arguments or whether the respective projection is not mapped to PF because of the unmarked nature of the absolutive case. Both assumptions would be compatible with the logic of the argument.

(6)
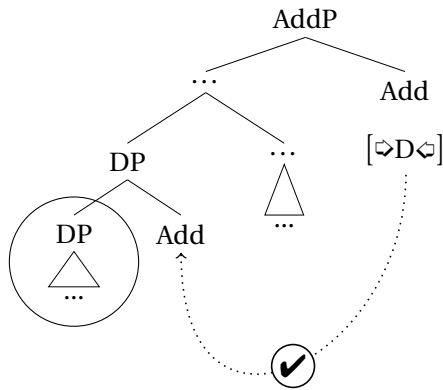
(7)
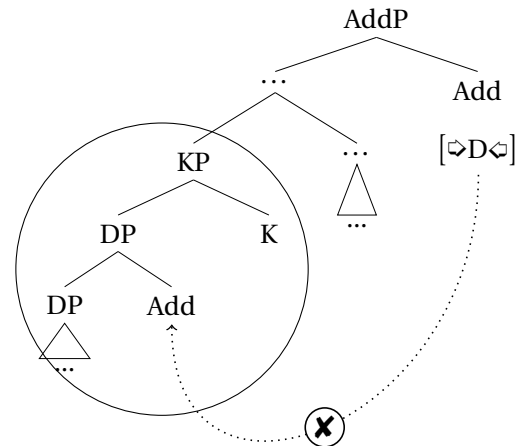
On the other hand, it becomes clear now why, in Tsez, the case of the noun phrase does not matter for the purposes of target-specific integration. The nominal feature is visible for the dislocation transformation in either position because syntactic islands do not play a role in Tsez. Thus, we can expand on the table above and conclude that the sensitivity to the case of the noun phrase also comes down to the locus of the integration feature.

(8)

	Integration Feature	Relation	Islands	Case-Sensitivity?
Khwarshi	On ADD-head	C-Command	Obeyed	Yes
Tsez	On ADD-exponent	Precedence	Ignored	No

We are, now, in a position to look more closely at the mechanism that causes displacement of the additive markers. Unlike with the second position elements, the operation cannot be subject to adjacency (be it linear or structural) because we have seen that the target-specific integration can, at times, apply without adjacency. Rather than strict adjacency, I thus assume that the relevant notion is one of closeness, which is relativized to the specific feature.[7]

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[7]The notion of relativized closeness is – not accidentally – reminiscent of the concept of Relativized Minimality in some sense (Rizzi 1990, 2001, 2004; Chomsky 1995; Starke 2001). Crucially, however, it is, like the notion of ADJACENCY above, defined over a relation ρ that also allows for it to

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(9)   Target-Specific Integration:

An element X bearing a $[\rhd F\lhd]$-feature can be adjoined to an element Y if X and Y fulfill relativized closeness.

(10)   Relativized closeness:

P and Q are the closest elements concerning a featural relation $[\rhd F\lhd]$-$[F]$ if there is a relation ρ such that P ρ Q and there is no element R bearing $[F]$ such that P ρ R and R ρ Q.

(ρ: C-command or Precedence)

A number of points are in order regarding this definition. First, it is important to note that it now becomes important that c-command and, in particular precedence are to be understood as transitive notions. If an element A precedes B and B precedes C, then A precedes C. This was not important for the discussion concerning adjacency because, as the term adjacency indicates, such configurations were specifically ruled out by the definition. While precedence is a transitive notion adjacency is of course not. But here, where interveners are specifically allowed as long as they do not bear the right kind of feature $[F]$, this becomes relevant. So, in a configuration like $P[\rhd F\lhd] \prec R \prec Q[F]$, where R does not bear a relevant feature, then P and Q still fulfill RELATIVIZED CLOSENESS despite them not being adjacent.

The second point that is important is that unlike the notion of ADJACENCY, RELATIVIZED CLOSENESS is symmetric. It does not matter for the purposes for of TARGET-SPECIFIC INTEGRATION whether the element with the $[\rhd F\lhd]$-feature precedes/c-commands the $[F]$-feature or whether it is the other way round. As I will demonstrate below, this will become important because with target-specific integration, we actually do find patterns that, on the surface, look like second-to-last position

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be applied to linear structures. It should also be noted that the linear aspect of the definition of RELATIVIZED CLOSENESS comes very close to the concept of relativized adjacency used for morphological purposes (such as root suppletion and allomorphy selection) in Toosarvandani (2016); Dolatian & Guekguezian (2023). I take this as another indicator that concepts like these are required in the syntax and the linearized morphology alike.

patterns where it is the target of integration that precedes the INTEGRATION feature.[8]

So, let us look at the concrete derivations now. We start with Khwarshi and as I stated above, I assume that the Khwarshi pattern is derived by having a [⇨D⇦]-feature on the additive head heading the respecting conjunct. Consider the placement of the polysyndetic coordinator in the second conjunct below. It specifically ignores the conjunct-initial lative case phrase and specifically targets the absolutive phrase below it.

(11)   [l-eɣ-un   ise   exena-ba-**n**   omˀoqˈˀe- λˈo-zi]
        IV-take-PRF.CVB DEM.OBL.ERG sack.OBL-PL.ABS-COORD donkey-SUP-ABL
        [bočka-ma-l kukku-**n**   čaλ-un]   ...
        barrel-IN-LAT flour.ABS-COORD pour-PFV.CVB ...
        'He took the sacks from the donkey and poured the flour into the barrel and
        ...'   Khalilova (2009, 87)

Without actually making outlandish assumptions about the syntax of Khwarshi, we can assume that the underlying relevant hierarchical structure of the converb clause that is the second conjunct looks like (12).

(12)
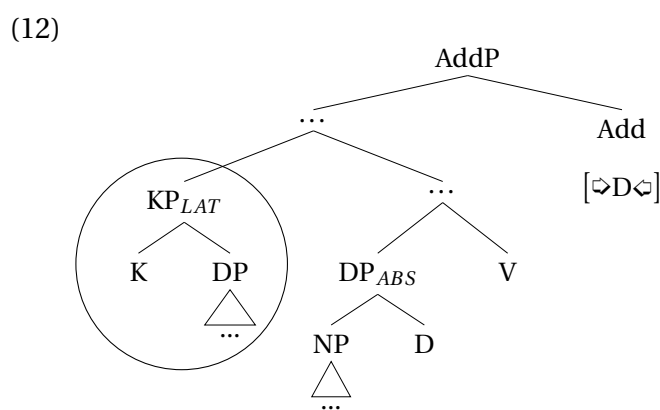
The KP$_{LAT}$ is the highest argument in the structure but the D-feature inside of it is invisible as it is located insight a cyclic domain that, indicated by the circle, has

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[8]The other consequence that this has is that when TARGET-SPECIFIC INTEGRATION applies upon Spell-Out, it becomes an option to adjoin a head to an element it is c-commanded by. This mimics effects of head-movement at PF (see e.g. Schoorlemmer & Temmermann (2012); Harizanov & Gribanova (2019) without the need of an additional operation. I will discuss this in a bit more detail in Section II.5.3.3 below.

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already been closed off and shipped to PF at an earlier cycle. The absolutive DP is lower but can still be a target for TARGET-SPECIFIC INTEGRATION because it is the closest element with the relative feature that's accessible. In the terminology of the definition of (10) above, there is a c-command relation between Add and DP_{abs} and there is no DP that is c-commanded by Add and that c-commands DP_{abs}. Hence, TARGET-SPECIFIC INTEGRATION can adjoin the additive head to DP_{abs}.

Consider now Tsez, where I argued above that TARGET-SPECIFIC INTEGRATION applies at Vocabulary Insertion, when the complement of the additive marker has already been prosodified and linearized. Consider the first conjunct of the example in (13).

(13) [Roλiqur   elu-r   zurma-q'ili-s   ruk'-**no**
      at.midnight 1PL-LAT zurna-drum-GEN1 loud.sound.ABS.IV-COORD
      teq-si],   [moλ-a-x-āy   č'ari-ł-si   eli].
      hear-PST.WIT dream-OS-AD-ABL wake-INTR-PST.WIT 1PL-ABS
      'At midnight we heard loud sounds of music, and woke up.'

<div align="right">Polinsky (2015, 399f)</div>

If we assume a simple prosodic structure like (14) for the example in (13), we see that φ_3 and Add fulfill the preconditions for the required step of TARGET-SPECIFIC INTEGRATION. φ_3 precedes Add and there is no element in between that would count as an intervener with nominal features. The only element in between is the verb (ω). Thus, as soon as we insert the respective exponent *-no* into the Add, which comes with a target-specific integration feature, it will be right-adjoined to φ_3.

(14)
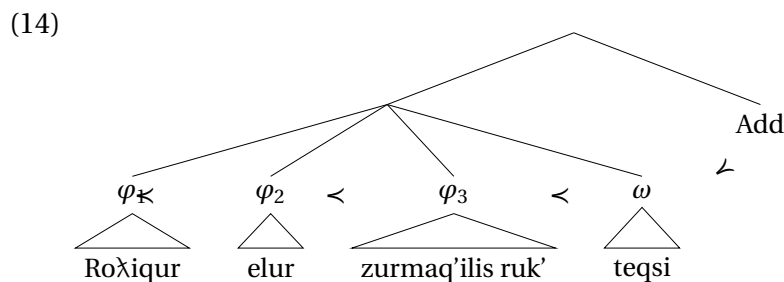
One note about the representation respective features is in order now. Above, I assumed that the crucial feature triggering target-specific integration in Tsez is $[\Rightarrow N \Leftarrow]$. However, the obvious question is whether φ_3 - being a phonological constituent - is actually recognizable as a noun at the point when it is prosodified. The simple answer here is that it has to be. Throughout the theoretical discussion so far, I largely stayed agnostic as to whether Vocabulary Insertion actually replaces the morphosyntactic features with phonological ones or whether it simply adds the phonological features. So, given what we said just now, it seems that at least the very basic categorial distinction between nouns and verbs needs to be maintained after Vocabulary Insertion. And while that might be somewhat dispreferred from a conceptual viewpoint, I would like to note that the literature has pointed out quite a number of cases where phonological rules seem to make a difference between nouns and verbs. Myers (1997) argues that Shona employs different tonal patterns in nouns and verbs. Letterman (1997) argues that the phonologies of nouns and verbs in Sinhala differ in a number of respects such as the quality of an epenthetic vowel. Bobaljik (1997) argues that the schwa-epenthesis rule in verbs is cyclic but acyclic in nouns in Itelmen. Smith (1997, 2001) discusses a number of cases to this extent and postulates a class of N-Faith constraints which are only active with nouns. What becomes clear from discussions like this is that the basic categorial distinction between nouns and verbs is frequently referenced by phonology and as such it is not surprising that target-specific integration targets exactly the same kinds of basic categorial features. For this reason, I assume that the crucial integration feature of the additive exponent *-no* is the feature $[\Rightarrow N \Leftarrow]$ and that the nominal feature [N] is actually maintained on the φ-phrases that nominal constituents are mapped to. Thus, as soon as the Vocabulary Item of the additive marker, which comes with the $[\Rightarrow N \Leftarrow]$-feature, is inserted, the exponent will be integrated to attach to what is linearly the closest nominal element.

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(15)
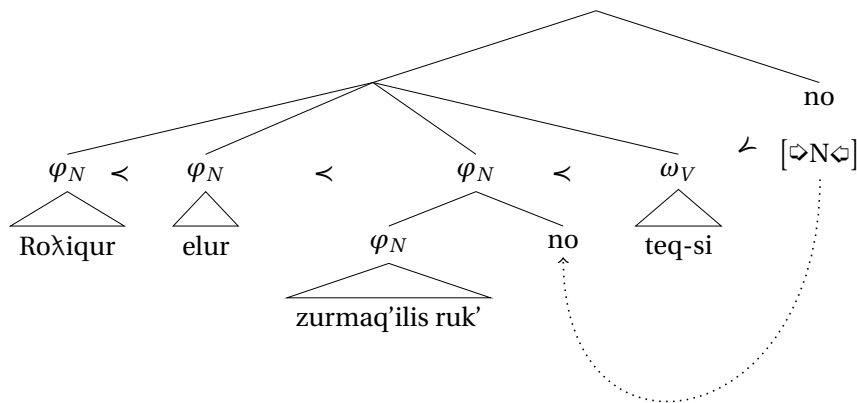
5.2.2. Sinhala - The verb cluster restriction

In the previous subsection, where we modelled the differences between coordinator placement in Tsez and Khwarshi, we arrived at the conclusion that the syntax as well as the prosodification of the two languages is basically identical and that the main difference in coordinator placement between the two languages arises from the locus of the target-specific integration feature. The different between the two possible loci ended up being one of the core assumptions of the Distributed Integration approach seen in Chapter 4, namely the choice as to whether the feature is located on a head or on the corresponding exponent.

In this section, we will turn to the last case study that has not received an explanantion, namely the one from Sinhala. In the case study about Sinhala, we ended up with the conclusion that the polysyndetic coordinator attaches only to nominal verb forms within the clause final verb cluster. If there is no nominalized verb form inside the clause-final verb cluster, then it will not (as one might expect) attach to a preverbal constituent as in Tsez but rather not be pronounced.

What I will suggest in this section is that the Sinhala pattern arises as a kind of interplay between the two derivations we have seen for Khwarshi and Tsez. The leading intuition is that Sinhala exhibits a possibility that we have not encountered yet: That there is an integration feature on the additive head *and* one on the respec-

tive exponent leading to a two-step integration process. The first step adjoins the additive head to the clause-final verb, thereby restricting its application domain to the verb cluster. And the second step then dislocates it to a nominal element within that domain. This derivation does not add anything to our theoretical machinery but merely explores the last logical option that the system provides for.

So, let us start by looking at some of the syntactic properties of Sinhala. Spoken Sinhala is a head-final language with a fair amount of verbal morphology. In the typical spirit of head-final languages, verbs form some sort of a cluster at the end of the clause. This cluster cannot really be separated by arguments or adverbs even though some small particles can go in between (see Gair 1970). These clusters consist of a non-finite verb form and (a) either an auxiliary that carries little semantic information or (b) so-called quasi-verbs (see Gair 2003) that express some sort of modal meaning. These are called quasi-verbs because they function like proper auxiliaries but themselves are uninflected. In these cases, the usual verbal morphology (expressing tense or mood) then is simply lost.

(16)   a.   Ranjit nuvərə ya-nə-wa
            Ranjit Kandi go-NPST-IND
            'Ranjit goes to Kandi.'

       b.   Ranjit nuvərə gihil-la tiə-nə-wa.
            Ranjit Kandi go-PERF BE-NPST-IND
            'Ranjit has gone to Kandi.'

       c.   Ranjit-te   nuvərə yann-ə puluwan
            Ranjit-DAT Kandi go-INF MOD
            'Ranjit can go to Kandi.'[9]

As I have elaborated in the respective case study, both the infinitive as well as the *la*-participle count as nominal in the respective sense which gave rise to the general-

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[9]As noted in the respective case study about Sinhala, all examples come from Dilini Kolombage (p.c.). Two remarks about the examples in (16): First, as shown in (16b), the verb *ya-nə-wa* ('go') is suppletive in the perfect and shows up as *gihilla* and second, as shown in (16c), some modals assign dative case to the subject. *Puluwan* assigns dative under a permissive reading but nominative under a possibility reading (as in 'might go').

ization that the polysyndetic marker *i* attaches to a nominal for inside the verb cluster. Arguments for this came from the fact that they can bear the assertion marker that typically marks non-verbal predicates or that the infinitive can also be case-marked in some cases. For the purposes of their syntax, I will assume that auxiliaries as well as quasi-verbal modals occupy a high position in the clause (Fin or T or Mod, respectively) and that the participle and the infinitive remain low in the structure (in v). The additive head, which takes high scope, is base-generated in a clause-peripheral position. In order to do justice to the observation that the lexical verb and all postverbal elements including auxiliaries and 'quasi-verbal' modals form a closely connected cluster, I will assume that all of these heads come with a $[\circlearrowleft]$-feature and thereby all attach to v upon Spell-Out.

Consider now a configuration where an example like (16c) is embedded inside a coordination structure. The first conjunct in (17) is such a configuration where an infinitive is embedded under a modal. The coordination marker then attaches to the infinitival verb.

(17)   [Chitra-tə nuvərə ya-nna-**i**   puluwan] [Ranji-tə   colombo
       Chitra-DAT Kandy go-INF-CONJ MOD   Ranjit-DAT colombo
       ya-nna-**i**   ooni].
       go-INF-CONJ MOD.
       'Chitra can go to Kandy and Ranjit wants to go to Colombo.'
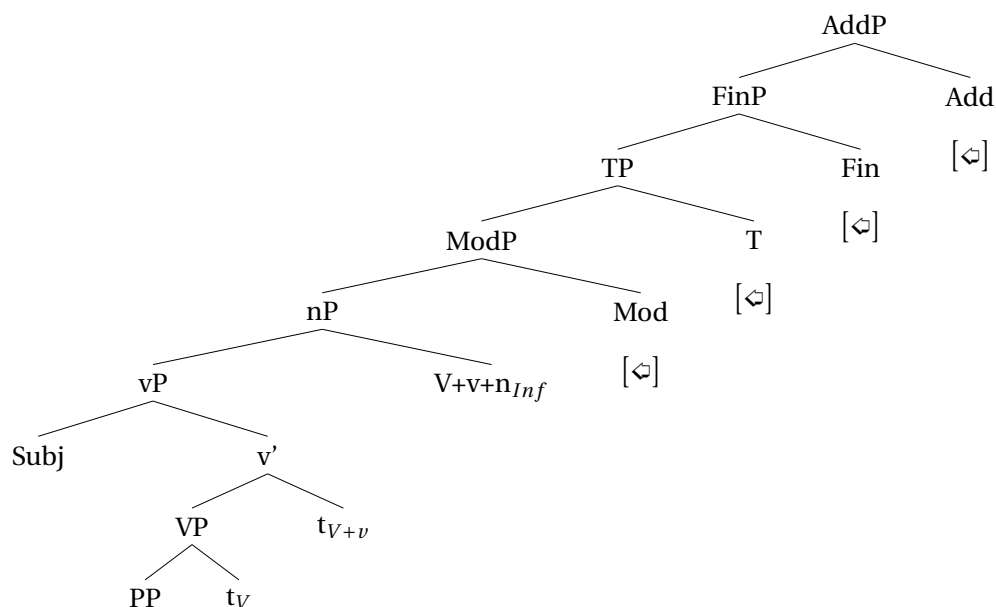
Concretely, I assume that modal quasi-verbs like *puluwan* select for an infinitival phrase, which introduces nominal properties.[10] In the tree in (18) below, I label this phrase n_{Inf}. I further assume that the verbal root undergoes head-movement up to n_{Inf}.

Against the background of what we said above, we assume a structure like in (18) where all the postverbal heads come with a $[\circlearrowleft]$-feature. The same holds for the ad-

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[10]It is not a new observation that infinitival phrases have some nominal properties. In many languages, we see nominal morphology under topicalization of an infinitival verb phrase (see e.g. Hein 2018).

ditive head. The result of the syntactic derivation could look like the following:[11]

(18)

```
                                        AddP
                                       /    \
                                    FinP      Add
                                   /    \      [↩]
                                 TP      Fin
                                /  \      [↩]
                           ModP      T
                          /    \      [↩]
                        nP      Mod
                       /  \      [↩]
                     vP    V+v+n_Inf
                    /  \
                 Subj    v'
                        /  \
                      VP    t_{V+v}
                     /  \
                   PP    t_V
```

As a result of Spell-Out, all postverbal heads will attach onto the lexical verb forming a cluster. As noted above, tense and finiteness are lost in configurations a quasi-verbal element so I assume they will not be mapped to PF when they are adjacent to Mod. The mapping at Spell-Out will thus then look like (19).

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[11]Note that I ignore all discussions about the position of the arguments in Sinhala. Given the availability of scrambling and other reordering options, it is very likely that the arguments do not (or do not have to) stay in situ. This does, as far as I can see, not have an effect on what I am trying to show here.

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(19)
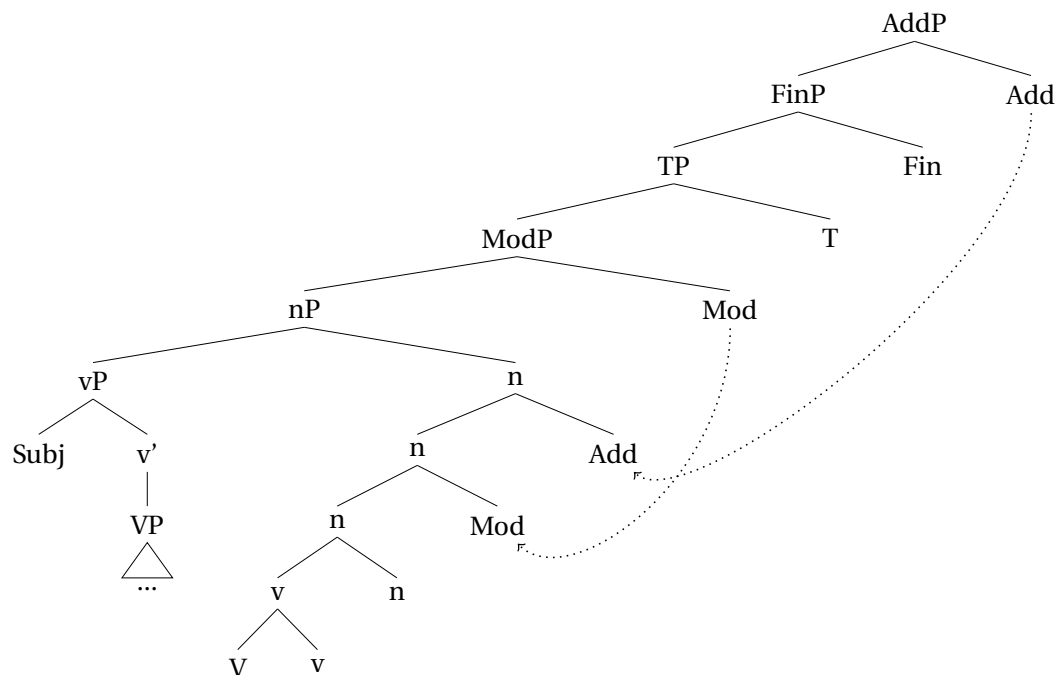
The derivation proceeds and upon Vocabulary Insertion of ADD, the prosodified complement of ADD looks as in (20). As Vocabulary Insertion applies bottom up, the verb and the modal quasi-verb have been mapped to phonological words. Eventually the complete cluster will also be mapped to a recursive phonological word as it was one complex head. The preverbal argument phrases are not part of the structure yet and the corresponding φs will be attached to the complex head in a later step. As in the case of Tsez above, I assume that the basic categorial distinction between nouns and verbs is maintained in the phonological structure.

(20)
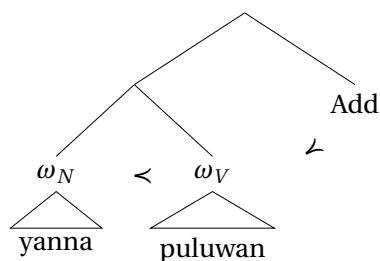
By assumption, the Vocabulary Item for the additive marker also comes with an integration feature and this time it is a target-specific one: [⇨N⇦]:

(21)   [ADD] ↔ /i/ [⇨N↶]

Then, TARGET-SPECIFIC INTEGRATION will apply. As we are at the point of Vocabulary Insertion, the crucial relation is the one of precedence. The nominal feature on the infinitival verb, by transitivity, precedes the target-specific integration feature as soon as the exponent of ADD is inserted. Thus, the additive marker will be integrated as adjoined to the infinitival phrase.

(22)
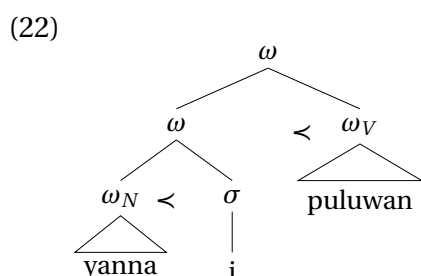
Note that it is the bottom-up property of Vocabulary Insertion that makes sure that the additive marker, even though it specifically seeks for a noun to attach to, will never be able to escape the verb cluster. All of the argumental phrases that are prosodified later will not fulfill the definition of target-specific integration because they do not precede the additive marker. They only precede the verb cluster as a whole.[12] In other words, the two-step integration process derives the seemingly paradoxical requirement of the coordinator in Sinhala that it wants to attach to something nominal but that it is restricted to the elements inside the verb cluster. The first step,

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[12]In order to show this consider the briefly the corresponding structure for a hypothetical example where a finite clause like (23) were embedded as the first conjunct of a coordination phrase.

(23)   Ranjit nuvərə ya-nə-wa
        Ranjit Kandi go-NPST-IND
        'Ranjit goes to Kandi.'

Assuming that there also were an additive marker, it would alongside the other postverbal markers form a cluster with the clause-final verb. As a result it would undergo VI but it cannot fulfill its target-specific integration feature inside of the verbal cluster since there is no nominal element. And even at a later point in the derivation, it will never get to a point where the conditions for target-specific integration are fulfilled. Once the preverbal nominal arguments are prosodified as well, the structure looks like (24) but, importantly, target-specific integration cannot apply either because the preverbal nominal φ-phrases do not precede the element bearing the [⇨N↶]-feature. They only precede the verb cluster as a whole which is not enough according to the definition.

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which can be seen as a more general property of Sinhala, is that of verb cluster formation that makes sure that all postverbal functional heads form a constituent of some sort. The second process then, is in a sense the same one that we have seen for Tsez, namely the simple attachment to a nominal host in its vicinity. However, unlike in Tsez the first step of cluster formation radically restricts the application domain of the second instance of integration, thereby yielding a completely different pattern on the surface. Before we proceed, I would like to note one empirical point that seems to corroborate the analysis I sketched. In the derivation I just presented, the restriction of the additive exponent *i* to appear inside the verb cluster, is not part of its specification or its morphological properties. It merely falls out as an interaction of cluster formation and bottom-up Vocabulary Insertion. That this is on the right track can be observed in cases where *i* conjoins what is arguably constituents bigger than a nominal but without a verb (or the verb having undergone ellipsis). In (25), we see a coordination of a phrase including the direct and the indirect object but no verb and in absence of a verb to cluster to, the additive marker is happy to attach to a nominal argument.

(25) amma [Ranjit-ʈə kamiseku-**i**]   [Chitra-ʈə gaumeku-**i**]
      mother Ranjit-DAT shirt-INDEF-CONJ Chitra-DAT gown-INDEF-CONJ
      araŋ   dunna.
      buy.PERF GIVE.PST.IND
      'Mother bought a shirt for Ranjit and a gown for Chitra.

<div align="right">Chandralal (2010, 183)</div>

At this point, we have now derived the three instances of target-specific coordinator

(24)

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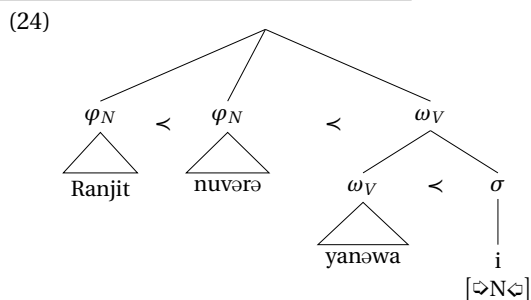
placement that I sketched in the typological part of this work. The core idea was that the integration mechanism sketched in the previous chapter about second position placement can be extended to include cases of target-specific integration where the element in question looks for an element with a specific grammatical property to attach to. In all of the cases that I found in my database, the coordinator wanted to attach to something nominal. However, I argued that this is not a deep-rooted property of the integration process itself but merely a diachronic remnant of the fact that at some point the nominal coordinator was used to also conjoin other elements. In the next section, I will discuss some remaining issues that I glossed over in the discussion of the individual case studies.

5.3. Open issues concerning target-specific integration

5.3.1. The problem of ordered repairs

What we have derived in all three case studies on target-specific integration in this chapter is that the respective coordinators dislocate from their underlying position and successfully attach to the correct nominal element when there is one. What we have not derived is the fact that when there is no accessible nominal element in a given domain, the coordinators remain unpronounced in all three languages. The result is that we simply have asyndetic coordination then. In (26) we see a coordination of verb phrases in Sinhala. Since there is no nominal element in the verb cluster, the coordinator simply disappears and cannot be used. The same holds for Khwarshi and Tsez in a sense. In configurations where there is no potential host inside a given conjunct, the coordinator does not attach to the verb but rather disappears completely. This is shown for Khwarshi in (27). The first and the third conjunct here only consist of a verb and therefore it cannot possibly be marked for be-

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ing a conjunct. Polinsky (2015) notes the same for Tsez and specifically states that *no* cannot attach to verbs.

(26) Ranjit [gedərə e-nəwa] [bat ka-nəewa] [ʈiiwee balə-nəwa]
      Ranjit home come-IND rice eat-IND   TV   watch-IND
      'Ranjit comes home, has a meal and watches TV.'

                                                    Chandralal (2010, 181)

(27) [idu λuss-u-q'arλ'a]   [yašk'a-**n** y-oq-un]   [y-a^{n}γ^Q-un]
      this sleep-PAST-PTCP-TEMP box-COORD V-take-PAST.UW V-open-PAST.UW
      iɬe.
      THAT.OBL.ERG
      'When he fell asleep, she took the box and opened it.' Khalilova (2009, 211)

The question why that is is not a trivial one in the system we developed. In a way, if integration is not possible because there is no target that would satisfy the target-specific integration feature, then we might expect that the coordinator will just remain in its underlying position and be exponed there. This, however, is not what happens. Obeying the target-specific integration feature seems to be so important that it is better to be deleted altogether than to appear on a host that does not have the right properties.

The problem gets even more complicated when taking a closer look at Khwarshi. What we have derived for Khwarshi is that the coordinator will attach to the absolutive phrase if there is one. But if the absolutive is not to be found, then we will try to attach to the highest XP. And only when there is no nominal constituent anywhere to be found, then its better to delete than to appear on a verb. So what we observe is a pattern of ordered repairs. The best (or cheapest) repair is to attach to the absolutive noun phrase, the next best thing is to attach to any noun phrase and if that does not work either, then we delete, which is still better than to appear attached to a verb. Using the slightly more formalized solutions that I have presented in the respective sections just now, we can schematize the ordered repairs as follows where ≫-symbol should be read as *is preferred over*.

(28)   a.   Khwarshi:

Attach to absolute DP ≫ Attach to the highest XP ≫ Delete ≫ Attach to a Verb

b.   Tsez:

Attach to rightmost NP ≫ Delete ≫ Attach to a Verb

c.   Sinhala:

Attach to rightmost NP (in the cluster) ≫ Delete ≫ Attach to a Verb

The first thing that I want to note is that despite the fact that it is not immediately clear how such patterns of ordered repairs should be derived, it is still reassuring that these patterns do not immediately falsify the framework I have set up. If we were to find a system of ordered repairs where a process applying at Vocabulary Insertion is preferred over a process applying at Spell-Out, then we would run into an ordering paradox that would falsify the current framework. Suppose we find a language where the pattern would be such that we attach the coordinator to what is linearly the rightmost noun and if that fails, we would attach it to the structurally highest XP. Such a pattern, while not hard to imagine, seems to be, at least with the limited data that I have available, ruled out. This is a good finding for the Distributed Integration approach.

However, I will readily admit that while the patterns in (28) do fortunately not falsify the approach immediately, it is still far from clear how they should be derived. As is well-known, patterns of ordered repairs are not easily expressed with simple rule-based frameworks such as the one that I have proposed here and they are often cited as evidence for optimization-based frameworks such as Optimality Theory, which allow for grammatical structures to violate some constraints as long as there is no competing structure that fares better with respect to the crucial constraints. A system like the one in Anderson (2005) has ordered repairs fall out of the algorithm without further ado because the system of ranked constraints by definition will yield

an optimal candidate even if it does not satisfy all the constraints.[13]

The one piece of machinery that rule-based systems like the one at hand have at their disposal to derive such patterns is serial ordering. If a process 1 can be said to apply before process 2 then it will not come as a surprise that failure of process 1 to apply (for whatever reason) can potentially be repaired by process 2. Let us look at the pattern of Khwarshi for now as it is the most intricate and arguably the most interesting. In the system we set up, both the attachment to the absolutive DP as well as to the highest XP are the results of integration at Spell-Out. As for the deletion, it is not immediately clear what kind of deletion this is but as I have speculated in the respective section outlining Spell-Out, there is also a deletion process applying at that point that takes into account markedness effects.

In the respective sections, I have not been explicit in what derivational order all of these operations at Spell-Out or Vocabulary Insertion apply.[14] But if we commit to a specific order, then at least a part of the ordered repairs pattern falls out. So suppose that we, upon Spell-Out, hit an element with a target-specific integration feature such as $[\Rightarrow D \Leftarrow]$. If the element can undergo the target-specific integration then it will but if it cannot, then a process applies which impoverishes the category-feature such that we will end up with an underspecified $[\Rightarrow \Leftarrow]$-feature. This, then in turn will lead to attachment to the highest XP upon Spell-Out. However, if that is not possible either, then we adopt an obliteration rule that deletes the additive head altogether.

(29) $[\text{ADD},[\Rightarrow D \Leftarrow]]$ $\xrightarrow{\textit{Impoverishment}}$ $[\text{ADD},[\Rightarrow \Leftarrow]]$ $\xrightarrow{\textit{Obliteration}}$ $\varnothing$

---

[13]Note however, that Anderson (2005) makes no predictions whatsoever about which configurations can repair which. Since clitic placement is evaluated with competing constraints in one big derivation, we actually might expect that morphosyntactically determined placement patterns can repair the failing of a phonological determined placement pattern etc. Since this is not what we find, it seems that this framework is much too powerful.

[14]I have stated that the operations apply bottom-up but as target-specific integration, integration as well as deletion affect the same head, that does not help us to determine which order the operations apply.

Of course that order does, at this point, not follow from anything and merely restates the empirical observations in a more technical light.[15]

The alternative, as was already suggested above, would be to enhance the system with violable constraints such that both Spell-Out and Vocabulary Insertion become optimizing mapping algorithms rather than simple rule-based mappings. In such a system, we can readily set up an ordering of constraints according which gives us the right result: In (30), I have sketched a toy constraint ranking that would do the trick. The key idea here is that we have two constraints requiring faithfulness to the subcategorization feature: FAITH$[\Rightarrow\Leftarrow]$ requires faithfulness to the positional part of the subcategorization feature and FAITH$[F]$ requires faithfulness to the specific category of the subcategorization feature. They are separated by a MAXMORPH-constraint requiring that a morpheme in the input be part of the output.

(30)   FAITH$[\Rightarrow\Leftarrow]$ ≫ MAXMORPH ≫ FAITH$[F]$

The result is that we will dislocate to a preverbal XP whenever we can but delete if we cannot. The lowest-ranked constraint will ensure that when we have different choices as to where to dislocate we target an element with a given feature F. But similarly as to the solution above, this seems more or less like a restatement of the observed facts and is not much of an explanation.

Ultimately, I am convinced that these patterns of ordered repairs might eventually provide us with interesting insights into the nature of these clitic-like elements and their interaction with other processes. If the Distributed Integration model that I have proposed here is on the right track then we have specific expectations as to which patterns can repair which and under what conditions. Unfortunately, my sample does not allow for any deeper insights here as we have only very few of these ordered repair patterns to discuss. And I hope that future research will unearth more

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[15]We have however seen in the discussion of Sinhala that the markedness-based obliteration of verbal inflection heads T and Fin needs to apply after the cluster formation because it only applies under adjacency to the modal quasi-verbs.

of these cases so as to gain more insights in that area.

5.3.2. Why only additive markers undergo TARGET-SPECIFIC INTEGRATION

One of the questions I have not addressed at this point is whether it is a significant finding that the case studies of target-specific integration in this chapter all involve polysyndetic coordination markers. Of course, any attempt of discussing this is naturally somewhat speculative because the cases we have come from only two areas (Tsez, Khwarshi and some related languages on the one hand and Sinhala, Tamil, Malayalam on the other). Nonetheless it is of course tempting to attribute the observation to the framework I have proposed as it, at least at first sight, looks like something that would fall out from the Cyclic Spell-Out model. Given what I have said about the relevant domains in coordination structures in Section II.4.3.1, it is plausible that in terms of INTEGRATION upon Spell-Out, monosyndetic coordinators (& in the tree below) will only ever be able to attach to the highest XP. I have not been explicit about what kind of material is accessible to elements of a higher phase but according to standard definitions, it is only the edge which is often defined as the specifier of the highest projection. Thus, it seems to be a reasonable assumption that even if & were to bear a target-specific integration feature looking for something that is more deeply embedded, it might not be able to access it.

(31)   The phasal domains of coordination:
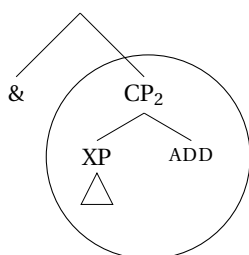
So, depending on one's additional assumptions about the accessibility of elements

in a Cyclic Spell-Out system, one might derive that target-specific integration upon Spell-Out (as in the case of Khwarshi) might not be possible. Crucially, however, the same logic does not rule out that we might find a monosyndetic coordinator undergoing target-specific integration upon Vocabulary Insertion. As we have seen, at that point, locality domains are no longer valid as the individual cyclic domains are stitched back together and a low element with the right features might be able to be accessed by a monosyndetic coordinator with the corresponding integration feature.

So, all in all, we must conclude that the present account only provides part of an explanation as to why all cases of target-specific integration are polysyndetic markers. But given what I have said above about our very limited empirical evidence, this might not be too bad of a result after all.

5.3.3. Head movement at PF as TARGET-SPECIFIC INTEGRATION

One final point I want to make is that the definition of target-specific integration provides for one configuration that we have not yet explored. In the respective section about Khwarshi & Tsez, I briefly mentioned that the definition of RELATIVIZED CLOSENESS is – unlike the definition of adjacency – symmetric. It does not matter for the purposes of integration whether the target-specific integration feature $[\rhd F \lhd]$ preceded/c-commanded the respective category feature $[F]$ or the other way round. We have made use of that in the derivation of Tsez, where the nominal feature of the target preceded the $[\rhd N \lhd]$-feature of the coordinator rather than the other way round. What we have not explored yet is the fact that, in principle, this should also allow for cases where a target-specific integration feature is *c-commanded* by a higher feature. So, that hypothetical configuration is one where a head with a feature $[F]$ c-commands a head bearing a $[\rhd F \lhd]$-feature. The question is whether such cases are attested and while I have no instances of coordinators in such configurations, I
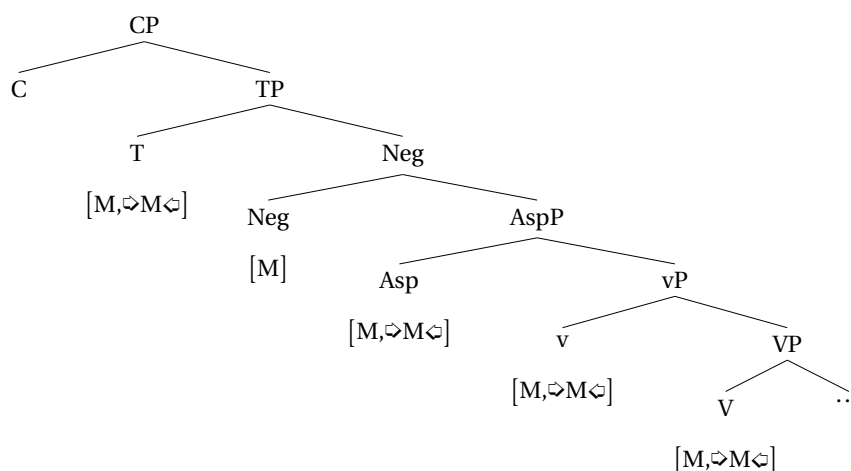
would like to point out that this precise configuration is precisely the one that would give us a version of head-movement at an early PF-stage, a phenomenon that is frequently claimed to be necessary in the literature (see e.g. Schoorlemmer & Temmermann (2012); Platzack (2013); Harizanov & Gribanova (2019); Fenger (2020)). Consider the configuration in (32). Here, a head X bears a category-feature [F] and c-commands a head Y that bears a [⇨F⇦]-feature. Assuming that the intervening specifier ZP does not bear the feature [F], Y can then adjoin to X.

(32)   PF-Head movement as Target-specific integration:
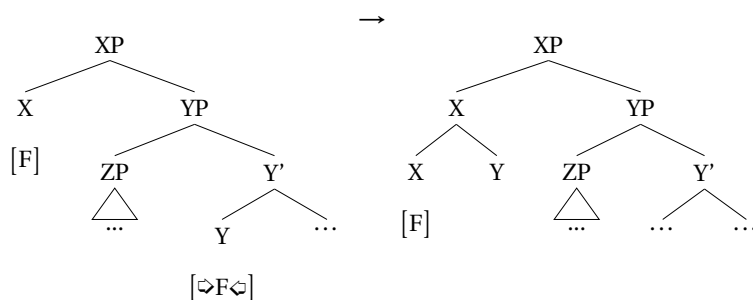
The way to restrict this mechanism lies, of course, in finding the right feature specifications. Harizanov & Gribanova (2019) for example argue that Russian exemplifies a case where a whole range of functional projections within the verbal spine come together either via Lowering or Raising and are ultimately pronounced in an intermediate position above vP and Asp and below T. According to Harizanov & Gribanova (2019), this position is Neg. They model this with a formal morphological selection feature [M], which can be specified for + or – and, as a result, moves upwards or downwards at PF. We can imitate their entire logic by using target-specific integration features. What Harizanov & Gribanova (2019) do in terms of ±-values, we can do in terms of the difference between a category-feature and a target-specific integration-feature.

(33)

```
              CP
           ／      ＼
          C          TP
                  ／      ＼
                 T          Neg
             [M,⇨M⇦]    ／      ＼
                      Neg          AspP
                      [M]      ／      ＼
                             Asp          vP
                          [M,⇨M⇦]      ／      ＼
                                      v          VP
                                  [M,⇨M⇦]     ／    ＼
                                             V        …
                                          [M,⇨M⇦]
```

Depending on how the relevant features and the respective locality domains are distributed, it might even be possible to model more complex cases of "postsyntactic affix-hopping" like English (Chomsky (1957); Bobaljik (1995)) or the pattern of lowering of tense and negation described for Mari and Udmurt described by Georgieva et al. (2021). This is not the place to work this out in more details but given what was said in Section II.4.2 about trying to minimize the toolbox of Distributed Morphology, this finding is an encouraging observation and indicates that the Distributed Integration approach is not simply adding another complex structure manipulating tool to the framework but rather tries to take a more abstract perspective that allows us to capture several proposed tools with one mechanism.

To briefly summarize before we come to the main conclusion of this work, in this chapter, I have extended the Distributed Integration approach, which was originally designed to cover the behavior of second-position elements, to the three case studies that did not fall under this general rubric. I have argued that the patterns all have in common that they specifically target a nominal element inside of their conjunct and that this requirement for a nominal target is due to its diachronic origins as a nominal coordinator. In terms of the formal model, I assumed that the definition of INTEGRATION can be kept basically the same except that the notion of AD-JACENCY that was required for second position placement is to be replaced by REL-ATIVIZED CLOSENESS, which is sensitive to the target-specific feature. Against this

background, I argued that the closely related languages Khwarshi and Tsez nicely illustrate the crucial distinction that we have observed in the original account of second position elements, namely that, for some elements, the INTEGRATION-feature is located on the morphosyntactic head and for others it is located on the respective exponent. The intricate pattern from Sinhala followed from the interaction of an additional process of verb cluster formation, which could also nicely be modelled in terms of integration, and a target-specific integration feature on the coordinator's exponent. Overall, this chapter demonstrated, that although some aspects of the model were, in a sense, a bit more speculative because we have less case-studies to work with, the Distributed Integration approach can successfully cover instances of target-specific coordinators and offers some promising perspectives on similar processes in the world's languages.

6. Conclusion

In this work, I have made an attempt to approach the topic of clitics from a purely empirical angle. Unlike previous attempts, the study at hand does not start from a more or less vaguely defined notion of clitic but rather starts by proposing a typology of the crosslinguistic placement patterns of a single morphosyntactic category, namely clausal coordinators. The category of coordinators was specifically chosen as we can quite straightforwardly determine their syntacto-semantic scope and, as such, their canonical position. Even in languages that exhibit extremely free word order, coordinators do not participate in these word order permutations and, in the vast majority of cases appear in their well-defined canonical position.

However, despite their strong tendency to appear in their canonical position, the work at hand has gathered quite a number of case studies in which coordinators surface in a non-canonical position and one of the main empirical tasks that this work set out to do was to classify and typologize the posssible positions of coordinators in the world's languages. Based on twelve in-depth case studies, I put forward a typology of shifting coordinators, i.e. instances of coordinators in non-canonical positions. As it turns out, the attested variation of placement patterns of shifting coordinators is quite restricted for the most part. In nine out of the twelve case studies, the shifting coordinator appeared in some sort of second position surfacing after either a morphosyntactic XP or after a prosodically defined host (either a phonological word ω or a prosodic phrase φ). In three out of the twelve case studies, the clausal coordinator attached to a specific nominal constituent within the clause.

6. Conclusion

Against this background, the work at hand argued that the empirical range of shifting coordinators closely mirrors the empirical range of what the literature discusses as clause-level clitics. The different kinds of second position placement are exactly the same as with clause-level clitics of other morphosyntactic categories. Going from there, I made the inductive step to argue that shifting coordinators *are* clause-level clitics and should be treated as such. Thus, this work is, in a sense, the first crosslinguistic study of second position effects, and clause-level clitics more generally, that keeps the morphosyntactic category of the clitics constant and study the full range of their possible placement patterns. Previous attempts of a typology of clitics all compared the grammatical behavior of different morphosyntactic categories (like pronominal clitics, determiners, etc.) and thus were not able to control for a whole range of interfering factors. In this work, we could for example control for the syntactic type of coordination (monosyndetic vs polysyndetic) or for factors like the phonological weight of the coordinator or whether a non-canonical placement of a coordinator obeyed syntactic islands or not. Controlling for variables of this sort allowed us to draw much more tangible conclusions for our understanding of clitics and the most adequate way of modelling their grammatical behavior.

Part II of this work was devoted to propose a coherent model of clause-level clitics based on the findings of shifting coordinators from Part I. I started with the argument that shifting coordinators should be treated as clear cases of what is usually referred to as (clause-level) clitics. I then reviewed quite a number of different formal approaches to the phenomenon of clitics and worked out the main debates circling around this topic. Building on that I offered a discussion of what shifting coordinators could bring to the table to settle these debates. Since the discussed approaches differed along a lot of different dimensions, I decided to discuss the approaches in a deconstructed state, discussing the crucial dimensions rather than critically reviewing each approach individually. I ended up with a detailed argumentation that shifting coordinators provide ample evidence that the most adequate model of cli-

tics and clitic placement patterns is (a) cyclic, (b) transformational, (c) distributed and (d) subcategorization-based. Regarding second position patterns of clitic placement, I further argued that second position elements exclusively attach to the first element rather than the rest of the clause and that the respective transformation modelling this should reflect that finding.

The formal model I proposed, which has the above-mentioned properties, was called the *Distributed Integration* approach. It rests on the assumption that second position placement, as well as clitic placement more generally, is an interface phenomenon meaning that it happens in the course of the mapping from either syntax to a postsyntactic morphology or from morphology to phonology. This basic dichotomy, which I attributed to the location of the subcategorization feature on either the morphosyntactic head or the respective exponent, resulted in the basic distinction between morphosyntactically determined clitic placement and phonologically determined clitic placement and explained many correlating properties such as the ability of the latter but not the former to shift into syntactic islands. The shifting process itself I called INTEGRATION and was formulated in a way such that it allows us to abstract over different kinds of relations of grammatical elements depending on when it applies. When INTEGRATION applies in the course of the mapping from syntax to morphology (i.e at Spell-Out), the crucial relation is one of c-command and when it applies at the mapping of morphology to phonology (i.e. at Vocabulary Insertion), the crucial relation is one of linear precedence. As such, the account also proposed a solution for the fact that some morphological operations seem to require structural adjacency whereas others require linear adjacency.

I showed in detail that the Distributed Integration account can derive the patterns observed in Part I of this book and, moreover, has a number of additional advantages as it can derive possible and impossible alternations between coordinators in canonical and non-canonical positions in some languages and that it also rules out allegedly non-existing cases of second-to-last position elements.

6. Conclusion

I then went on to show that the account could also be extended to the less straight-forward cases where the clausal coordinator attach to a specific noun phrase within a given conjunct, a pattern that I attributed to the diachronic process of extending a nominal coordinator to being compatible with clausal complements as well. The crucial underlying idea here was that unlike standard second position placement, which is the result of a radically underspecified subcategorization feature, these category-sensitive patterns should be modelled with a specific subcategorization feature, which then leads to an INTEGRATION operation, which is relativized to the specific feature rather than applying under mere adjacency.

Taking a step back and looking at the big picture questions from a slightly more abstract perspective, I would like to note that I take the work at hand to be a good example how a purely empirical perspective can help us approach long-standing heuristic problems of linguistic theory. Rather than coming with an artificial, pre-defined notion of what it means to be a "clitic" or what properties a clitic should have, we set up the empirical investigation such that we control for interfering factors. In the study at hand, we chose the subject of investigation such that purely syntactic word order transformations (or permutations) could be ruled out with reasonable certainty as the cause for the empirical variation we observe. And against that background, the attested patterns then indicated quite straightforwardly, I think, that what we are dealing with here are different kinds of clause-level clitics as discussed in the literature. Overall I take the study at hand to be the by far most comprehensive attempt to approach the topic of second position elements and clause-level clitics more generally from a crosslinguistic perspective. Of course, it will be exciting to see which of the generalizations or tendencies will turn out to be robust (or completely nonsensical) once we apply the same methodology to other morphosyntactic categories but for now, it strikes me as a promising heuristic to assume that it is at least worth checking if other empirical domains behave as expected in this regard.

On the formal side, I take the work at hand to be a successful application of many more or less recent developments in the areas of morphosyntax and morphophonology. I argued that, by and large, the framework of Distributed Morphology offers an architecture which is well-suited to derive the intricacies of second position placement and other issues circling around clitics and their grammatical behavior. Of particular relevance here were the assumptions of a realization conceptualization of morphology as well as the property of Late Insertion, which allowed us to model the interaction of clitic placement with other grammatical processes from different modules. Further, it was crucial that the model be cyclic both in the sense that mapping from the syntax to the postsyntax happens in chunks smaller than the complete structure but also that these mappings apply bottom-up in the sense that, within these chunks, lower structure is mapped to the next module before higher material. Finally, the framework of Distributed Morphology has the beneficial property of allowing for a limited autonomy of the morphology in the sense that the application of some structure-changing processes have an effect only on the morphological (and the phonological) side of things without having an effect on the syntax or the semantics. This was crucial for the work at hand since *Integration* procedure that I have proposed in this work could be shown to have exactly these properties.

A. Broad sample

Language	Genus	Language Family	References
Abkhaz	Abkhaz	Abkhaz-Adyghe	Arkadiev (2020)
Christian Urmi	Aramaic	Afro-Asiatic	Khan (2016a)
Barwar Aramaic	Aramaic	Afro-Asiatic	Khan (2008)
Bidhaawyeet	Cushitic	Afro-Asiatic	Vanhove (2014)
Coptic	Egyptian	Afro-Asiatic	Ashton (2012)
Basque	Basque	Basque	–
Malayalam	South Dravidian	Dravidian	Jayaseelan (2013)
Tamil	South Dravidian	Dravidian	Lehmann (1989)
Kalaallisut	Inuit	Eskaleut	See Sect. I.3.3
Hungarian	Hungaric	Uralic	Bodányi (2013)
Xong	Hmongic	Hmong-Mien	Sposato (2021)
Hittite	Anatolian	Indo-European	Agbayani & Golston (2010)
Armenian	Armenian	Indo-European	–
Gaulish	Celtic	Indo-European	Mitrović (2014)
Old Irish	Celtic	Indo-European	Mitrović (2014)
Gothic	Germanic	Indo-European	Mitrović (2014)
German	Germanic	Indo-European	See Sect. I.4.2
Ancient Greek	Hellenic	Indo-European	See Sect. I.3.1
Sinhala	Indo-Aryan	Indo-European	See Sect. I.6.3
Palula	Indo-Aryan	Indo-European	Liljegren (2016)
Ishkashim	Iranian	Indo-European	Karvovskaya (2013)

A. Broad sample

Latin	Italic	Indo-European	See Sect. I.3.1
Polish	Slavic	Indo-European	See Sect. I.4.3
Slovenian	Slavic	Indo-European	Marušič et al. (2011)
Cherokee	Southern Iroquioan	Iroquioan	See Sect. I.3.2
Jacaltec	Mayan	Mayan	Craig (1977)
Mongolian	Mongolic	Mongolic-Khitan	Janhunen (2012)
Lezgian	Lezgic	Nakh-Dagestanian	See Sect. I.5.1
Archi	Lezgic	Nakh-Dagestanian	Chumakina et al. (2016)
Khwarshi	Didoic	Nakh-Dagestanian	See Sect. I.6.1
Tsez	Didoic	Nakh-Dagestanian	See Sect. I.6.2
Rangi	Bantu	Niger-Congo	Stegen (2011)
Yoruba	Defoid	Niger-Congo	See Sect. I.4.1
Nupe	Nupoid	Niger-Congo	Kandybowicz (2005)
Mandarin	Chinese	Sino-Tibetan	Zhang (2006)
Bunan	Bodic	Sino-Tibetan	Widmer (2014)
Ersu	Ersuic	Sino-Tibetan	Zhang (2016)
Makalero	Timor	Timor-Alor-Pantar	Huber (2011)
Evenki	Evenic	Tungusic	Bulatova & Grenoble (1999)
Even	Evenic	Tungusic	Kim (2011)
Udihe	Udegheic	Tungusic	See Sect. I.5.2
Turkish	Turkic	Turkic	Kornfilt (1996)
Northern Khanty	Ob-Ugric	Uralic	Borise & Kiss (2023)
Western Mansi	Ob-Ugric	Uralic	Eichinger (2017)
Udmurt	Finno-Permian	Uralic	Arkhangelskiy (2014)
Urarina	Urarina	Urarina	Olawsky (2006)
Huichol	Corachol	Uto-Atztecan	Comrie (1982)
Ute	Northern Uto-Atztecan	Uto-Atztecan	Givón (2011)
Wardaman	Yangmanic	Yangmanic	Merlan (1994)
Yavapai	Yuman	Yuman	See Sect. I.5.3
48 Languages	**36 Genera**	**21 Families**	

B. Examples from languages in the broad sample

(1) **Abkhaz:**

[a-minístr-**g'əj**   d-ʕa-j-χ-d]   [sar-**g'əj**   a-vóžd'
DEF-minister-ADD 3SG.H.ABS-CISL-GO-RE(AOR)-DCL 1SG-ADD DEF-chief(R)
sə-j-jə-tə-n]
1SG.ABS-3SG.M.IO-3SG.M.ERG-GIVE-PST

'The minister returned and gave me over to the chief.'

Arkadiev (2020, 87)

(2) **Christian Urmi:**

[tre dan-ə   ɟu=mə́šxa ḳaluyè=la]   [tre dan-ə=**da**
two DET.PART-PL in=oil   fry.PROG=COP.3SG.F two DET.PART-PL=COORD
bə-švaḱé=la   nàyə]
PROG-l̂eave.INF=COP.3SG.F raw.PL
'She fries two in oil and she leaves two raw.'

Khan (2016b, 192) gloss by Silvie Strauß

(3) **Bidhaawyeet:**

ti-di=**t**=herb
3SG.FEM-say.PERF=COORD=OBJ.1SG
'she told me and...'

Vanhove (2014, 42)

(4) **Coptic:**

a=w=tamio=**de**   en=u=taive
AUX.PERF=3PL=make=COORD ACC=a=coffin
'and they made a coffin'

Coptic, Ashton (2012)

B. Examples from languages in the broad sample

(5) **Basque:**

[Eder-to   da-uka-zu   soineko hori], [zurea ez   da, **baina**].
beautiful-ADV 3SG-have-2SG dress   that   yours NEG BE BUT
'You look beautiful in that dress even if its not yours'

<div align="right">Labayru Hiztegia Online[1]</div>

(6) **Malayalam:**

John war-uka-(y)um ceyt-illa,   Mary pook-uka-(y)um ceyt-illa
John come-INF-CONJ do-PERF-NEG Mary go-INF-CONJ   do-PERF-NEG

'John didn't come; also Mary didn't go.',

<div align="right">Jayaseelan (2013)</div>

(7) **Xong:**

[Wel **deit**   puk   daut], [beul **deit**   gaond wel].
1SG SIMUL speak speech 3   SIMUL bother 1SG

'He's bothering me while I'm trying to speak.'

<div align="right">Sposato (2021, 579)</div>

(8) **Hittite:**

[ginuwas GAD.HI.A] [patann=**a**   ^{GIŠ}GIR.GUB]
for.knees veils   of.feet=and stool
'veils for the knees and a stool for the feet'

<div align="right">Agbayani & Golston (2010)</div>

(9) **Eastern Armenian:**

[mi tasə k'ayl nran-ic'   et   ənk-ac k'ayl-owm ēr
one ten step DEM.DIST-ABL back fall-RES walk-IPFV AUX.3SG.PST
Arowt'ik-ə], [nra   hetew-ic'=**ēl**   xowl-ə]
Arutik-DEF DEM.DIST.GEN behind-ABL=COORD deaf-DEF
'About ten steps behind him, Arutik was walking and behind him, the deaf

one.'[2]

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[1]I thank Iker Gutiérrez and Claudia Parfene for bringing the pattern in Basque to my attention and Claudia Parfene for providing me with a relevant example.

[2]Eastern Armenian National Corpus (EANC: Šahen T'at'ikyan, Nra čanaparhə, mas 1) gloss and translation by Silvie Strauß.

(10) **Gaulish:**

[lotites snī] [regu=**c** cambion]
quicken.2 us.ENCL straighten.1SG=COORD crooked.ACC
'You quicken us and I righten the wrong (*lit.* straighten the crooked one).'

Mitrović (2014, 132f)

(11) **Old Irish:**

... [ba **ch** ri Temrach]
COP and kind Tara.GEN
'and he was king of Tara.'

Old Irish (Celtic), Mitrović (2014, 130) citing Thurneysen (2003, 549)

(12) **Gothic:**

... [wopida Iesu] [gaþ **uh** imma].
call.PAST.3SG Jesus.ACC say.PAST.3SG and him.DAT.SG
'... he called Jesus and said unto him.'

Gothic, Mitrović (2014, 79)

(13) **Ancient Greek:**

[érgeto d' eks húpnou] [theíee **dè** min amphékhut' ompheé]
keeps and out of.sleep divine and him around.poured voice
'he kept off sleep and the divine voice poured around him.'

Ancient Greek, Homer, Iliad 2.41 in Agbayani & Golston (2010)

(14) **Palula:**

pha-íi báabu ǰhaamatreé díi [[xarčá **bi** dawa-áan-u]
girl-GEN father son.in.law.OBL from [expenses also ask.for-PRS-MSG
[ǰandeé **bi** khéli dawa-áan-u]]
goat.pl also numerous ask.for-PRS-MSG]

'The girl's father demands expenses [to be paid] as well as numerous goats.'

Liljegren (2016, 344)

(15) **Ishkashimi:**

Lena šir-čoy pəvu, məx-**məs** šir-čoy pəv-on.
Lena milk-tea drink.3SG 1PL-ADD milk-tea drink-2PL
'Lena drinks milk tea and (also) we drink milk tea.'

Karvovskaya (2013)

B. Examples from languages in the broad sample

(16) **Slovenian:**

[Peter me   jo   je pokazal], [Janez mu   **pa** GA   je
Peter HIM.DAT HER.ACC AUX show   Janez HIM.DAT CONJ HIM.ACC AUX
pokazal].
show
'Peter has shown her to him while Janez showed HIM to him.'

Slovenian, Marušič et al. (2011), gloss adapted

(17) **Jacaltec:**

xicheacoj ix   – slah-**ni**   yunin   ix.
started   CL/SHE finished-COORD her.child CL(woman)
'she started (it) and her child finished (it)'   Craig (1977), gloss adapted

(18) **Mongolian:**

[ter uy-e.d=**c**   bai-g.aa=gwai] [odao bo bur=**c**   bai-x-gwai]
that period-DAT-ADD b.P.IMPERF=PRIV now   TOP every=ADD be.P.FUT=PRIV
'At that time there were non and now there still are not any.'

Janhunen (2012, 266)

(19) **Rangi:**

[Kʉ-fuma Ʉla va-dom-áa   na Haubi too-lʉʉmbya n-dʉʉ
  15-come Ula 2.PST-go-HAB to Haubi ITR-greet   10-relative
jaachwe]   [njɨr-ii   **maa** va-ka-hʉmʉlʉka]
10.3SG.POSS   9-way-LOC but 2-CONS-rest
'From Ula, they went to Haubi to greet his relatives but on the way then, they

rested.'

(Stegen, 2011, 275)

(20) **Nupe:**

[Musa à   ba _] [Gana **ma** à   gi nakàn].
Musa FUT cut   Gana CONJ FUT eat meat
'Musa will cut and Gana will eat the meat.'

Kandybowicz (2005, 57f)

(21) **Mandarin:**

Baoyu yāo   tiàowǔ, **ke(shi)** wǒ **ke(shi)** yáo   huí-jiā.
Baoyu want dance   but   I   but   want return-home
'Baoyu wants to dance, but I want to go home.'   Zhang (2006, 182)

(22) **Bunan:**

daksam=**ta** ma-tuŋ-k-are ka apa.
now=ADVS NEG-drink-INTR-PRES.DISJ.SG ASS AUTH
'But now he does not drink alcohol anymore.'

<div align="right">Widmer (2014)</div>

(23) **Ersu:**

latɕikù=nɛ̀ tə-sì ya-li: [tɕʰo dʑì ku], [kuàtsì
PN=TOP one-CL:BIT APFX-good zanthoxylum COORD yield melon.seed
dʑì ku].
COORD grow.

'Lajigu (is) a bit better: (Here) zanthoxylum can be grown (and) melon seeds

can be grown.'

<div align="right">Zhang (2016)</div>

(24) **Makalero:**

[Uai=ni=ni aire' muni ma'u=ni ini-horu dame=na'a=po]
CLS=LNK=LNK now return come=LNK 1PL.EXC-WITH peace=INT=ADV
[ini=**ni** na'u tepa tule]...
1PL.EXC=CONTR just constant not.want.
'And now they come and want to make peace with us, but we don't want

(that)...'

<div align="right">Huber (2011, 480)</div>

(25) **Evenki:**

umnə:t ŋina gogo-l-lo-n bi:=kənə: olo-m
suddenly dog bark-INGR-AOR-3SG 1SG=CONJ.PART frighten-1SG
'Suddenly a dog started barking and I got scared.'

<div align="right">Bulatova & Grenoble (1999, 54)</div>

(26) **Even:**

[ilə ŋən-rə-n ɔrən] [talı-**da** ŋən-nōt-tə-p].
where go-NONFUT-3SG deer there--COORD go-HAB-NONFUT-1PL

'The deer are going somewhere and we are going there.'

<div align="right">Kim (2011, 263), gloss adapted</div>

B. Examples from languages in the broad sample

(27) **Turkish:**
Kedi içeri girdi   Ali de kapıyı   açtı.
cat in   enter.PST Ali and door.ACC open.PST
'The cat entered and, as for Ali, he opened the door.'   İ.K. Bayırlı, p.c.

(28) **Urarina:**
nihjauria tɕãe kati   saate-nana-a=ne
don't   CONJ black.monkey kill.by.blowgun-ILT-NTR=NEGF
'Also, he ought not to kill black monkeys.'   Olawsky (2006, 805)

(29) **Hungarian:**
[János a   televíziót nézte],   [Péter **meg** a   rádiót   hallgatta].
John   the TV.ACC   watched, Peter and the radio.ACC listened
'John watched TV and Peter listened to the radio.'   Zhang (2006:185)

(30) **Northern Khanty:**
[imi-le-ɬ   ɬɛtot-ɬaɬ   pasan-a ʃaβi-səɬɬe]   [ɬuβ **pa:**
woman-DIM-3SG food-PL<3SG table-LAT arrange-PST-PL<3SG she also
iɬl   oɬ-əs].
down lie-PST.3SG

'The woman arranged the food on the table. She also lay down.'

Borise & Kiss (2023, 190)

(31) **Western Mansi:**
[aŋkəʃk   **i**   kʷals]
old.woman AND got.up
'and the old woman got up.'   Eichinger (2017, 312)

(32) **Udmurt:**
[Už=**no**   jevə̂l],   [uža-z=ke=no,   ukśo-jez=**no**
work=ADD NEG.EXIST work-PST.3SG=IF=FOC money-3SG.POSS=ADD
jevə̂l.]
NEG.EXIST
'There are no jobs and, even if you work, there is no money.'

Arkhangelskiy (2023, 28), gloss and translation adapted

(33) **Huichol:**
Nee [wan] [maria **naa**]-me ne-wa-qiini
I   Juan Maria and-OBJ 1SS-3PO-KILL/PL

'I am killing Juan and Maria.'   Comrie (1982)

(34) **Ute:**

[mamachi 'u] ['aapachi-**wa** 'u] [ta'awachi-**wa** 'u] wuuka-qha-y
woman   the boy-COORD   the man-COORD   the work-PL-IMM

'The woman, the boy, and the man are working.'

Givón (2011, 210)

(35) **Wardaman:**

durd 0-me-ndi-ya   gamin   wiyan-**wan**   0-nyanga-ndi
grab   3SG-AUX-PST-NAR spear-ABS water-ABS-DF 3SG-COME-PST

'He grabbed his spear and the water came'.

Merlan (1994, 315)[3]

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[3]The suffix glossed as DF (for 'defocusser') is, according to Merlan (1994) a conjunctive element. Merlan (1994) states about it that "Insofar as its central function is that of signalling linkage, its occurrence appears to have the overall textual effect of a kind of de-emphasis of that to which is it suffixed and/or which it appears to be relating to preceding text."

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