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## Verbal morphology and grammatical aspect in Sarikoli

Timothy S. Palmer

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VERBAL MORPHOLOGY AND GRAMMATICAL ASPECT IN SARIKOLI

by

Timothy S. Palmer

A Thesis  
Submitted to the Graduate Faculty  
of the

University of North Dakota

in partial fulfillment of the requirements

for the degree of

Master of Arts

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December  
2016

This thesis, submitted by Timothy S. Palmer in partial fulfillment of the requirements for the Degree of Master of Arts from the University of North Dakota, has been read by the Faculty Advisory Committee under whom the work has been done and is hereby approved.

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Robert Fried, Chair

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Mark Karan

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Douglas Fraiser

This thesis meets the standards for appearance, conforms to the style and format requirements of the School of Graduate Studies of the University of North Dakota, and is hereby approved.

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Grant McGimpsey  
Dean of the School of Graduate Studies

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Date

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Timothy S. Palmer

August 3, 2016

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## Abbreviations

1	first person
2	second person
3	third person
ACC	accusative
ADJZ	adjectivizer
BEN	benefactive
CAUS	causative
CESS	cessative
COM	comitative
COMP	complementizer
COND	conditional
COP	copula
DAT	dative
DEM	demonstrative
DIM	diminutive
DIST	distal
DUR	durative
EXIST	existential
GEN	genitive

INF	infinitive
INS	instrumental
INTENT	intent or intention
IPFV	imperfective
LOC	locative
MED	medial
NEG	negation
NOM	nominative
NNOM	non-nominative
PL	plural
PFV	perfective
PN	personal name
POLAR	polar
POSS	possessive
PRF	perfect
PTCP	participle
PROH	prohibitive
PROX	proximal
Q	question
REFL	reflexive
SELF	self

SG singular

STAT stative

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## Abstract

Grammatical aspect in Sarikoli, an Eastern Iranian (Pamir) language, has never been adequately described. This work fills a gap in the descriptive literature, beginning with a straightforward restatement of verbal morphosyntax, and moving to a discussion of verb stems and their uses. Verb stems in Sarikoli include the infinitive, imperfective, perfective, and perfect. Additional morphemes discussed in this work include the durative clitic, stative (resultative) suffix, cessative suffix, and agreement suffixes and clitics.

Sarikoli verbal morphology encodes aspect, not tense. The major grammatical aspects of Sarikoli include perfective, imperfective, perfect, and durative. Verb stems and other aspectual marking in context give rise to a range of interpretations, explored in this thesis primarily through theory-neutral basic linguistic description.

## CHAPTER 1

### Purpose, organization, and theory

#### 1.1 Purpose and theory

The purpose of this thesis is to describe verbal morphology, and semantic and pragmatic properties of grammatical aspect, in the Sarikoli language. The organization of ideas will be based primarily on morphology, in order to present information coherently and systematically. I describe the overt structures of the language, then present the full range of their meanings, both encoded and implicated or inferred.<sup>1</sup>

I have supposed that there are two major ways to investigate the grammar of a language. One way is to assume that all languages encode similar or identical information, then work out the different ways in which they do so — starting with function and searching for forms. This approach is potentially suited to the writing of entire grammars, and some theoretical analyses and generative frameworks, and does not necessarily take into account factors in the linguistic and/or cultural context of utterances. A more functionally oriented approach is to address each language as culturally and linguistically distinct, then working out the ways in which those distinct forms present information which is logically similar to other languages — beginning with form and explaining meaning or use. Given a clause with a particular syntax and verbal morphology, what are the possible interpretations? For this descriptive linguistic

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<sup>1</sup> Here *implicated* is taken to be meaning intended by the speaker, and *inferred* is meaning as interpreted by the hearer, based especially on context and other pragmatically accessible information.

work, my approach is to record what speakers of the Sarikoli language have said, or elicit what they might say in another context, then uncover the conditions or interpretations of that speech.

Mother-tongue speakers are not thought to place various morphemes under semantic umbrella categories during speech production; instead, we produce the relevant forms in context without always knowing why. Speakers without linguistic training may be unaware that an English “present tense” verb form may be used unmodified for a past situation, a present state, or a future situation, but not a present action. Deep metalinguistic awareness is not typically a part of producing and interpreting utterances, because it requires too much processing effort in proportion to resultant cognitive effects (see the brief summary of Relevance Theory principles which follows in this section). Nevertheless, overt morphosyntactic properties consistently encode linguistic signals which allow for certain interpretations but exclude others. These morphosyntactic forms are in turn best understood by analyzing them in context, including full utterances, surrounding textual information, and background assumptions from the culture or immediate environment.

I aim to be as “theory-neutral” as possible in this description, relying somewhat on the methodological and descriptive theory known as Basic Linguistic Theory (BLT), whose major exponents are R.M.W. Dixon (2010a; 2010b; 2012) and Matthew Dryer (2006). BLT embraces descriptive terminology that has been developed and refined over time, especially through typological research, to describe the world's languages. I begin with the unique overt structures of the Sarikoli language and explain their meaning (both underlying semantic meaning and inferred meaning) using commonly accepted linguistic terminology. A thorough description of this sort assumes a connection

between linguistic form and meaning as it is intended by the speaker and inferred by the hearer; currently the most comprehensive framework for such a task is Relevance Theory (RT).<sup>2</sup>

Part of the task of language description is to record grammatical forms as they are spoken by mother tongue speakers and analyze them according to the cognitive effects they produce. This involves determining possible explicatures and likely implicated conclusions from encoded forms, in RT terminology. The hearer employs a comprehension heuristic to interpret an utterance in a way that maximizes relevance. Thus, in this thesis I detail the morphosyntactic forms as well as the likely interpretations of those forms. Sometimes a particular interpretation is mandated by the form alone, while in other instances, a great deal more contextual information is necessary. RT is not strictly necessary to move from an overt form or utterance to an interpretation, but it offers a framework in both terminology and the importance of inferential processes for interpreting the totality of an utterance in context. Because I am not focusing on the inferential processes themselves, I give only the overt forms, the range of their uses and most common interpretations, and some salient contextual information that is relevant in my own judgment through first-hand experience of the language and culture. I am therefore emphasizing the importance of pragmatic processes in determining the meaning of utterances, without directly and specifically discussing pragmatics.

---

<sup>2</sup>For an accessible and informative summary of Relevance Theory, see Sperber & Wilson (2004). RT embraces the notion that grammatical forms are linguistically encoded, but further argues that positive cognitive effects (a broader category than “meaning”) are achieved when the hearer uses a minimum of effort in processing the linguistic forms and contextual information to produce maximal cognitive effects.

## 1.2 Language information and background

### 1.2.1 *Language and cultural information*

Sarikoli [srh]<sup>3</sup>, known by speakers as Sarikuy, is the world's easternmost Iranian language, of the Indo-Iranian branch of the Indo-European language family. It can be more specifically designated as an Eastern Iranian language residing in a Pamir sprachbund. The only language communities are found in Xinjiang Uyghur Autonomous Region, in the People's Republic of China. There are small communities in the Silk Road cities of Urumqi and Kashgar, but the majority of speakers reside in Tashkurgan Autonomous County in the westernmost portion of Xinjiang province. While some researchers have proposed that Sarikoli is “doomed” to extinction (Dodykhudoeva 2007), the current generation of children learn it from their parents at home, with few exceptions. During the next twenty years, it is extremely likely that Mandarin Chinese will begin to supplant Sarikoli in the home domain. Parents already encourage children to use some Mandarin Chinese words in the home in search of socioeconomic advantages. The next generation of parents will have been educated exclusively in Chinese, so it is possible that some will shift to speak Chinese in the home domain.

Currently, Sarikoli language vitality and attitudes are strong. However, lack of an orthography little mother tongue media, and education solely in the national language, along with language shift, are likely to result in language death if the Sarikoli language is not developed further. Nearly all television and written materials are in Mandarin Chinese or Uyghur, and Mandarin Chinese is the only language which children are

---

<sup>3</sup>This is the ISO 639-3 code for the Sarikoli language, as found in Ethnologue (Lewis, Simons & Fening 2016).

permitted to speak in the schools where they attend class and reside. The only mother tongue media are recorded songs in the language, which frequently reflect pride in ancient vocabulary, geography, and ethnic identity. Sarikoli is the largest language group among the Chinese “Tajik” ethnicity, with smaller numbers speaking Wakhi or Uyghur as a mother tongue. The provincial language is Uyghur, a Turkic language, and the national language is Mandarin Chinese.

Sarikoli people are traditionally farmers of grains and herders of sheep, goats, and yaks. They live settled lives in villages spread across the eastern Pamir plateau, and engage in seasonal semi-nomadic pasturing of flocks. The Sarikoli people are endogamous, patrilineal, and patrilocal. All are considered adherents of the Ismaili sect of Shia Islam.

There is a dialect continuum among Sarikoli speakers, with some clear distinctions between at least three different groups due to distance and separation between villages. Dialects are evident to speakers, but intervillage marriages and interactions of all sorts are extremely common, with the result that differences are moderated through contact with other dialects. The differences between dialects are primarily in vowel pronunciation, and secondarily in vocabulary, only occasionally involving grammatical morphemes or syntax.

### *1.2.2 Research background*

Previous work in Sarikoli has been minimal. The first major foray into describing the language survives as a 19th-century printing of the work of R.B. Shaw (1876) on the Ghalchah languages (Wakhi and Sarikoli, as spoken in mid-19th century Tashkurgan). Shaw's work predates modern linguistics, but remains useful as a dictionary and

repository of three traditional oral stories. The next known work was more rigorously carried out by Russian linguist T.N. Pakhalina (1966) in the middle to late 20th century. A Chinese researcher, Gao (1985), wrote a short description in Mandarin Chinese. Additional linguistic research has been performed recently, when Pamela Arlund (2006) wrote a doctoral dissertation on vowel diphthongs. The most recent works on Sarikoli are Deborah Kim's (2014) thesis on subordinate clauses and a paper on reflexives (Kim 2015).

Pamir languages have generally been understudied, mainly because of the geographical isolation of communities, but all extant languages have been studied over the past half century. The Sarikoli community, nestled among glacial peaks, is perhaps the most difficult to access because of altitude (~3000 m), and restrictions on travel and residence imposed by the People's Republic of China. The closest related language is considered to be Shughni, which has been the subject of scholarly investigation in recent decades, but is not mutually intelligible with Sarikoli. More distantly related Iranian languages such as Farsi or Pashto have some value for comparative purposes; lexical cognates and borrowings abound, although numerous borrowings into Sarikoli have also originated from Arabic and Uyghur, and increasingly, Mandarin Chinese. Grammatical structures in Pamir languages have diverged significantly from other Iranian languages.

This thesis is intended to fill a knowledge gap regarding grammatical aspect and to make available a current, self-contained, and relatively complete description of Sarikoli verbal morphology for English readers. I also propose some terminological suggestions and alterations relevant to Sarikoli and related languages, for the benefit of future grammatical description.

### 1.3 Field research and data procedures

The research for this thesis was conducted entirely with native Sarikoli speakers from Xinjiang Uyghur Autonomous Region, People's Republic of China. All speakers were adults who were born in Tashkurgan Autonomous County. More than one year of language learning provided me a solid basis for basic analysis and communication with native speakers. All sessions were conducted monolingually in Sarikoli. Data for analysis were gathered through stories, descriptions, individual sentences, and paradigm elicitation.

I present material that I have judged to be exemplary of the plurality of speakers, even when there is disparity between sources or dialects. I report primarily examples from natural conversations or stories as spoken in context by native speakers. In some instances, data have been intentionally elicited or specifically altered from the original or spontaneous forms with guidance from native speakers, in order to present them coherently without devolving into a discussion of dialectology or phonology. During the course of glossing, it is common for Sarikoli consultants to approve or suggest alternatives when the original is perceived as impure or dialect-specific. On the whole, I present utterances that have been or might be pronounced by speakers in their contexts, although specific elicited utterances have also entered into the analysis. When an utterance has arisen in the course of typical conversation or activity, or a specific cultural context, I provide information about the context in the discussion of the example.

All glossing and transcription of data has been performed in cooperation with native speakers in connection with elicitation and language learning. Since Sarikoli does

not have a recognized orthography, I use my own transcriptions, which are based on direct auditory communication and visual information (lip rounding, articulation places, etc). Transcriptions are roughly phonemic, with some exceptions made for clarity. The vowels [e], [ɛ], and sometimes [ə] are transcribed differently, but not claimed to be phonemic; there is so far no completely convincing phonological analysis of the language (Pakhalina (1966) is the most thorough). I use [y] for the vowel that others have described as [ɯ], since most of my data suggests phonemic rounding of that vowel. Its phonetic realization is potentially [ə], a symbol which I avoid because it more likely leads to confusion than clarity in grammatical description.

## **1.4 Overview**

This thesis is primarily a description of surface structure and grammatical forms in Sarikoli. It provides enough information for readers to predict grammaticality and even produce some verb forms and clauses, given correct lexical input, under the assumption that all grammatical work for unwritten and underdescribed languages involves at least some documentation for the preservation and promotion of the language community. Although this is not a language primer, it holds some value for teachers and learners of language. Since not all readers will be familiar with all topics and terminology in this work, some in-text definitions and footnotes are provided. This work is intended to be accessible to the majority of linguists and ethnographers. I assume that most readers have a basic grasp of linguistics principles (grammar and phonology), as well as knowledge sufficient to read IPA (International Phonetic Alphabet) characters. This thesis will be at least partially inaccessible to a language learner or researcher without linguistics knowledge.

### *1.4.1 Chapter listing*

There are five chapters:

**Chapter 1** is devoted to methodology and language information.

**Chapter 2** includes verbal morphosyntax, including the composition of verb phrases, the use of clitics and suffixes, and relevant phonological considerations. It will address basic verbal morphology along with verb phrase considerations. Without this information, the reader can hardly understand Chapter 3.

**Chapter 3** is the target material of this paper. It is meant to present overt morphosyntactic forms in order to describe grammatical aspect. It builds on information presented in Chapter 2, some of which is available elsewhere, but not in a distilled form.

**Chapter 4** raises some questions about aspectual marking on other (non-verbal) word classes.

**Chapter 5** briefly summarizes the findings of this paper and projects the typological interest and need for future research.

### *1.4.2 Style conventions*

The style of this thesis aligns firstly with the requirements set forth for linguistics theses at the University of North Dakota. Aspects of style that are not specified or required adhere mainly to generic linguistic style rules as suggested by the former linguistics department of the Max Planck Society for the Advancement of Science (2014). I have made minor adjustments for clarity according to the demands of this description. Abbreviations in glosses on the whole follow the suggestions in Leipzig

Glossing Rules (2015); a list of abbreviations used in this thesis is included in the front matter. Transcribed linguistic data are based on the IPA (1999) and are roughly phonemic, except when phonological analysis is incomplete or inconclusive, in which cases standard phonetic representations have been adopted.

## CHAPTER 2

### Basic verbal morphosyntax

Clausal and phrasal constituency as it relates to verbs is necessary to understand morphology, because Sarikoli employs both clitics and suffixes and inflects for both subject agreement and aspect. The interested researcher or language learner must also have a means to determine what is or is not a Sarikoli verb or verb phrase component. Since Sarikoli is an underdescribed language with little published description, it is necessary to describe the essential components of verbal morphosyntax here to supply a foundation for full description of grammatical aspect in Chapter 3.

#### 2.1 Nominative-accusative alignment

Sarikoli is best described under a nominative-accusative model, and is not considered to be ergative for any tense/aspect or person/animacy. Imperfective verbs predictably follow the nominative-accusative pattern without complication.

- (1) *waz*        *xufts-am*  
1SG.NOM sleep.IPFV-1SG.IPFV  
'I (will) sleep.'

In (1), the nominative<sup>1</sup> pronoun *waz* appears as the actor in an intransitive clause.

---

<sup>1</sup>For the duration of this thesis, I gloss pronouns with two forms as either *nominative* or *non-nominative*. Terms like “direct” and “oblique”, although used frequently in Iranian linguistics, are unclear and not useful for describing Sarikoli. When Sarikoli pronouns have two distinct forms, one is used for nominative case only, while the other is used for all other (non-nominative) cases.

The order of the arguments, (accusative) case marking, and pronoun morphology are all indicators of grammatical roles (subject and direct object). As seen in (2) through (4), the order of core arguments is first subject, then direct object. The direct object is sometimes marked with an accusative prefix.

(2) waz        kalo    puj-am  
 1SG.NOM sheep herd.IPFV-1SG.IPFV  
 'I herd sheep.'

(3) waz        a-kalo        ðewdz-am  
 1SG.NOM ACC-sheep milk.IPFV-1SG.IPFV  
 'I will milk the sheep.'

(4) albasti    a-my                χird  
 monster ACC-1SG.NNOM eat.3SG.IPFV  
 'The monster will eat me.'

The clause in (2) can logically be interpreted in only one way. The first-person nominative pronoun must be a human agent and the sheep must be a patient. In (3) the accusative object additionally includes accusative marking. Both (2) and (3) are transitive verb clauses with a 1SG.NNOM subject pronoun and an object noun in typical word order. The accusative marker is not required for indefinite direct objects, but is common for marking definite direct objects. (4) includes a first-person non-nominative pronoun which is marked by the accusative case prefix; the non-human agent is unmarked and in subject position. Case marking can only occur on non-nominative pronouns.

(5) jy            a-wi                χy-ri        yin    kaxt  
 3SG.NOM ACC-3SG.NNOM SELF-DAT wife do.3SG.IPFV  
 'He makes her his wife.'

The clause in (5) has multiple pronoun arguments and an imperfective verb stem. The pronoun *ɟy* is always nominative, and the pronoun *wi* is its non-nominative counterpart (Sarikoli does not have gendered pronouns). Pronoun morphology and case marking in SOV order lead to only one possible interpretation regarding the agency of the arguments. Logically, this verbal complex only permits one interpretation of agent and patient (or actor and undergoer), because only a man can have a wife, and only a woman can become a wife in Sarikoli culture. (5) comes from a traditional story in which the man is the most prominent participant.

Clauses with perfective (sometimes erroneously described as “past tense”) verbs also follow a nominative-accusative pattern, which can be determined by case marking morphology, word order, and semantic restrictions or contextual information.

(6) *kyd a-tɕurik pa buj dwust*  
dog ACC-guy at cave bring\_in.PFV  
‘The dog brought the guy into the cave.’

(7) *tɕurik a-kyd pa buj dwust*  
guy ACC-dog at cave bring\_in.PFV  
‘The guy brought the dog into the cave.’

(6) follows the nominative-accusative pattern, with a perfective verb form referring to a past situation. In place of *kyd*, any noun or (nominative) pronoun agent can be used without additional case marking, as might be expected from (1) through (5). Upon swapping the core arguments as seen in (7), the clause changes meaning because the (unmarked) subject is the agent or actor and the (accusative) object is the undergoer. The direct object is marked for accusative case in both (6) and (7).

The fully nominative-accusative alignment in Sarikoli is important to recognize for two reasons. First, in contrast to some other Iranian languages with split ergativity,<sup>2</sup> there is no alteration of word order or morphosyntax of core arguments according to verbal tense/aspect (or the animacy of the arguments). Second, there are two systems for agreement marking, one for perfective and another for imperfective clauses. This bears some resemblance to the split ergative system from which it originated (Edelman & Dodykhudoeva 2009a:782), but the core arguments themselves are not marked differently in different tense/aspects. The behavior of agreement clitics will be examined in §2.6.

## 2.2 Clause constituency

A well-formed Sarikoli clause contains either a verb phrase or a copular complement as the final constituent. Morphological and aspectual properties of verb phrases are the primary focus of this thesis and will be described in detail.

### 2.2.1 *Constituent order*

Standard word order in a Sarikoli clause is indisputably SOV, as is evident from (1) through (7) in §2.1. When a clause is in unmarked word order, the verb phrase is the

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<sup>2</sup>The term *ergative* describes the pattern of marking core arguments (subject and object noun phrases) in a clause. In nominative-accusative languages, the subject of an intransitive clause is marked in the same way as the actor (or agent) in a transitive clause, while the undergoer (or patient) in a transitive clause is marked differently. In ergative languages, the subject of an intransitive clause is marked the same way as the undergoer of a transitive clause, and the actor is marked differently. Split ergative systems may behave like nominative-accusative languages at some times, and like ergative languages in others. The split commonly takes place along tense-aspect lines, or according to an animacy hierarchy of discourse participants. Some Iranian languages, not including Sarikoli, are considered ergative in past/completed tense-aspects only.

final element in the clause, and the subject, objects, and peripheral clause elements precede the verb. Word order is violable for purpose of focus, but such violations most commonly involve object fronting. The verb, when present, usually concludes a clause or utterance. The common reasons for a verb not concluding a clause are topic demotion, and copula drop (common for present identities, attributions, and locations, as described in §2.2.2.2). Corrective or additive tags occasionally follow the verb. I include both topic demotion and tags, even though it may be impossible to distinguish them, except when a placeholder such as *tsejz* is used. However, the overwhelming proportion of all utterances conclude with a verb.

Flexibility in word order can be illustrated partially through variability in common utterances. Anyone who has spent time in Sarikoli homes will have become familiar with the formulaic offer of tea.

(8) *tɕoj ty-ri wejð-am = o*  
 tea 2SG.NNOM-DAT pour.IPFV-1SG.IPFV = POLAR.Q  
 ‘Shall I pour tea for you?’

(8) demonstrates that the first-person singular subject pronoun *waz* is typically dropped in context, and the agreement suffix indicates the subject.

Less commonly, the order of constituents may be different.

(9) *wejð-am = o ty-ri tɕoj*  
 pour.IPFV-1SG.IPFV = POLAR.Q 2SG.NNOM-DAT tea  
 ‘Shall I pour tea for you?’

There is nothing ungrammatical about altering the order of constituents in (9). In fact, the constituents of this question may come in any order, all equally acceptable to speakers and hearers. Semantically the meaning is identical, and pragmatic inference is

also likely identical. If a subject pronoun is used in such utterances, it is commonly sentence-initial, but not inviolably so. Most phrases or arguments can appear at various locations within a clause in relation to one another.

Clauses with inverted word order such as (10) are usually considered ungrammatical.

(10) ??χyg-an            tsej  
eat.PFV-1PL.PFV vegetable  
'We ate vegetables.'

(10) is usually ungrammatical, because of constituent order. As the answer to a question such as "What did you eat?" it is not acceptable, but in the right context (e.g. 'vegetables' being the topic of conversation, or having eaten being in focus) similar utterances do occur, however marginally. In this word- or morpheme-level phonemic segmental representation, the stress and duration of words, and pauses between words, are omitted. For (10) and many sentences with inverted word order to be considered grammatical, they must be uttered in the correct context and have the greatest stress or highest intonation point on the verb. Such noun phrases or other components are analyzed as being detached and/or dislocated. Since a thorough exploration of dislocated constituents is beyond the scope of this thesis, it is sufficient to say that speakers deny the grammaticality of (10) in isolation because of but accept (11) as grammatical in isolation or in nearly any context.

(11) tsej = an            χyg  
vegetable = 1PL.PFV eat.PFV  
'We ate vegetables.'

Topics may be moved to post-verbal position for restatement or reactivation when they are prominent in discourse or whenever they might be eliminated for discourse reasons. Corrective tags have a similar pattern, although a filler or placeholder such as *tsejz* ‘what/something’ or *tɕoj* ‘who/someone’ may be inserted in the proper argument position (before being amended by a tag phrase).

(12) jy            tizd            χy   i   χil   tsejz            xykerd   qytɕoq  
       3SG.NOM go.3SG.IPFV then one type what/something search\_for toy  
       ‘He goes and searches for some type of, um, toy.’

Fillers or placeholders (as exemplified in (12)) are common in narrative and conversation to replace missing information, with or without a tag or afterthought. Such utterances are not usually considered grammatical.

Sarikoli constituent order is not typologically surprising. In most general terms, Sarikoli is a SOV language with moderate flexibility for the purpose of focus. There are at least two reasons why constituent order is important in the description of verb morphology in Sarikoli. First, the verb phrase is normally the final component of a sentence or utterance, so constituent order aids the listener in interpreting which elements belong to the verb phrase. Second, an understanding of constituent order undergirds the description of verbal suffixes and clitics.

### *2.2.2 Existential and copular clauses*

Copular and existential clauses are not identical in form, but share some commonalities, especially in non-present tense/aspects.

### 2.2.2.1 Existential clauses

Present existential clauses include the verb *jost* ‘there is/are’. Although I label the stem *jost* as IPFV, it does not share many interpretations with IPFV stems as described in §3.2.2. Most importantly, it is not inflectable for person or aspect. It is used for two major purposes. The first is presentational or ontological (delivering new information or making a statement about things that are).

(13) pa rabut sad at pindzu tɕəd jost  
at Rabut hundred and fifty house EXIST.IPFV  
‘There are one hundred fifty houses in Rabut.’

Presentational and ontological clauses are identical in form, so only context can differentiate them. (13) came in response to the question, ‘How many houses are there in this village?’

The second purpose of the existential is ownership or relationship, which are also identical in form to each other.

(14) my-an tsavur vrud/tɕopɕy jost  
1SG.NNOM-GEN four brother/scythe EXIST.IPFV  
‘I have four brothers/scythes.’

The only difference between a presentational/ontological clause such as (13) and an ownership/relationship clause like (14) is the genitive NP, usually sentence-initial. The speaker might not consider this a different use, because the form of the verb or verb phrase is identical, although the clause would have a different kind of meaning and

translation if we were to use a metalanguage<sup>3</sup> that distinguishes verbally between possession and existence. The existential verb is occasionally dropped in context.

#### 2.2.2.2 Copular clauses

Copular complements, as is frequently the case cross-linguistically, express mainly present identities, attributions, or locations. In the present the copula is dropped and the complement is placed in apposition to the subject.

(15) džasawul-an wi            dɛst    χanadur  
PN-POSS      3SG.NNOM friend chef  
'Jasawul's friend is a chef.'

(16) my-jad      barqo bɛwr  
PROX.DEM lamb brown  
'This lamb is brown.'

(17) my            bob            çitç varçide  
1SG.NNOM grandfather now Tashkurgan  
'My grandfather is in Tashkurgan now.'

The identity in (15), the attribution in (16), and the location in (17) differ mainly in the lexical or semantic properties of the complements. It is not typologically surprising that identities, attributions, and locations have the same general form.

Although Sarikoli has a fully inflectable copula, it is not grammatical to use it in the present for most realis clauses. Such use would give rise to a future interpretation, or a different modality.

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<sup>3</sup>*Metalanguage* is taken to mean simply the language used to provide a description. In this thesis that role is filled by a particular register of written English which includes linguistic terminology and glosses.

(18) \*ta jaχ tɕardʒ χanadur vid  
 2SG.NNOM sister good cook be.3SG.IPFV  
 [\*‘Your sister is a good cook’/??‘May your sister be a good cook.’]

There are not many contexts in which (18) is acceptable, because of the imperfective copula (usually giving rise to a future interpretation) in an equative clause. It is a strange utterance to native speakers, and might be uttered only in particular narrow contexts. Similar utterances are fully grammatical, as exemplified in (19) and (20).

(19) spejd pond ty-ri vid  
 white road 2SG.DAT-DAT be.3SG.IPFV  
 ‘Safe travels to you.’

(20) ta eid-ir mubyrak vid  
 2SG.NNOM festival-DAT blessing be.3SG.IPFV  
 ‘Blessings for your festival.’

The copular clauses in (19) and (20) include overt copulae, but not obligatorily so. In ordinary speech the copula is optional but often included in such optative clauses. However, in the unmarked or declarative mood

### 2.2.2.3 Existential-copular neutralization

In non-imperfective aspects, existential and copular clauses neutralize to a single verb, which is the appropriate stem of the copula.

For current situations, the presence of a copula is ungrammatical (cf. (15) through (17)). For former (past tense) copular clauses, as in (21), it is ungrammatical not to include the copula.

(21) waz = am χanadur vyd  
 1SG.NOM = 1SG.PFV chef be.PFV  
 ‘I was a chef.’

The perfective copula in (21) is obligatory. Without the perfective clitic and perfective copula, the only possible interpretation is that the situation holds for the present time. The copula in (21) contrasts with zero copula in verbless copular clauses such as (15), (16), and (17).

In non-imperfective existential clauses, the verb takes the same form as non-imperfective copular clauses.

(22) putxu-an aroj pyts vyd  
king-GEN three son be.PFV  
‘A king had three sons.’

The existential verb takes on the same form as the copula for infinitive, perfective, and perfect stem uses. I consider this to be *neutralization* because a single overt form functions as both copula and existential in those stems. The existential stems are overtly segmentally identical to other copular stems, but not similar to the imperfective existential form.

Table 1. Copula and existential stems

English Gloss	INF	IPFV	3SG.IPFV	PFV	PRF
EXIST ‘there is/are’	vid	jost		vyd	veðdʒ
COP ‘be’		vew	vid		

Table 1 demonstrates that there is a unique existential form only for imperfective stems. I have used the same stem labels as for other verbs, although existential and copula verbs do not perfectly align in tense/aspect with other verbs — because existential and copular situations are states, the language of *past* and *non-past* would be more accurate.

### 2.2.3 Serial verbs

Uninterrupted sequences of verbs occur in Sarikoli. In some instances, sequences of verbs with the same inflectional properties (person and aspect) represent directly sequential events. In such instances the subject remains the same, and the verbs may share all arguments. Frequently, the first verb may be transitive while the others are intransitive. Entire sequences of intransitive verbs also occur.

(23) i pa qapoq wi a-waxin zozd dæðd tizd  
one at bottle 3SG.NNOM ACC-blood take.3SG.IPFV enter.3SG.IPFV go.3SG.IPFV  
'He takes the blood in a bottle, leaves, and goes.'

(23) is excerpted from a story in which the main character takes the blood of his slain bull into the forest. Storytellers commonly use sequences of two or three verbs to relate actions in narrative.

Sequences of verbs are not limited to narrative. Sequential imperative verbs occur frequently in daily conversation.

(24) mo turf wux  
PROH trip.IPFV fall.IPFV  
'Don't trip and fall.'

Whether or not an imperative is prohibitive (negated), the verbs may appear in direct sequence. (24) clearly shows that it is not necessary to repeat the prohibitive morpheme for each verb, and that imperative verbs may be directly sequential.

Serial verb function may be difficult to distinguish from other uninterrupted sequences of verbs or clauses.

(25)  $\chi$ or ar kov mareb = am ðud jy xuvd rejd  
 nephew in mouth cream = 1SG.PFV give.PFV 3SG.NOM sleep.PFV remain.PFV  
 ‘I gave milk to my nephew, (and) he remained asleep.’

(25) could also be translated ‘I gave milk to my nephew, he fell asleep and stayed.’ In Sarikoli serial verb constructions it is common for the final verb to be both the culminating event in a sequence, and a sort of modality a way to modulate or encapsulate the sequence. Speakers may not make a logical distinction. Other arguments occasionally insert between the verbs even when no conjunction is present. Some utterances include two juxtaposed clauses which are meant to be interpreted as a sequence of events. The line between juxtaposed clauses with zero anaphora arguments, and serial verb construction, is not always clear.<sup>4</sup>

It is not necessary for all verbs in sequence to be inflected identically. For instance, a clause may contain both a perfective stem and a perfect stem.

(26)  $\text{z}\epsilon\delta$  az zindun naxtyg tyjd $\text{z}$   
 thief from prison exit.PFV go.PRF  
 ‘The thief has gone free from prison.’

The verbs in (26) are in uninterrupted sequence, and the utterance could be clumsily translated ‘The thief exited from prison and has gone.’ However, since verbs like *rejd* ‘remain’ and *tid* ‘go’ frequently conclude sequences of verbs, they may be considered to have a modal function as well.

A sequence of verbs as clauses which share arguments, especially the subject, may also be separated by clausal conjunctions such as  $\chi\gamma$  or *tom*, both meaning ‘then’. In

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<sup>4</sup>Aikhenvald (Aikhenvald & Dixon 2006) paints a broad definition of serial verb constructions (SVCs) that allows for a broad range of SVC types in Sarikoli. Here I am concerned mainly with the surface description of *sequence of verbs* as they relate to verb phrase syntax, and not a full typological description of SVCs.

§4.2 Clausal Linkage, I expand on how conjunctions or other words which temporally situate clauses in relation to one another relate to aspectual marking.

## 2.3 Verb phrase

Here I describe only inflected verb phrases. Infinitive or participial verb phrases on the whole follow the same patterns, which will be seen in the discussion of the relevant stems in §3.1 and §3.4.2.4.

A verb phrase is typically verb-final and consists of a simple or compound verb along with modifiers.

(27) *barqo xiθp-ir a-qongraꝑy vysondꝑ*  
lamb wolf-DAT ACC-bell show.PRF  
'The lamb has shown the bell to a wolf.'

(27) shows a verb in typical position along with a full noun phrase for subject, direct object, and indirect object. The noun phrases may occur in different order for focus fronting. In my conception, following Dixon (2010a:109-110), a verb phrase need not be considered to include core or peripheral arguments, but only a verbal complex and associated modifiers.

(28) *waz a-ta tꝥardꝑ wejn-am*  
1SG.NOM ACC-2SG.NNOM good see.IPFV-1SG.IPFV  
'I like/love you.'

The successive words *tꝥardꝑ wejn-am* in (28) could be understood to mean 'I see/know well', or 'I like/love' (lit., 'I see [it as] good.'). Ambiguities in verb phrases may arise from the components of verbal complexes and/or the nature of adverbs, which are not a morphologically well-defined class.

The verb phrase contains at least one verb, which may be a compound verb, and may also include adverbs with or without degree modifiers.

(29) my            dɛst = ik        tudzɪk ziv        ytɕ    asto asto  
1SG.NNOM friend = DUR Tajik    tongue very slowly  
  
ɣymand sɛwd  
learning become.3SG.IPFV  
'My friend is learning Sarikoli very slowly.'

Few non-serial verb phrases can include more constituents than (29), since it consists of a degree word (*ytɕ* 'very'), an adverb (*asto asto* 'slowly'), and a compound verb (*ɣymand sɛwd* 'learn.3SG.IPFV'). The overwhelming head-final tendency in Sarikoli is evident; in the above example, all phrasal heads appear to the right of their modifiers. The major exceptions to head finality in Sarikoli are some case markers or adpositions.<sup>5</sup>

### 2.3.1 Modal constructions

The primary type of modal construction in Sarikoli involves a modal noun or adjective following the verb. Another modal construction includes the verb *latɕejg* 'put/allow'. A deep discussion of modality is beyond the scope of this thesis, except as it applies to verb phrase morphosyntax and the use of various verb stems.

Modal adjectives following an infinitive stem verb are frequent, and should be analyzed as copular clauses.

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<sup>5</sup>In general agreement with Dixon (2010a) I assert that the notion of "adposition" (and "adpositional phrase") in Sarikoli and other languages is an unhelpful vestigial descriptive practice. Affixes, separate words ("adpositions"), and potentially (although not in my analysis) clitics, are all methods employed in Sarikoli for marking the function of a noun phrase.

(30) maç viojdz-ændz xytyr-ef-ir dam zoxt luzim  
 1PL ride.PRF-ADJZ camel-PL.NNOM-DAT breath take.INF necessary  
 ‘The camels that we rode need a rest.’ (lit., ‘For the camels ridden by us, taking a rest is necessary.’)

The modal adjective *luzim* in (30) should be considered a verbless copular complement.

The *mejdz* construction is also copular in form, which becomes more evident in past tense.

(31) xεb = am çtu mareb χig mejdz vyd  
 yesterday = 1SG.PFV cold cream eat.INF INTENT be.PFV  
 ‘Yesterday I was planning to eat ice cream.’

Clauses with *mejdz* may be identical in form to modal adjective clauses, and indeed *mejdz* can be analyzed as a modal adjective, as my gloss of (31) suggests. Alternatively, an infinitive verb followed by *-mejdz* may be analyzed as a future participle. Such an analysis has the upside of similarity to the perfect participle as seen in §3.4.2.4. Sarikoli may be diachronically in the midst of a process of grammaticalizing a modal adjective into a future participle. Edelman and Dodykhudoeva (2009b:799,809) report that Shughni uses a similar suffix, which in their analysis forms a participle, although in Shughni they claim that it collocates only with the verbs glossed as ‘stay’ and ‘go’. In Sarikoli, *mejdz* constructions are fully productive.

A frequent construction that might be labeled *jussive* or *permissive* normally includes an inflected form of the verb *latçejg*, which literally means ‘put/place’ but has the metaphorically extended definition ‘allow’.

(32) laka-it maç zoz-an  
 put.IPFV-2PL 1PL take.IPFV-1PL  
 ‘[You (pl)] let us take it.’

In (32) both verbs are fully inflected so that the utterance can be analyzed as two independent clauses. The verb *latɕejg* may be inflected for a subject person although the default form is the bare imperfective stem or imperative. Further discussion of the construction appears in §3.2.2.6.

### 2.3.2 Phrasal stress

In spoken Sarikoli it is usually simple to distinguish between a compound verb and a verb preceded by an indefinite predicate because the compound verb stresses the noun element (but not the verb element), whereas the simple verb has its own stressed syllable.

(33) tɕerm waðitɕ-ir      jordam tɕewydʒ  
 bug    sparrow-DAT    help    do.PRF  
 ‘The bug helped the sparrow.’

Although *jordam* and *tɕewydʒ* are separate words (they can be split by clitics), they operate as a single semantic unit. The phrasal stress in (33) is on the final syllable of *jordam*, which is the noun component of the compound verb. It should be noted that the various stems of the verb *tɕejg* ‘do’ nearly always surface unstressed because they are rarely in focus.

In contrast, a noun preceding a verb but functioning as a core argument allows the verb to accept its own stress.

(34) waz            ɣy            radzen      zon-am  
 1SG.NOM    SELF.NNOM    daughter    kill.IPFV-1SG.IPFV  
 ‘I am going to kill my daughter.’

Stress in the verb phrase provides information for utterance interpretation. The phrasal stress is on the verb root rather than the noun that precedes it, unless the preceding noun takes on additional stress for focus. In the traditional narrative from which (34) was taken, *radzen* ‘daughter’ was already prominent in the discourse. The factors determining phrasal/clausal stress or intonation are complex and beyond the scope of this paper, but *ceteris paribus*, phrasal stress generally falls on the stressed syllable in the focal or most salient element in the phrase.

## 2.4 Verb stems

A verb stem is a concrete (non-abstract) overt morphological form of a verb that can be uttered with or without clitics or affixes. Analyzing verb forms as separate stems is potentially problematic because a stem may have both a root component and identifiable affixes. Verb stems have developed by affixation to verb roots and by regular (predictable) vowel alternations in the root, and these processes are partially reflected in the current verb morphology. Stems have now ossified, however, and cannot be predicted with complete accuracy. Thus, the notion of a verb stem is helpful, and necessary to analyze clauses and verb phrases as they are currently spoken.

Table 2 lists twelve high-frequency Sarikoli verbs in all stems. Note that of all verbs known in the language, only the first (*tcejg*) appears to be lexically suppletive (see also *jost* in §2.2.2.3).

Table 2. High-frequency verb stems in Sarikoli

English Gloss	INF	IPFV	3SG.IPFV	PFV	PRF
'do'	tɕejg	ka(n)	kaxt	tɕewg	tɕewydz
'become'	sɛt	so	sɛwd	syt	sɛðdz
'come'	jɛt	joð	joðd	jot	iθtɕ
'be'	vid	vɛw	vid	vyd	vɛðdz
'go'	tid	tɛdz	tizd	tyjd	tyjdz
'speak'	lɛvd	lɛv	lɛvd	lɛvd	lɛvdz
'remain'	rejd	ris	rast	rejd	rɛðdz
'give'	ðod	ðo	ðid	ðud	ðudz
'take'	zoxt	zoz	zozd	zuxt	zuxtɕ
'drink'	broxt	broz	brozd	bruxt	bruxtɕ
'eat'	χig	χor	χird	χyg	χyɣdz
'sit'	nalist	niθ	naθt	nalyst	nalyɕtɕ

The comparative table of verb stems shows that stems in each column have overt similarity in the presence (or absence, in the case of the IPFV stem) of common segments. For instance, the 3SG.IPFV forms end in alveolar stops, while PRF stems end in alveolopalatal affricates.

### 2.4.1 Causatives

Causatives are readily identifiable by their *-on* suffix.<sup>6</sup> Causative forms and meanings tend to be lexically fixed, but causative verbs are so common that they appear productive. Causativity may be considered a nearly productive derivational process with

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<sup>6</sup>In most forms *-on-* appears to be an infix due to being appended to the root before inflectional suffixes. In Indo-European linguistics, the distinction has long been made between “suffixes” and “endings”; under such a model, *-on* is a suffix appended to a root before the inflectional ending *-d* is added. I use the term *suffix* for what have been traditionally labeled both “suffixes” and “endings”.

resultant forms that are consistently identifiable. Forms (verb stems) are 100% regular and their meanings are usually ascertainable according to the verbal root.

Since causatives are entirely regularly inflected, there is no need to make verb stem charts to demonstrate or memorize unpredictable forms. Such a chart would appear as follows.

Table 3. Causative stems paradigm

English Gloss	INF	IPFV	3SG.IPFV	PFV	PRF
'eat.CAUS' ('feed')	χyronð	χyron	χyronð	χyronð	χyronðz
'sit.CAUS' ('seat')	nalaθond	nalaθon	nalaθond	nalaθond	nalaθondz
etc.					

There is no need to delineate all stems for causative verbs. All causative verbs follow the paradigm in Table 3. If one stem is known, the others can be derived easily.

Likewise, there is nothing unpredictable about a causative verb's imperfective (subject agreement) suffixation paradigm; all causatives use the imperfective stem with the agreement suffixes as described in §2.5.2 on agreement suffixes. Even the third-person singular form, in contrast to non-causative verbs, is completely regular if the bare imperfective causative stem is known.

Table 4. IPFV Agreement paradigm for χyronð 'feed'

PERSON	SINGULAR	PLURAL
1st Person	χyron-am	χyron-an
2nd Person	χyron-∅	χyron-it
3rd Person	χyron-d	χyron-in

The paradigm in Table 4 is perfectly regular; no Sarikoli causative deviates from the pattern, and so all imperfective forms are regular and predictable if the bare stem is known.

In some instances the alternation between non-causative and causative is simply the demotion of an undergoer from subject to direct object along with the addition of an agent or causal factor. The non-causative form is intransitive and the causative form is transitive.

(35) tuk            wazyd  
      electricity turn\_off.PFV  
      ‘The lights went out.’

(36) akbar a-tuk            wazawond  
      PN    ACC-electricity turn\_off.CAUS.PFV  
      ‘Akbar turned the lights off.’

The form *wazyd* in (35) is intransitive and used only infrequently. The causative form is transitive and puts the undergoer in direct object position. The causative *wazawond* as used in (36) is more frequent than its non-causative counterpart. The non-causative form is used primarily when no agent can be identified.

In Sarikoli it is an inherent semantic property or restriction that some intransitive verbs take undergoer subjects, while others takes actor subjects.<sup>7</sup> An example of the former has just been given. Regardless of agency, though, causative verbs demote the subject to direct object.

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<sup>7</sup>The most common terminology to designate an intransitive verb with an undergoer subject is *unaccusative*, and for an intransitive verb with an actor subject, *unergative*. Unergative and unaccusative verbs are not (usually) determined by overt verb morphology in Sarikoli, but rather by a verb's lexical entry or features.

(37) jy            wazɛvd  
      3SG.NOM return.PFV  
      ‘He went back.’

(38) tɛw = at            a-wi            wazɛpond  
      2SG.NOM = 2SG.PFV ACC-3SG.NNOM return.CAUS.PFV  
      ‘You sent him back.’

In (37), the subject of the intransitive verb is an agent. The subject agent is demoted to direct object patient when the verb is causative in (38).

In some instances, the causative form takes on an additional meaning.

(39) ujnak kyd a-rasim    wazɛpond  
      glass dog ACC-image return.CAUS.PFV  
      ‘The mirror reflected the dog's image.’

It is unsurprising in (39) that the causative form of ‘return’ might be used to mean ‘reflect’; the semantic connection is predictable and psychologically salient. The non-causative form of *wazɛvd* ‘return’ is far more frequent than the causative.

There are also causative forms which have tenuous or at least less predictable links to non-causative forms, either because of semantic shifts, or disuse of a non-causative verb. Phonological shifts or other processes have also served to separate some causatives from their non-causative cognates, making the causative forms less predictable. Table 5 lists some causative verbs next to related non-causative verbs.

Table 5. Causative stems and related non-causative forms

Causative Verb	English Gloss	Functional Non-Causative	Segmentally Similar Verbs	English Gloss
CAUS.3SG.IPFV		3SG.IPFV		
$\chi$ ambond	'bring_down'	$\chi$ ofst		'descend'; 'move_down'
rafond*	'use'		roft	'spread'
rond*	'scold'		rurd	'extend'
vysond	'show'	wand		'see'
wazond*	'know'		wand	
$\mathbb{Z}$ bond	'chew.CAUS'	$\mathbb{Z}$ bewd		'chew'
narzambond	'celebrate', 'pass. CAUS'	narzambd, nardzast		'celebrate', 'pass'

\*These verbs have causative morphology but not causative syntax. Like all causatives, it is not possible to append an additional causative suffix to them. I assume that they are underlyingly true causatives which have undergone lexical shifts.

In the first row of Table 5,  $\chi$ ambond contains two additional morphemes not present in the most frequent non-causative form  $\chi$ ofst. This is explored more deeply in §2.4.2 on other derivational affixation. Other forms are more speculative since they are both semantically and phonologically distanced from their counterparts. The verbs rafond 'use', rond 'scold', wazond 'know' are not used causatively, but appear to have causative morphology, and they align with the causative agreement suffixation paradigm.

The verb vysond is in frequent use but has no apparent non-causative cognate currently in use. The functionally non-causative form wand 'see' is also frequent but there is no synchronic evidence that it is a cognate with either vysond 'show' or wazond 'know'. On the other hand,  $\mathbb{Z}$ bond is unquestionably the causative of  $\mathbb{Z}$ bewd but the

syllable nuclei appear to have elided (an uncommon occurrence amongst Sarikoli causative verbs).

The final row gives an example of a verb whose causative and non-causative forms show virtually no difference in meaning. The morphologically causative form is far more frequent, although it is rarely used causatively. Some speakers use *narzambond* as both an intransitive verb meaning ‘celebrate’ and a causative of the verb *nardzɛd* ‘pass.INF’, equivalent in meaning to *nardzɛsond* ‘pass.CAUS.INF’. Thus I have listed two functional non-causatives even though *nardzast* cannot mean \*‘celebrate’.

#### *2.4.2 Other derivational affixation*

There are a number of verbs which seem to incorporate derivational elements into the verb stem, including adpositional and verbal intensifying morphemes. These are not synchronically productive, but may become a point of historical investigation. Some of these morphemes consistently receive stress for unknown morphophonemic reasons. Table 6 below lists a number of forms possibly derived diachronically through affixation.

Table 6. Non-productive (derivational) verbal affixes

Proposed Affix	Stressed?	INF Examples	Potential Cognates (INF)
<b>-(a)mb</b>	Yes	parombd ‘block’	
		tsyrambd ‘pinch’	
		tçimbd ‘obey’	tçid ‘scratch’
		vyczambd ‘squeeze’	vydzid ‘press/cover’
		vyczombd ‘stretch’	
χambond ‘bring_down’	χovd ‘descend’		
<b>ba-</b>	Yes	bawid ‘close’	zarwid ‘wrap’
<b>in-</b>	No	indejd ‘arise’	dejd ‘enter’
		intsivd ‘sew’	
<b>xy-</b>	No	xykejg ‘search_for’	
		xytçaxt ‘cut’	tçakt ‘strike’
<b>na-</b>	Yes	naðevd ‘adhere’	paðevd ‘sneak_in’
		nalist ‘sit’	
		naviçt ‘write’	
<b>pa-</b>	Yes	paðevd ‘sneak_in’	naðevd ‘adhere’
		paðid ‘light_up’	ðod ‘give’
		patewd ‘throw’	
<b>ra-</b>	Yes	ranixt ‘forget’	
		ratsist ‘escape’	
		rawixt ‘jump’	wixt ‘gather’
<b>wa-</b>	Yes	waðord ‘grab’	
		warivd ‘stand’	rivd ‘breastfeed’
		wazid ‘turn_off’	zid ‘seize/rob’
<b>la-</b>	Yes	latçejg ‘put’; ‘allow’	tçejg ‘do’
<b>tçi-</b>	No	tçitçejg ‘be_able’	

Table 6 lists potential diachronically appended affixes in the left column, then notes whether the syllable with the affix is stressed. The third column lists infinitive stems which appear to have incorporated the affix, while the final column lists verbs without the affix that may be cognates, or bear segmental resemblance. There are further examples for several affixes, but most instances, even those in the chart above, are not certain to derive from an identifiable root. For a few verbs, the connection to a cognate without an affix borders on ludicrous and is unlikely to have a sound historical basis unless dramatic semantic shifts are involved. The final two rows describe prefixes for the verb *tɕejg* ‘do’. Although these prefixes are not productive, the verbs *latɕejg* and *tɕitɕejg* are inflected in like manner to *tɕejg*, including stem suppletion, suggesting fairly recent grammaticalization. The prefix *tɕi* is likely a grammaticalization of a locative case marker, which is commonly used with infinitive verb stems; *tɕitɕejg* can appear in all stems, so I consider it a distinct verb. For *latɕejg* the prefix is stressed, while for *tɕitɕejg* it is not stressed.

While the causative suffix *-on* may be considered nearly productive, no other verbal derivational affix is productive to any extent. Primary verbs are a closed class in Sarikoli; all verbal affixes except the causative suffix have been lexically frozen.

### 2.4.3 *Verb stem stress*

While stem stress in Sarikoli nouns is nearly exclusively ultimate (including most borrowed words), stem stress in verbs is less predictable. Many verb stems in frequent use are monosyllabic and therefore irrelevant to the discussion of stem stress. Two- and three-syllable verb stems commonly have initial stress but there are no phonological rules or constraints for stress assignment that do not require relatively inaccessible

information about diachronic affixation. Since clitics and suffixes are unstressed, the primary stress on a verb stem remains constant despite alterations in syntax or the addition of aspectual markers. Compound verbs have reduced stress on the verb stem, as discussed previously in §2.3.2.

## 2.5 Inflectional suffixes

Verb suffixes append directly to verb stems to mark aspect or subject agreement. Agreement suffixes are reserved for imperfective verbs, so they never occur on the same verb stem as aspectual suffixes.

### 2.5.1 Aspectual suffixes

The stative suffix or perfect aspect marker *-dz* can be considered a non-productive aspect marker that forms perfect stems. The idea of a stative suffix for perfect aspect is explored in §3.4.1.1, with additional discussion of affixation to other word classes in §4.1.1. Unpredictability of vowel apophony and consonant lenition processes limits its productivity, so that it is simpler to consider perfect stems to be lexically fixed forms. The stative suffix never precedes (or follows) an agreement suffix because the two never occur in the same verb phrase.

The cessative suffix *-it* appends to a perfect stem to form pluperfect verbs, and will be discussed further in §3.4.2.5. The cessative suffix may follow but not precede the stative suffix, and it does not appear in other grammatical contexts.

### 2.5.2 Agreement suffixes

Inflectional suffixes obligatorily append to imperfective verb stems as subject agreement markers. Imperfective third-person singular stems already contain the inflectional suffix, sometimes with consequent morphophonemic alterations. Thus, the third-person singular suffix is identifiable but not completely productive, and is more efficiently analyzed as a separate stem. The following chart of imperfective agreement marking suffixes can be used to construct a paradigm for imperfective verbs.

Table 7. Sarikoli subject agreement suffixes

	<b>Singular</b>	<b>Plural</b>
<b>1st Person</b>	-am	-an
<b>2nd Person</b>	∅	-it
<b>3rd Person</b>	[-D, non-productive]	-in

Table 7 shows suffixes that inflect imperfective verb stems for subject person agreement. The addition of subject agreement suffixes sometimes results in predictable morphophonemic changes, especially when the imperfective stem ends in a vowel, as will be seen in §3.2.1.2. Agreement marking of 3SG.IPFV forms includes some lexically fixed forms, especially due to vowel apophony and consonant lenition. The diachronically appended suffix *-D* is an alveolar stop that assimilates to the voicing of the previous segment. Non-third-person agreement marking is phonologically predictable, and therefore does not require proliferating stems or paradigms. It is

necessary to posit only a single set of agreement suffixes; there is no evidence that Sarikoli has multiple declensions, and agreement suffixes are not known to be fusional.<sup>8</sup>

Every imperfective verb is marked for subject agreement, even in serial constructions. This contrasts with the use of agreement clitics, of which only one appears per clause, as explored in §2.6.2.

## 2.6 Inflectional clitics

Verbal clitics are of two kinds in Sarikoli. Some clitics are agreement markers that indicate both the subject person and perfective aspect. These will be referred to in this paper as “agreement clitics”. Other clitics serve to inflect the verb (phrase) for aspect only.

Verbal inflection clitics in Sarikoli are phrasal enclitics, so they may not occur in initial position in a clause. As clitics they cannot be pronounced as independent words. They preferentially attach to the first phrase (whether noun, verb, adjective, or adverb) in a clause. They do not attach to simple prepositions such as *az* ‘from’ or *pa* ‘at’, or to adjectives or possessor pronouns within a NP. Inflectional clitics are not stressed, so they have shorter duration and lower volume than stressed syllables in spoken language.

### 2.6.1 Aspectual clitics

There is only one true aspectual clitic, the durative enclitic = *ik*.

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<sup>8</sup>Fusional morphemes encode more than one kind of information; e.g., subject agreement and grammatical aspect in a single suffix. Sarikoli agreement suffixes only affix to imperfective verbs, but they do not themselves encode a particular aspect.

The durative clitic is preferentially second position, most commonly attaching to the first phrase in a clause.

(40) xjejn angi = ik      dʒald tizd  
blue donkey = DUR fast go.3SG.IPFV  
'The grey donkey is going fast.'

(41) ki-jad              çer      tar      guz = ik              tizd  
MED-PROX.DEM donkey toward grassland = DUR go.3SG.IPFV  
'This donkey is going to the grassland.'

(40) shows the durative clitic in typical position. Less frequently, it may appear later in the clause, as in (41). When no other elements are present in a clause, the durative clitic may even follow a verb. Durative clitic morphosyntax will be described further in §3.5.1.

The durative clitic may directly follow (but not precede) an agreement clitic when a perfective or perfect verb occurs in the same clause.

(42) maç = an = ik              xor      tyjd  
1PL = 1PL.PFV = DUR Kashgar go.PFV  
'We used to go to Kashgar.'

In (42) a durative clitic directly following an agreement clitic. Neither of the clitics is stressed; primary stress remains on the stressed syllable of the phrasal head to which the clitics attach.

When two clitics appear within a clause, they may also attach to different words instead of appearing in direct sequence. Clitics attaching to different words is relatively uncommon but not absolutely ungrammatical.

### 2.6.2 Agreement clitics

For perfective and perfect verb forms, subject person agreement is instantiated by means of enclitics. These clitics are preferentially second-position, although it is grammatical to place them elsewhere in a clause. They do not follow a perfective or perfect verb stem unless the verb is the first phrasal head in the clause.

Agreement clitics cannot appear in first position in a clause. They usually follow a phrasal head (or its case marker) and do not attach to a case marking word or affix preceding a noun. They are unstressed.

The morphology of agreement clitics is shown in Table 8.

Table 8. Sarikoli agreement clitics

	<b>Singular</b>	<b>Plural</b>
<b>1st Person</b>	= am	= an
<b>2nd Person</b>	= at	= af
<b>3rd Person</b>	= ∅	= af

Agreement clitics are not wholly different from agreement suffixes. By comparing Table 8 to Table 7, it becomes evident that both the first-person singular and plural forms are segmentally identical, while the third-person plural form is similar. Other forms differ significantly, although only the second-person plural discrepancy cannot be explained easily by phonological and discourse factors.

An agreement clitic typically attaches to the first NP in a clause.

- (43) *ða vrud = af byðon tuxt*  
 two brother = 3PL.PFV saddle carve.PFV  
 ‘Two brothers carved saddles.’

(44) maç = an          gap    tçεwg  
       1PL = 1PL.PFV word do.PFV  
       ‘We had a conversation.’

Although any phrase is acceptable for clitic attachment, the subject comes first when word order is unmarked, so a subject NP often anchors the clitic. The clitics in (43) and (44) both attach to the first phrasal head in the sentence, which happens to be the subject. As demonstrated by (44), agreement clitics commonly attach to a pronoun which carries the same subject person information. It is possible but not preferable for clitics to attach to later elements in a clause (cf (41)).

Agreement clitics are highly recognizable in discourse, and signal agreement marking for a verb or series of verbs that appear later in the clause. Predictably, a series of perfective (or perfect) verbs require at most one agreement marking clitic. Crucially, a subject pronoun can be dropped when the subject is already present in the discourse, but an agreement marking clitic is obligatory in a clause with one or more perfective aspect verbs. The exception, as seen in Table 8, is the third-person singular form, which is = ∅.

During conversation, speakers occasionally insert agreement marking clitics more than once, especially if there is a pause in the middle of a clause. Fluid speech contains only one agreement marking clitic per clause, even when multiple verb stems are present.

As explained above in §2.6.1, an agreement clitic does not follow the durative clitic.

(45) \*(?)woð = ik = af                  my                  pa tçεd    jot  
       3PL.NOM = DUR = 3PL.PFV 1SG.NNOM at house come.PFV  
       [‘They used to come to my house.’]

(45) is ungrammatical<sup>9</sup>, or at least very unusual, because the clitic order is inverted. It is unlikely that a durative clitic can precede an agreement marking clitic even if they attach to different clausal constituents. While such constructions are considered grammatical in elicitation and consultation sessions, they virtually never occur in ordinary fluid speech.

## 2.7 Phonology and morphophonemics

Phonology is in some ways ancillary to the main points of discussion in this thesis. This work is about verbal aspect as interpreted based on verbal morphology in context. Brief phonological discussions are included here for a few reasons. First, verbal morphology includes both clitics and suffixes, which may not always be pronounced in their underlying forms in context. Secondly, stress and other aspects of phonology may be related to encoded meaning, especially since verbs display different stress patterns from other major word classes. Furthermore, some diachronic sound change processes are evident in grammatical forms as they currently surface.

The most problematic phonological or morphophonemic features are diachronically formed, synchronically fixed apophonic verb stems. Such verb stems have undergone changes in the quality of vowels or diphthongs in the final syllable, and now present as unpredictable, lexically fixed, forms. To construct a complete paradigm of verb stems, one has to have heard a speaker pronounce all the forms. Morphophonemics and other phonological information are central to linguistic encoding and decoding, and thus provide crucial information for utterance interpretation.

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<sup>9</sup>Some speakers may permit inverted order of successive clitics, but rarely if ever produce such utterances volitionally.

### 2.7.1 Vowel/diphthong apophony in verb stems

Sarikoli has a great number of alternations between vowels, sometimes including glides (semivowels), in verb stems. These would typically be categorized as examples of Indo-European *ablaut*, but here I use the more general term *apophony*, meaning “sound change”. Apophony in this instance means segmental changes in stems that are currently realized as alternations. The alternations between vowels or diphthongs are seen clearly in the differing forms of infinitive and perfective stems. Prima facie, such sound changes differentiate between two stems with different aspectual properties. It is reasonable to assume that at least some alternations result from vowel mutations (or vowel harmony) to accommodate suffixes which have now dropped out of use. Knowing one of the verb stems, it is not always possible to predict the others, as both Table 2 (High-frequency verb stems) and Table 9 (below) suggest.

Table 9. Sarikoli infinitive and perfective stems juxtaposed to demonstrate apophony

English Gloss	INF	PFV
'lie_down'	alid	alyd
'close'	bawid	bawid
'send'	boxt	buxt
'run'	ʒox̣t	ʒox̣t
'search_for'	xykejg	xykewg
'arise'	indejd	indewd
'enter'	dejd	dejd
'lose'	bynost	bynost
'bring_in'	dwost	dwust
'jump'	rawixt	rawyxt
'suck'	spift	spift
'look'	t̥ix̣t	t̥ux̣t
'seize'	zid	zid
'kill'	zɛd	zɛd
'wash'	znod	znud
'slip'	znoj̣d	znoj̣d

Table 9 includes some verb stems which have identical infinitive and perfective forms, contrasted with verb stems that show vowel alternations in the stem. There is no synchronic phonological basis for these alternations. Despite apparent unpredictability of verb stems on the whole, some verbs are predictable. In *-g* stem verbs (those whose infinitive form ends in *g*), there is a regular vowel alternation between INF and PFV stems. The same vowel alternations and others are also found in *-d* stem (those whose infinitive form ends in *d~t*) verbs. Greater than 50% of *-d* stem verbs in my catalogue of

200 do not exhibit apophony (ablauting or vowel mutation). Imperfective forms are slightly less predictable (see §3.2.1).

In Table 10, I list the final syllable vowel and diphthong alternations between the infinitive and perfective stems, without including imperfective and perfect forms.

Table 10. Apophony in Sarikoli infinitive and perfective stems with counterexamples

INF stem	PFV stem	Examples		Counterexamples	
		-g stem	-d stem	INF	PFV
i	y	χig ‘eat’	nalist ‘sit’	naviçt ‘write’	fyrđ ‘slurp’
ej	εw	tçejg ‘do’	indejd ‘arise’	dejđ ‘enter’	kεwd ‘dig’
o	u		đod ‘give’	woxt ‘fall’	ramud ‘cause’
εw	u		pxεwd ‘shear’	kεwd ‘dig’	jurd ‘bring’
ε	o		jεt ‘come’	levđ ‘speak’	χovđ ‘descend’
i	u		tçixt ‘look’	wixt ‘gather’	turft ‘stumble’
ε	y		sεt ‘become’	zεđ ‘kill’	dzymbđ ‘move’
i	yj		tid ‘go’	tsid ‘harvest’	
i	o		đikt ‘lick’	đizđ ‘ache’	zoxđ ‘run’

The first three rows of Table 10 represent common vowel mutations found in multiple verb paradigms, while the remainder of the mutations have few examples, or only one example. All vowel mutations might be assumed to arise from a perfective suffix which once included a rounded vowel, resulting in stem harmony diachronically preceding apocope or other deletion of the final syllable.

The counterexamples columns are intended to show that infinitive or perfective stems may include the relevant vowel without undergoing regular mutation. Under INF counterexamples, verbs that do not display the same vowel alternations are listed, while

under PFV counterexamples, verbs that have the expected perfective stem vowel/diphthong without the corresponding infinitive stem form are listed.

A discussion of historical phonology is beyond the scope of this thesis. The evolution of verb stems is likely to be diachronically complex, even producing different results according to the time a verb entered the lexicon, or according to the influence of surrounding consonants, or even as the result of competing dialects and language contact.

### *2.7.2 Voicing assimilation*

The suffixed affricate  $-dz \sim -tʃ$  is always assimilated in voicing to the previous segment. For coda consonant clusters, it is unlikely for the affricate to surface otherwise. I consider the voiced variant to be the underlying form, for two reasons. First, it has wider distribution, following both consonants and vowels, while the voiceless form follows only consonants. Second, while final consonant devoicing is a strong tendency in Iranian languages, Sarikoli being no exception, final consonant voicing as a phonetic tendency is not attested. It is therefore unlikely that an underlyingly voiceless consonant might be voiced, but extremely likely that a voiced consonant would lose its voicing in some environments. It is also possible to assert that the suffix is underdetermined for voicing and receives its voicing from its environment.

### *2.7.3 Stress: Inflectional elements are unstressed*

Inflectional elements (suffixes and enclitics) are usually unstressed. Derivational affixes vary in their stress assignment. Clitics or suffixes that inflect for aspect or subject agreement typically are not stressed, while suffixes that change a word's class are

frequently stressed. As noted in §2.4.2, many verbs have non-ultimate stress, especially when they may have been formed diachronically through affixation.

#### 2.7.4 *Vowel reduction and voicelessness*

Sarikoli is a stress-timed language with corresponding phonetic tendencies. Vowels tend to be reduced in unstressed syllables, and in unstressed syllables in a voiceless environment, a vowel may become voiceless. This is not strictly a morphophonemic issue (since the phenomenon applies equally to all phonological phrases at the phonetic level), but it may affect the decoding of utterances when the clitic =*ik* follows a voiceless consonant. Because the clitic is unstressed and ends in a voiceless stop, it may become nearly inaudible in some environments.

(46) *jyrx = ik kewdik χird*  
bear = DUR here eat.3SG.IPFV  
'The bear is eating here.'

(47) *tamoq = ik χor-an*  
food = DUR eat.IPFV-1PL  
'We are eating.'

In (46), the clitic is pronounced for a short duration and is voiceless. The place of articulation is the same for the clitic consonant and the final consonant of *jyrx*. This leads to the near disappearance of the durative clitic at times in fast spoken language, a fact which would not be recognized merely by looking at a written phonemic representation. In an utterance such as (47), phonological phenomena including consonant assimilation to the uvular fricative ensure that the clitic consonant does not surface distinctly and the hearer can only depend on context and minute differences in

syllable timing to interpret the presence or absence of the durative morpheme

Phonology is not a central topic of this thesis, but the pronunciation of vowels and audibility of segments is important because it potentially contributes to utterance interpretation.

## CHAPTER 3

### Verbal morphology and grammatical aspect

Having described in a general way most relevant verbal morphology in Sarikoli, in this section I explore verbal morphology primarily as it relates to grammatical aspect.<sup>1</sup> In §1.1 I asserted the need to describe language by taking into account both overt morphology and pragmatic inference to produce the relevant interpretation of an utterance. The stems and morphological markers are assumed to encode a basic meaning, which may be modified or enhanced by morphosyntactic information contained in the utterance, as well as by contextual information.

#### 3.1 Infinitive

The infinitive is most commonly a verb-based noun that denotes an event or state. Infinitives can be distinguished from nouns in that they 1. bear overt segmental similarity to or share roots with inflectable verbs, which are a lexically separate class from nouns, and 2. they potentially carry their own sets of arguments, which is not commonly possible for lexical nouns.

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<sup>1</sup> *Grammatical aspect* may also be called *viewpoint* or *viewpoint aspect* in some sources. These terms are distinct from *lexical aspect* (also called *Aktionsart*, *situation aspect*, or *situation type*), which regards primarily innate features of verbs and will not be explored in this thesis, except when lexical aspect plays a role in utterance interpretation or in the formation of grammatical aspect.

### 3.1.1 Infinitive morphosyntax

Infinitives are lexical verbs which cannot be derived synchronically — non-compound (primary or simple) verbs are a closed class in Sarikoli. Syntactically, infinitives function as verbs within their minimal clause, and the infinitive (clause) functions as a noun within its matrix clause.

#### 3.1.1.1 Morphology of the infinitive stem

The infinitive forms of Sarikoli verbs are not entirely predictable based on other forms of the verb, but similarities to and vowel alternations with perfective forms are frequent. This has previously been described in §2.4 and §2.7.1.

All known infinitive stems end in an alveolar stop  $d\sim t$  or the voiced velar stop  $g$ . Only a handful end in  $g$ , while the rest have a final alveolar stop. The historical bases for verb stem morphology are underexplored, but the current state of Sarikoli verbs suggests that at least two systems of verbal morphology have been active diachronically and continue to be relevant in verb morphology. Closely-related Shughni has similar verb stems concluding in an alveolar stop, but a complete absence of  $-g$  stems Stump (2009).<sup>2</sup>

Infinitive stems are not formed synchronically by suffixation or vowel alternation; they are lexically fixed forms. Table 2 in §2.4 compares common verbs in all stems.

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<sup>2</sup>Although Stump's online verb list is a small unrefined database that draws from a few sources and remains orphaned online, I have confirmed that Shughni lacks  $-g$  stem infinitives independently with a researcher of that language.

### 3.1.1.2 Infinitive clause syntax

Infinitive stems appear as verbs in relation to their arguments but act as arguments in relation to inflected verbs. In copular clauses they can be subjects or copular complements. Infinitives may be marked for case just as any other noun, which will be discussed in §3.1.2.1.

The infinitive clause may contain additional arguments, while the entire infinitive clause functions as an argument within another clause. The infinitive clause can never be a main clause; it is always subordinate. Infinitive clauses, no matter their function, adhere to the same basic syntactic patterns, and examples can be seen in the many uses discussed in §3.1.2.

### *3.1.2 Uses of the infinitive stem*

The infinitive in Sarikoli is used in similar manner to other Indo-European languages. It can be employed directly as a verbal noun which allows for additional arguments. It occurs in infinitival clauses with various functions. The infinitive stem is also used to form participles.

#### 3.1.2.1 Verbal nouns

The infinitive stem is used unmodified as a noun denoting the activity of the verb. The noun may be a core or peripheral argument. It may also be interpreted to form a clause whose subject is in the genitive form, with other arguments optionally present. The infinitive (clause) does not accept an additional nominative subject. It may accept derivational and case marking affixes and words as is typical of nouns in Sarikoli.

- (48) ta            xojd            tɕardz = o  
 2SG.NNOM study.INF good = POLAR.Q  
 ‘Is your studying [going] well?’
- (49) waz = am            a-naviɕt            adu    tɕewg  
 1SG.NOM = 1SG.PFV ACC-write.INF finish do.PFV  
 ‘I finished the writing.’
- (50) my            pyts χy            tɕəd    zox-t-avon  
 1SG.NNOM son SELF.NNOM house take.INF-BEN  
 az    my            pyl    zuxt  
 from 1SG.NNOM money take.PFV  
 ‘My son took money from me for buying his house.’

In (48) the infinitive clause serves as subject of the matrix clause. The subject of the infinitive clause has genitive morphosyntax. In (49) the infinitive serves as the direct object of a clause. In (50) the infinitive functions as a peripheral argument, being directly followed by the benefactive marker.

The previous examples demonstrate that an infinitive verb stem can act as a nominalized verb that fills an argument slot in a clause. Infinitives can also serve as the verb within a subordinate clause, carrying their own sets of arguments.

- (51) bibigyl ta            kylto intsivd-ir            jordam tɕewg  
 PN    2SG.NNOM hat sew INF-DAT. help do.PFV  
 ‘Bibigul helped to sew your hat.’

In (51) the infinitive bears at least one additional argument. The infinitive clause might be interpreted as having both a subject and direct object, in which case a more accurate translation would be ‘Bibigul helped [with] your hat sewing.’

### 3.1.2.2 Unspecified aspect

The infinitive stem of a verb can be used with the suffix *-ir~ri* to produce a form that not specified for aspect. These forms appear to be verbal nouns as seen in §3.1.2.1, marked with a dative suffix. This suffix is considered to be dative in my glosses and analysis, although infinitives marked with it do not always function as dative-marked nouns (usually recipients, destinations, beneficiaries, etc.) do. They function more like verbs.

(52) gawar tɕoj tɕejg-ir

PN tea make.INF-DAT

Gawar makes/will make/is making/is about to make tea.

(53) gawar tɕoj kaxt

PN tea make.3SG.IPFV

Gawar makes/will make tea

Utterances like (52) with unspecified verbal aspect are fully grammatical but not as frequent as imperfective forms like (53). Utterances like (52) are uncommon in isolation because they do not encode aspectual information and therefore demand more processing effort on the part of the listener. They are more frequent in subordinate clauses, and constructions that include modal verbs or adjectives.

The infinitive stem is frequently used in evidential constructions. The evidential construction is in the form INF-DAT *veðdz*.

(54) wi maktab wi-ri pyl ðod-ir veðdz  
3SG.NNOM school 3SG.NNOM-DAT money give.INF-DAT be.PRF  
'Her school gave/gives//will give money to her.'

Since the verb that structures the embedded event, *ðod* ‘give’, is an infinitive, there is no true tense/aspect to the situation, and this kind of evidential does not encode the timing or completion of the (embedded) situation. The copula is perfect in form, often indicating surprising or new knowledge about a situation, acquired secondhand, or from sensory information, or by inference. Evidential constructions always contain a perfect verb stem and will be discussed fully in §3.4.2.2 under the uses of the perfect.

Sarikoli does not have a unique method for encoding imminence, but the unspecified INF-DAT form often functions in that way. There is little difference between imminence and purpose, which is described next.

### 3.1.2.3 Purpose

The purposive use of the infinitive can be considered a special instance of case marking on a verbal noun as described in §3.1.2.1. It also appears morphologically similar to the use of the infinitive for unspecified aspect, and is closely connected to the notion of imminence.

The English usage of the word “purpose” leads one to believe that it means essentially the same thing as “intent” (see §3.1.2.5). Sarikoli speakers use different overt forms for purpose and intent, however.

A purpose clause includes an infinitive dative suffix resembling the evidential use, often embedded within a fully inflected verb clause.

- (55) xiθp pa barqo χig-ir iθtɕ  
wolf ACC- lamb eat.INF-DAT come.PRF  
‘The wolf has come [in order] to eat the lamb.’

Although (55) includes a perfect verb stem, a purpose clause does not require a perfect verb like the evidential construction does. Purpose clauses, like intent clauses, may occur in past, present, or future.

(56) xiθp a-barqo χig-ir jot  
wolf ACC-lamb eat.INF-DAT come.PFV  
'The wolf came [in order] to eat the lamb.'

(56) demonstrates that purpose clauses are grammatical with perfective verbs. Purpose clauses are frequent and highly compositional in Sarikoli speech. That is, nearly any arguments and verbs which form other clauses can also occur in purpose constructions.

Purpose clauses do not require an overt inflected verb; some copular clauses need include only the subject NP and the dative-marked infinitive.

(57) waz tɔj broxt-ir  
1SG tea drink.INF-DAT  
'I am going to drink tea.'

The utterance in isolation seen in (57) does not give enough information for the listener to supply an aspect. In this instance it was clear in the context that the speaker was preparing to drink tea. There is no particular reason why a speaker would choose the purposive construction in such a copular clauses; the grammar is somewhat vague. Therefore, such uses, while grammatically acceptable, are infrequent.

Infinitive verb stems used to express purpose are common in conversational and narrative speech. It should be noted that such purpose clauses have no specific morphological encoding, but they can often be recognized by their syntax in which the dative-marked infinitive commonly precedes an inflected verb.

### 3.1.2.4 Infinitival participles

This use of the infinitive stem is frequent, corresponding to what might be called active participles or present participles. The moniker “present participle” is not entirely incorrect but implies that it must be used in the present. “Active participle” is more problematic and unusable because there is another participial form derived from the perfect stem, which may be either active or passive, depending on the situation, as detailed in §3.4.2.4. Therefore, I refer to a participle formed from the infinitive stem simply as an *infinitival participle*.

Infinitival participles are infinitive verb stems with the suffix *-itçuz*. This should be considered a productive derivational suffix that transforms a verbal noun into a verbal adjective. Sometimes the adjective is used substantivally, in which case *-itçuz* is a de facto agentive suffix.

- (58) tew        maç az    jaχ    dzuç    maç ato    pa-az-zabu  
2SG.NOM 1PL from sister place 1PL father at-from-behind  
  
tid-itçuz    a-narsa-ef    laka    pa-az    ta        buzd  
go.INF-ADJZ ACC-thing-PL put.IPFV at-from 2SG.NNOM send.IPFV  
‘Let our father’s funeral things be sent with you from our sister’s house.’

The phrase *maç ato pazabu tiditçuz narsajef* might literally be translated ‘our father’s after-going things’ and is something of a circumlocution. The productivity and compositional potential of the suffix *-itçuz* allows for both conventionalized and novel forms and interpretations.

- (59) bejt    lævd-itçuz        lej    bejt    wazond  
song speak.INF-PTCP many song know.IPFV  
‘The singer knows many songs.’

Sarikoli has lexically fixed suffixes such as *-gar* which have an agentive meaning. Rather than *bejt levditçuz*, ‘song saying [person]’, speakers may also choose the form *bejtgar* ‘singer’. Some technological items have not been lexicalized in the same way, so that a digital music player is typically labeled a *bejt bæwl wεðditçuz* or ‘song listening [device]’. The suffix *-itçuz* is wide-ranging in interpretation.

(60) dorz tçejg-itçuz a-dorz tçεwg  
 hole do.INF-ptc ACC-hole do.PFV  
 ‘The drill/punch/hole-maker made the hole.’

A *dorz tçejgitçuz* may be an electric or hand-powered drill, or a hole punch of any sort, or even a person who makes holes. (60) is both somewhat tautological and a bit humorous to Sarikoli speakers, but entirely grammatically correct.

Infinitival participles are highly productive and frequent. Despite the range of possible interpretations, they are unlikely to be overly ambiguous or vague in context.

### 3.1.2.5 Intent and other modalities

Sarikoli has at least two verb forms that might be labeled participles, the infinitival participle (§3.1.2.4) and the perfect participle (§3.4.2.4). These two participles are adjectivized verbs which can function as prenominal modifiers or as copular complements. Intent constructions bear some similarity to participles, and might be analyzed as future participles. However, the intent form cannot be used as a prenominal modifier as other participles can. It cannot be used merely as a future tense. The infinitive is used along with the morpheme *mejdž* ‘intending’ to show intent. The *mejdž* complex is not inflected for person, which means that it may be analyzed as a complement in a copular clause.

(61) xiθp a-barqo χig mejdž  
 wolf ACC-lamb eat.INF INTENT  
 'The wolf plans to/is intending to eat the lamb.'

A typical use of *mejdž* is seen above in (61). Sarikoli speakers, perhaps influenced by other languages including Mandarin Chinese, sometimes consider the *mejdž* construction to be a future tense, but in conversation and narrative discourse the imperfective form is far more frequent for that purpose. The imperfective form usually implies will/intent and prediction. The truth conditions for the *mejdž* construction are more stringent — the situation must be volitional on the part of the actor.

(62) xiθp a-barqo χird  
 wolf ACC-lamb eat.IPFV  
 'The wolf will/is going to eat the lamb.'

The possible interpretations of the imperfective form in (62) are will/intent or prediction. This will be discussed further in §3.2.2.2 under the future tense use of the imperfective stem.

The intent construction can be used for past, present, or future time reference.

(63) xiθp a-barqo χig mejdž vyd  
 wolf ACC-lamb eat.INF INTENT be.PFV  
 'The wolf was intending to eat the lamb.'

(64) xiθp a-barqo χig mejdž jođd  
 wolf ACC-lamb eat.INF INTENT be.IPFV  
 'The wolf comes/will be coming intending to eat the lamb.'

Past and future intent clauses in (63) and (64) include overt inflected verbs. The past intent clause (63) is formed in like manner to copular clauses as discussed in §2.2.2.2. Future intent clauses are fairly infrequent but grammatical.

The *mejdz* construction cannot properly be considered a future participle because it cannot function as an adjective preceding a noun in a noun phrase.

(65) \*χig-mejdz    xiθp pa    barqo iθtɕ  
eat.INF-INTENT wolf LOC lamb come.PRF

The utterance in (65) is ungrammatical only because the *mejdz* complex precedes a noun as if to modify it. While it would not be surprising for *mejdz* constructions to begin functioning as future participles, such grammaticalization is currently incomplete.

As presented briefly in §2.3.1, the infinitive stem is employed in the construction of various modalities. The intent construction can be analyzed in the same way as need constructions.

### 3.2 Imperfective

The imperfective stem(s) have commonly been referred to as “non-past” or even “present” because the states and events that they depict tend to be temporally located in the present and future. However, this dichotomy between past and non-past is not well-informed. Similarly to English, Sarikoli cannot depict a present action with a “non-past” verb, unless it is accompanied by a durative marker (cf. English progressive/continuous forms). A “non-past” stem without additional aspectual marking will most often be interpreted as future. This is not problematic, since the same stem is used for both. However, the so-called “non-past” (usually referred to as “present” in English) has anterior or past uses, and the so-called “past” in Sarikoli has future uses, which will be explored in §3.3. Some languages can be shown to have tense systems, but Indo-

European verbal systems were originally aspectual, and Sarikoli maintains aspectual distinctions without verbal tense marking.

### *3.2.1 Morphology of the imperfective stem*

Sarikoli imperfective forms are generally bare stems in all persons/numbers but third-person singular.

The non-3SG imperfective stem is the most morphologically variable — that is, it may end in a great variety of segments. While other stems have morphological limitations, the imperfective stem without agreement suffix is the least morphologically predictable, and may conclude in a vowel or nearly any consonant. Since the subject agreement suffix for 2SG is  $-\emptyset$ , the bare imperfective stem appears most obviously in imperatives.

Table 11. Imperfective stems with various final segments

IPFV	3SG.IPFV	INF	English Gloss
laka	lakaxt	latɕejg	‘allow’
dɛ	dɛt	dɛt	‘drive’
ðo	ðid	ðod	‘give’
*-i, *-u, *-y			
kɛw	kɛwd	kɛwd	‘dig’
xuj	xujd	xojd	‘read’
mir	mɛrd	marg	‘die’
ol	old	ost	‘rest’
fam	famd	famd	‘understand’
jon	jigd	jig	‘grind’
rov	rovd	riv	‘breastfeed’
dið	dɛðd	dɛjd	‘enter’
ðerz	ðerzd	ðerzd	‘load’
tojz	tojzd	tizd	‘pull’
kejy	keɣd	kaxt	‘slaughter’
tɕɛɾ	tɕɛɾd	tɕɛɾd	‘shriek’
spof	spift	spift	‘suck_on’
ratsɛθ	ratsaθt	ratsist	‘escape’
paðes	paðast	paðid	‘light_up’
naviɕ	naviɕt	naviɕt	‘write’
pyrx	pyrxt	pyrxt	‘spew’
qɛχ	qɛχt	qɛχt	‘cough’
pɛdz	past	pɛχt	‘ripen’
*-dz			
warofts	warofst	warivd	‘stand’
*-tɕ			
θob	θopt	θipt	‘lick’
vind	vist	vist	‘tie’
xytɕejg	xytɕeyd	xytɕaxt	‘cut’
watsop	watsopt	watsipt	‘grope’
*-t			
ðok	ðokt	ðikt	‘lick’
woq	woqt	woqt	‘bark’
*Imperfective verb stems concluding in these segments are unattested. They are inserted into gaps in the table roughly according to decreasing sonority within the Sarikoli phonemic inventory.			

From a sample of 200 verbs currently in use, it is evident that imperfective stems can conclude in most segments. The source list is not exhaustive, and cataloguing of verb stems is an ongoing project; nevertheless, from known stems, a few generalizations can be made. No known imperfective stems end in a syllabic [i], [u], or [y]. It is disputable whether *-ts* affricates occur in final codas in words such as *warofts*; speakers and dialects differ on whether the segment after [f] is in fact [ts] or [s]. Final *-d* in imperfectives usually or always follows [n] (e.g., *vind*). A stem ending in [dʒ] or [tʃ] might be perceived as a perfect form in some contexts. An imperfective stem ending in [t] could be perceived as a different stem, such as a perfective verb. However, there is no reason, phonological or otherwise, why an imperfective stem might not conclude in any segment.

#### 3.2.1.1 Third-person singular imperfective forms

The imperfective form for the third-person singular bears some contemporary resemblance to some other Indo-European languages. While other agreement suffixes are simply appended to the imperfective stem, the third-person form may include vowel mutations as well.

The third-person singular is in many cases similar to other imperfective forms, with the addition of an agreement-marking suffixed alveolar stop, which is voicing-assimilated. Ablaut stem changes are frequent, and are the major reason that this stem is not completely predictable or productive. The morphological marking of a final alveolar stop is parallel to the use of agreement suffixes with all other imperfectives, and so can be considered as a lexicalized/suppletive form. Third-person singular agreement differs from other agreement in that it does not begin with a vowel (cf.

§2.5.2). For some verbs, the 3SG.IPFV stem is identical to the INF stem and/or the PRF stem, but it is never identical to the bare IPFV stem.

### 3.2.1.2 Contractions and glide epenthesis with agreement suffixes

The imperfective stem requires an agreement suffix. Agreement suffixes, as noted in §2.5.2, begin with a vowel. There are a small number of imperfective stems which end with a vowel. Since the stem ends in a vowel, and agreement suffixes begin with vowels, the result must be a hiatus, lengthened vowel, epenthetic consonant, or deleted vowel. Although hiatuses can be claimed to occur in Sarikoli, they probably are not a result of productive suffixation. Lengthened vowels do occur phonetically in some contexts, but they are not preferred for verb stem suffixation. The most common strategies in Sarikoli are insertion of an epenthetic glide or a contraction resulting in the deletion of a phonemic vowel. When the stem ends in *-ε* or when the suffix begins with *-i-* (an environment of high and/or front vowels, generally speaking), the resolution strategy is the insertion of an epenthetic glide *-j-*. When the final vowel in an imperfective stem is *a* or *o* (an environment of non-high, back vowels), the phonetic product will be a contracted or elided form, although in slow, careful pronunciation, the palatal glide may be inserted. The following chart illustrates the likely output when an agreement suffix is appended to an imperfective stem with final vowel.

Table 12. Contractions and glide epenthesis (IPFV stem)

Person/number	det 'drive'	tɕejg 'do'	set 'become'
1SG	dejam	kam	som
2SG	dɛ	ka	so
3SG	dɛt	kajin	sewd
1PL	dejan	kan	son
2PL	dejit	kajit	sojit
3PL	dejin	kajin	sojin

Glide epenthesis is a regular phonological phenomenon in Sarikoli. Contractions are considerably less frequent, and most instances occur with (back) vowel-final imperfective stems. In slow careful speech, speakers may avoid contractions, e.g., [sojam] rather than [som]. This is uncommon in typical speech (conversations, narratives), but psychologically salient in the mind of speakers.

### 3.2.2 Uses of the imperfective stem

The uses of the imperfective stem tend to have one thing in common: They direct the listener to view a situation internally, from within the time during which it occurs. The precise definition of imperfective aspect is this internal viewpoint. Not all imperfective verbs are incomplete or unrealized, and conversely, verbs which are overtly perfective may also yield incomplete or unrealized interpretations. That is to say, there is nothing inherently incomplete or irrealis about the imperfective stem in Sarikoli. However, all uses can be thought to provide an internal viewpoint of a situation.



### 3.2.2.2 Future tense

Situations that are likely to happen in the future most frequently use imperfective stems. Cross-linguistically, imperfective verb forms frequently give rise to a future tense interpretation.

(69) *dʒuma varçide wazɛfs-an*  
Friday Tashkurgan return.IPFV-1PL  
'On Friday we [will] return to Tashkurgan.'

When a specific future time reference (e.g., 'tomorrow') is given, the hearer will interpret the verb with future time reference. Otherwise, pragmatic processes will take into account the context to disambiguate between future and habitual. On the other hand, some states may require disambiguation between present and future tense.

(70) *tɛw χy dɛst jaχ tɛardʒ wejn*  
2SG.NOM SELF.NNOM friend sister good see.IPFV  
'You like/will like your friend's sister.'

If the context includes the fact that the addressee has not met his friend's sister, then a future tense interpretation will be preferred.

### 3.2.2.3 Habitual events

Events related with imperfective verb forms are cross-linguistically likely to be interpreted habitually. Presumably, the event being viewed internally (the central characteristic of imperfective aspect) means that a hearer may conclude the situation has begun and continues in some way, although not in a continuous manner. An utterance such as 'I run' takes on a habitual interpretation (i.e. 'I am currently in the habit of running') and not a continuous interpretation (\*'I am currently running (and

will continue until I rest’). As I will show in §3.2.2.5 and §3.5, the continuous interpretation is ungrammatical without additional durative marking.

- (71) maç patiç dzyl-moçin det  
1PL cousin small-car drive.3SG.IPFV  
‘Our cousin drives a car.’ (\*‘Our cousin is driving a car.’)

Whether the utterance is interpreted as future or habitual depends heavily on other contextual information. In some circumstances (when one is seeking a driver, perhaps, and a friend is offering to help), the difference may be inconsequential. Adding a frequency phrase increases the likelihood of a habitual interpretation; without a frequency phrase the future interpretation is more likely.

- (72) ara maθ paləw χor-an  
every day pilaf eat.IPFV-1PL.IPFV  
‘Every day we eat pilaf.’

Whether or not a frequency word or phrase is present, a habitual interpretation is possible for imperfective verbs, but the frequency phrase provides necessary information for habitual interpretation when there is no other context. That is, habitual aspect is inferred in context and not encoded in the imperfective stem.

A small number of verbs are unlikely to be interpreted habitually for semantic and/or pragmatic reasons not related to lexical aspect.

- (73) waz χy radzen zon-am  
1SG.NOM SELF.NNOM daughter kill.IPFV-1SG.IPFV  
‘I am going to kill my daughter/\*I kill my daughter.’

The utterance in (73) comes from a traditional story. It would be extremely unlikely that the speaker regularly engages in physically or even hyperbolically killing his

daughters. In fact, no hearer would form such an interpretation except in the narrowest of contexts.

#### 3.2.2.4 Narrative imperfective

The use of the imperfective stem that is often referred to as “narrative present” might more accurately be termed “narrative imperfective”. An instance of narrative imperfective from a traditional story is seen in (74), in an event that occurs in response to an incantation.

(74) *ʒɛz paχtɕak χird tçi filj ðaχtɕ sɛwd*  
firewood pile eat.3SG.IPFV on elephant load.PRF become. 3SG.IPFV  
‘Firewood piles up and becomes loaded on the elephant.’

The verb stem *sɛwd* is a third-person singular imperfective form meaning ‘become.3SG.IPFV’. *sɛwd* is frequently used in the present to mean ‘[it is] fine/okay’, but the range of senses of the verb include ‘become’ and ‘go/travel/arrive’. Ordinarily, the imperfective stem would be interpreted as future tense or habitual aspect. Such interpretations are not possible within the context of the story, because the event is asserted to have actually occurred as a result of the incantation.

#### 3.2.2.5 Present continuous and progressive

Present (ongoing) events cannot be expressed without a durative marker.

(75) *maç = ik kitub tɕos-an*  
1PL. = DUR book look.IPFV-1PL.IPFV  
‘We are looking at a book.’

(76) maç        kitub tços-an  
 1PL.NOM book look.IPFV-1PL.IPFV  
 ‘We look/will look at a book.’

The translation of (75) into English must be continuous or progressive.<sup>3</sup> As seen in (76), an imperfective stem without the durative marker gives rise to a future interpretation in Sarikoli. Habitual interpretation is also possible, as in English, but less likely.

(77) ara    maθ ða    kitub xuj-in  
 every day two book read.IPFV-3PL.IPFV  
 ‘Every day they read two books.’

(78) \*ara    maθ ða    kitub = ik    xuj-in  
 every day two book = DUR read.IPFV-3PL.IPFV

The frequency phrase at the beginning of the clause in (77) directs the hearer to a habitual rather than future tense interpretation. The presence of a durative clitic along with an imperfective verb in (78) makes the habitual utterance ungrammatical, just as the English equivalent (\*‘Every day they are reading two books’) is also ungrammatical.

Some verbs that appear to be stative require the durative marker in order to be grammatical for the present time frame. Just as in (75) and (76), an ongoing situation that requires continued effort or stimulus must be marked as durative.

(79) χonim-an wi            kol = ik    ðizd  
 PN-GEN    3SG.NNOM head = DUR ache.3SG.IPFV  
 Honim's head hurts.

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<sup>3</sup> *Continuous* is sometimes used only for states, and *progressive* for events. There is no need to make a distinction, because the overt marking in Sarikoli is the same.

The present tense necessity of the durative marker for the verb *ðizd* ‘ache’ in utterances such as (79) will be explored further in the discussion of the durative marker under §3.5.2.1.

### 3.2.2.6 Imperative and cohortative

Imperatives are the forms used for commands, requests, and related speech acts. Sarikoli imperatives are simple second-person imperfective forms.

A second-person singular imperative form appears as a bare imperfective stem.

(80) *my-ri tilifon ka*  
1SG.NNOM telephone do.IPFV  
‘Give me a telephone call.’

(81) *xipik χor-it tɕoj broz-it*  
bread eat.IPFV-2PL.IPFV tea drink.IPFV-2PL.IPFV  
‘Have some bread, drink some tea.’

In (80) the verb *ka* ‘do.IPFV’ is an unaltered second-person singular form. Imperatives can also be uttered in second-person plural forms, as in (81), using the imperfective stem with the second-person plural suffix.

It is not necessary to posit a distinct imperative form; in Sarikoli, imperative mood is interpreted when the imperfective is uttered in an imperative context. Similarly, for first-person plural clauses, the cohortative interpretation is possible.

(82) *maç çitç pa tçed tɛdz-an*  
1PL now at house go.IPFV-1PL.IPFV  
‘Let's go home now.’

Depending on context, imperfective verb forms allow for several interpretations, including future or even habitual. However, in (82) the time phrase limits the

interpretations. Nevertheless, interpretation may hinge upon whether the first-person plural referent is inclusive or exclusive. Context and the conversation participants or environment play a major role in utterance interpretation of cohortatives, then. If the addressee(s) is/are relatives of the speaker, a cohortative interpretation would probably result as the family leaves a place to return home. Since Sarikoli does not have inclusive or exclusive forms, context or additional information plays a part in utterance interpretation. If the speaker is, for example, a mother with her two young children, speaking to a friend, a more proper English translation would be ‘We're going home now.’

Third-person imperatives or jussives are most commonly formed with a complex that includes the verb *latçejg* ‘put’ (IPFV stem *laka*), although the jussive construction can be used for all subject persons.

(83) *təw maç az jaχ dʒuj maç ato pa-az-zabu*  
 2SG.NOM 1PL from sister place 1PL father at-from-behind  
*tid-itçuz a-narsa-ef laka pa-az ta buzd*  
 go.INF-ADJZ ACC-thing-PL put.IPFV at-from 2SG.NNOM send.IPFV  
 ‘Let our father's funeral things be sent with you from our sister's house.’

It would be acceptable to posit an active agent (presumably the speaker's sister) rather than a passive theme as subject in (83). In any case the construction can be used to obtain permission. This differs slightly from the speech act of suggestion associated with cohortatives. Upon arriving at a Sarikoli home, a host might also use the jussive construction.

(84) *ta sunka laka waz zoz-am*  
 2SG.NNOM bag put.IPFV 1SG.NOM take.IPFV-1SG.IPFV  
 ‘Let me take your bag.’

Jussives such as that seen in (84) are not morphologically different from other imperfective forms, except for the use of the verb *latɕejg*. Jussive, like imperative and cohortative, is not a grammatical mood.

Imperfective verb stems are commonly employed in speech acts of commanding, suggesting, and wishing; the correct interpretation depends on contextual factors, some morphological markers, and intonation.

### 3.2.2.7 Prohibitive

The prohibitive is essentially a negative imperative, so it is sensible that it also employs the imperfective stem. Unlike negated clauses, however, prohibitive clauses use the prohibitive marker *mo* rather than the negation marker *na*. The prohibitive marker can be inserted at nearly any phrase boundary within a clause, although the preverbal position is most frequent, followed by postverbal, with sentence-initial being grammatical but less frequent. The prohibitive particle can only occur with an imperfective verb stem, even when the context is otherwise perfective.

(85) *tɛw mo turf-∅ wux-∅*  
 2PL PROH stumble.IPFV-2SG.IPFV fall.IPFV-2SG.IPFV  
 ‘You don't trip and fall.’

The most frequent position for the prohibitive particle is immediately preceding the verb, as shown in (85). Other positions, especially clause-final and clause-initial, are also frequent.

(86) *ej daraxt dzymb mo*  
 hey tree move.IPFV PROH  
 ‘Hey tree, don't move.’

(87) mo tɛw dzyl-moçin qati tɛdz  
 PROH 2SG.NOM small-car INS/COM go.IPFV  
 'Don't travel by car.'

There does not appear to be a difference in scope or meaning when the prohibitive particle moves to another clause position. It is not known why some speakers in some contexts choose to front (as in (87)) or back (as in (86)) the prohibitive particle, but this is worthy of investigation.

The most common prohibitive utterance is the standard apology formula.

(88) çafɔ mo so  
 upset PROH become.IPFV  
 'Sorry.' (lit., 'Don't become upset.')

Although the apology in (88) is ostensibly idiomatic, movement is still permitted; the prohibitive particle may be grammatically moved to clause-initial or clause-final position without a change in scope or meaning.

All prohibitives employ imperfective verbs, even when the context is perfective.

(89) waz = am bur tyjd  
 1SG.NOM = 1SG.PFV then go.PFV  
 'Well, I'm leaving.'

(90) \*mo tɛw = at tyjd  
 PROH 2SG.NOM = 2SG.PFV go.PFV

It is ungrammatical to use a perfective form in (90) as a response to the perfective form in (89), because the prohibitive particle may only appear with an imperfective verb stem. The perfective stem as used for ongoing and near future situations will be discussed in §3.3.2.3. Since the imperfective stem is always used in prohibitive constructions, it is strong evidence that this use of the imperfective stem is not a

discourse requirement, but is a clause-level grammatical requirement in line with the imperative use of the imperfective.

All prohibitives, like other pure imperatives, are second-person singular or plural.

### 3.2.2.8 Conditional

Grammatically speaking, imperfective stems do not have a conditional function any more than other stems, but the conditional particle collocates frequently with imperfectives.

- (91) agar ta            d̥est i tsiz az ta            ɛtna zozd  
if 2SG.NNOM friend one thing from 2SG.NNOM borrow take.3SG.IPFV  
tsa a-wi            wazapt ymejð mo ka  
COND ACC-3SG.NNOM return.3SG.IPFV plan PROH do.IPFV  
'If your friend borrows something from you, don't count on him returning it.'

If the imperfective verb *zozd* in (91) had been a perfective or perfect form, the utterance would have remained grammatical.

In conditional copular clauses, the copula is not dropped even in the present. This obligation for conditional clauses deviates from other copular clauses. This is again not a distinctive use of the imperfective stem, but rather a syntactic constraint of conditional clauses. Nevertheless, the distinction is only visible in the present.

- (92) palew tamaç-ir χyç tsa vid            χor-it  
pilaf 2PL-DAT happy COND be.3SG.IPFV eat.IPFV-2PL.IPFV  
'If you (pl.) like pilaf, have some.'

Some conditionals do not include a consequent clause, and therefore have the effect of softening an imperative to act as a polite request.

(93) *ða* *ʋov* *ingliç-tça* *gap* *my-ri* *çymand* *ka* *tsa*  
 two mouth English-language word 1SG.NNOM-DAT learning do.IPFV COND  
 ‘If only/perhaps you would teach me two English phrases.’

The line between conditional and optative is not distinct. (93) includes the conditional particle, but many such clauses can be considered optative (cf §3.2.2.9 for optativity without the conditional particle). The same information might be communicated in Sarikoli with a polar question. Polar questions themselves are not limited to any tense/aspect, but requests and wishes occur in the imperfective stem. The polar question clitic =*o* is not dependent upon aspect, and is properly considered a grammatical marker of interrogative mood.

### 3.2.2.9 Optative

Optative is not a mood proper, nor does it behave as other modalities in Sarikoli do. What is traditionally called “optative mood” is usually the expression of a wish, desire, or possibility having something in common with irrealis moods and other modalities. Sarikoli does not have a suffix or clitic to mark optativity, nor is there a modal verb or adjective for that function. This particularly modality is determined pragmatically because the verb stem itself does not give enough information about its interpretation.

(94) *ta* *dzun* *ar* *baixt* *vid*  
 2SG.NNOM spirit in heaven be.3SG.IPFV  
 ‘May your spirit be in heaven.’

It can be seen in (94) that a wish may be expressed using the imperfective stem, and this is much more common for the copula than for other verbs. Optative use of imperfective verbs occurs frequently in celebratory or hortatory contexts.

### 3.3 Perfective

The perfective stem is often incorrectly labeled as “past”. Like the notion of a past/non-past distinction between verb tenses, the perfective/imperfective bipartite distinction divides inflected verbs into two major aspectual classes. Perfective and imperfective will be shown here to be superior category labels in Sarikoli, and the notion of tense as a grammatical category in Sarikoli will be discarded.

#### *3.3.1 Morphosyntax of the perfective stem*

The two major characteristics of a perfective aspect clause are a lexically fixed perfective stem and an agreement clitic which is syntactically and morphologically different from the imperfective agreement suffix.

##### 3.3.1.1 Morphology of the perfective stem

The perfective stem cannot be generated through a synchronically productive process. As noted in §2.7.1, perfective stems display some nearly regular vowel alternations with infinitive stems, so that they can be considered ablaut forms which have been derived diachronically through apophony. The historical process is somewhat inaccessible, but the patterns of apophony in some instances encode verbal aspect. Like infinitive stems (cf. §3.1.1.1), perfective stems end in *-d~t* or *-g*.

##### 3.3.1.2 Syntax of the perfective stem

When a perfective stem is used, it must be accompanied by a second-position subject agreement marking clitic as discussed in §2.6.2. Agreement clitics most

commonly precede the verb, unless the verb is the sole element in a clause. Third-person singular subjects do not require overt agreement marking in perfective aspect.

For all persons except third-person singular, perfective aspect is formed by the combination of a (perfective) subject agreement clitic and a perfective verb stem.

(95) tɛw = at                      tɕoj bruxt  
       2SG.NOM = 2SG.PFV tea drink.PFV  
       ‘You drank tea.’

In (95), an agreement clitic and a perfective verb stem appear in the same clause to mark perfective aspect. The syntax and morphology of subject agreement clitics has been discussed in §2.6.2, there is no need to elaborate further for other subject persons with overt agreement clitics.

In third-person singular, however, only the perfective stem itself indicates grammatical aspect.

(96) barut tɕoj bruxt  
       PN   tea drink.PFV  
       ‘Barut drank tea.’

There is no tense or person ambiguity in (96) because there is only one participant and the perfective verb stem for ‘drink’ is unique. There is no subject agreement clitic, but rather a lack of a clitic or a null clitic, for the third-person singular perfective.

Some verbs have two or more homophonous stems, but there is no person or aspect ambiguity because of overt subjects and/or subject agreement clitics.

(97) woð = af                      nizamidin tɕɛd    wɛðd  
       3PL.NOM = 3PL.PFV PN            house pour.PFV/\*3SG.IPFV/\*INF  
       ‘They built Nizamidin’s house.’

The verb stem *wεðd* in (97) must be interpreted as a perfective form in the above utterance due to the presence of a perfective clitic.

However, formal ambiguity does arise with such verbs when there is a third-person singular subject.

(98) *nizamidin χy tçεd wεðd*  
PN SELF.NNOM house pour.PFV/3SG.IPFV/\*INF  
'Nizamidin built/will build his own house.'

Because the verb stem *wεðd* in (98) may be third-person singular imperfective, perfective, or infinitive, the hearer requires more contextual information to determine the speaker's intended meaning. The infinitive interpretation is ungrammatical because an infinitive cannot be the main verb in a main clause.

Adding a time phrase such as 'last year' or 'next week' would effectively disambiguate the utterance in (98) and clarify the interpretation of the verb stem, as would a context such as viewing a completed house or seeing the future site of the house directly.

### *3.3.2 Uses of the perfective stem*

The perfective stem cannot rightly be considered past tense, since it does not place a situation into a period earlier than speaking or reference time. It has a varied range of uses in past, present, and future time periods. Perfective verbs are used, generally speaking, to provide a view of a whole situation, or to view a situation from the "outside". The use of perfective aspect in Sarikoli supports the notion of a whole-event or exterior perspective.

### 3.3.2.1 Completed events

Cross-linguistically, perfective forms are overwhelmingly used to denote completed or past events and states. Completion or termination is frequent the major difference between imperfective and perfective interpretation. This leads the casual observer or speaker to believe that the perfective aspect is a past tense. Events in perfective aspect commonly are both past and completed.

(99) zylfiço χy            tsem ujnak bynost    xykewg            vyg  
PN      SELF.NNOM eye    glass    lose.PFV    search\_for.PFV    find.PFV  
'Zulfisho lost, searched for, and found his glasses.'

(99) is typical of utterances with perfective verbs. There is no logical reason to expect another verb form to be used for past events, and perfective utterances in isolation or without additional context will most commonly yield that interpretation. Additionally, the sequence of perfective verbs is interpreted in the stated order so that each situation is complete before the next begins.

Likewise, perfective verbs are used for baseline narrative to convey that the situations occurred in the past and have no ongoing relevance.

(100) wođ            ðεw = af            tar safar    tyjd  
3PL.NOM    two = 3PL.PFV    journey    go.PFV  
'The two of them went on a trip.'

The narrative use of the perfective as exemplified in (100) is included under completive because no additional inferences are required to interpret such a use. Narrative and other completive uses of the perfective have taken place in the past, and will correctly be interpreted as past tense in most situations.

### 3.3.2.2 Past states

Past states are not necessarily completive. The perfective or past form of the copula, *vyd*, must be interpreted according to contextually available information. Other states, like knowing, are not likely to have been completed, but the incomplete states are nonetheless viewed as a whole.

(101) *pinz sul tçi prud çonjoz pa uçχuno χanadur vyd*  
five year on front PN at restaurant chef be.PFV  
'Five years ago, Shonyoz was a chef at a restaurant.'

Without further context, the use of the perfective copula stem in (101) implies that the state (identity) no longer holds, although this is more reasonably considered a pragmatic inference than a truth condition.

Past existential clauses are formally similar to other past copular clauses.

(102) *arøj deyg byloq pa byn vyd*  
three pot brook at base be.PFV  
'There were three pots beside the brook.'

The use of the perfective stem of the copula with a past existential as seen in (102) has been mentioned previously in §2.2.2.3.

Finally, it is not necessary for a past state to have reached completion in order for it to be uttered in the perfective aspect.

(103) *xεb = at wazond-iko my-ato xor tyjdz-it*  
yesterday = 2SG.PFV know.PFV-COMP my father Kashgar go.PRF-CESS  
'Yesterday you knew that my father went/had gone to Kashgar.'

Logically speaking, in (103) there is no reason to believe that knowing something in the past implies not knowing in the present (in fact, quite the opposite). Again, completion

is not a truth condition of a perfective verb, but it is pragmatically inferred based on lexical aspect and context. The notion of a cessative suffix as seen in the complement clause in (103) will be explored briefly in a discussion of the pluperfect in §3.4.2.5.

### 3.3.2.3 Immediate future and ongoing events

While the most common uses of perfective verbs are for past and completed situations, it is also used for both ongoing and future events. The most common such utterance is a leavetaking formula.

(104) waz = am                      bur    tyjd  
      1SG.NOM = 1SG.PFV then go.PFV  
      ‘Well, I’m leaving.’

Despite (104) being a common leavetaking utterance, the syntax is compositional. It can be altered lexically or grammatically in many ways and remain felicitous, and remains grammatical when other verbs are substituted.

(105) çitç = am                      bur    çyg  
      now = 1SG.PFV then eat.PFV  
      ‘I guess I’ll eat now.’

While (104) is a common utterance, (105) is rarely heard in life and conversation. Nevertheless, it is equally grammatical. The word *bur* in (104) and (105) is not strictly necessary and does not serve to encode tense or aspect, but it may be viewed as a signal for changing topic or concluding a conversation.

When leaving is already a topic in the discourse, a host almost always uses a perfective utterance as a politeness convention.

(106) tyjd = at = o  
 go.PFV = 2SG.PFV = POLAR.Q  
 ‘Are you leaving?’

In context, (104), (105), and (106) all appear to indicate future events. Although Sarikoli has an imperfective verb stem that can be used for some present and most future situations, (106) uses a perfective verb stem. Given that the imperfective form is used primarily for present states and future events, while the perfective form is use for past and imminent events, one might be tempted to say that Sarikoli bifurcates into two basic tenses, one which denotes past and near future, and another which designates present states and distant future actions. Such a speculation is needlessly complicated; Sarikoli very neatly reflects an aspectual system. The primary difference between aspects is whether an event is viewed internally or externally.

It is even more problematic for the analysis of perfective aspect that an action undoubtedly in progress can take on perfective form as well. Sarikoli normally encodes events in progress with a durative clitic and imperfective verb stem. To inquire about a prior (completed) act, a slightly different question is asked, but it also includes a perfective verb.

(107) tar ko = at tyjd  
 toward where.NNOM = 2SG.PFV go.PFV  
 ‘Where are you going?’

(108) tar ko = ik tɛdz  
 toward where.NNOM = 2SG.DUR go.IPFV  
 ‘Where are you going?’

(109) kudzur = at tyjd  
 where = 2SG.PFV go.PFV  
 ‘Where did you go?’

The perfective utterance in (107) would normally be understood to inquire about the act in progress. It is grammatical to use the form in (108), but uncommon. The major difference between the two perfective utterances in (107) and (109) is the directional marker *tar* ‘toward’, which plays no direct role in the verb phrase proper, but influences the interpretation of the verb and the clause. Most frequently, when referring to past events, the verb *sət* ‘become’ is used instead.

The examples in this section are mainly verbs of motion, and the utterances often have phatic social function. These uses of perfective verb stems can probably not be considered ingressive, as seen in §3.3.2.4, but the events can be conceived as having begun, at least in terms of the speaker's intention or certainty.

Some similar utterances are overwhelmingly interpreted as completed events.

- (110) tsejz tamoq = at      χγg  
 what food = 2SG.PFV eat.PFV  
 ‘What [kind of] food did you eat?’

An utterance such as (110) could hardly be interpreted to mean ‘What are you going to eat?’ It will almost exclusively be interpreted as a past event, unless the context allows for an alternate interpretation. It is in fact a common utterance in Sarikoli homes. A Sarikoli host never fails to offer tea and food to a guest; but it is polite for a guest to refuse food in many ways. If the response to an offer of food is a statement such as ‘I already ate’, then the host may inquire further, wanting to know whether the guest has had a full meal. The inquiry will not be regarded as a question of what food the guest is going to or planning to eat, unless it occurs in that specific context (e.g., the previous utterance including a perfective verb referring to a future event), and even then, it is somewhat strange; the aspect is much more likely to be imperfective.

The use of perfective verb forms for ongoing and future events demonstrates conclusively that Sarikoli cannot reasonably be said to have a system of verb stems denoting tense. Tense is not encoded on Sarikoli verb stems or through the use of aspectual clitics, but it is instead inferred from aspectual information in context.

#### 3.3.2.4 Ingressive

Perfective forms of becoming verbs frequently produce an ingressive meaning cross-linguistically. This is true of the Sarikoli verb *set* ‘become’.

(111) woð = af                    sejr      syt  
           3PL.NOM = 3PL.PFV satiated become.PFV  
           ‘They are satiated/full [of food].’

It is unsurprising in (111) that a verb of becoming takes on an ingressive meaning in the perfective form. Any achievement (telic, punctiliar event) can be interpreted ingressively in Sarikoli.

Other achievement verbs besides becoming verbs can be used in like manner.

(112) manos tçi noχ xuvd  
           PN      on bed sleep.PFV  
           ‘Manos is sleeping (lit., fell asleep) on the platform.’

In (112) the verb *xuvd* ‘fall\_asleep.PFV’ is punctiliar and therefore implies that the subject is still in the resultant state. Similar examples are *mewg* ‘die.PFV’ and *nalyst* ‘sit\_down.PFV’. The implication in Sarikoli is that a state was fully enacted by a punctiliar event.

(113) tɛw = at                    my-ri                    lɛvd      çitç = am                    wazond  
           2SG = 2SG.PFV 1SG.NNOM-DAT say.PFV now = 1SG.PFV know.PFV  
           ‘You told me. Now I know.’

Words like *wazond* ‘know’ in (113) can be used to indicate the beginning of a state when the verb is perfective. Using an imperfective form would force the interpretation of an ongoing state rather than the intended interpretation of ingression into the state of knowing.

The ingressive use of the perfective is frequent for both states and for punctiliar verbs, and is not limited to verbs of becoming. For activities and accomplishments, the use of perfective forms most commonly leads to a past interpretation — that the event both began and ended before the time of speaking.

### 3.3.2.5 Past habitual aspect

Past habitual clauses also require both a perfective verb and a durative clitic. The combination of perfective and durative results in an iterative interpretation.

(114) *waz = am = ik*                      *çejtun-arabo az tyng dət*  
1SG.NOM = 1SG.PFV = DUR Satan-vehicle from Tung drive.PFV  
‘I used to ride bicycle from Tung.’

Since past tense is commonly inferred from the use of a perfective stem, past habitual is not truly a unique use of the perfective stem itself, but a product of adding a durative marker. Nevertheless, (114) is an example of a distinctly interpreted use of the perfective verb stem. Frequency phrases are frequent in such utterance to mark iterativity. Past habitual clauses will be explored fully under the uses of the durative in §3.5.2.3.

### 3.4 Perfect

The identification of perfect verb stems in Sarikoli is straightforward. The notion of a perfect generally indicates completion (such as past tense or perfective aspect) with present or continuing relevance. The Sarikoli perfect often does indicate completion of a situation (cf §3.4.2.1) and is not entirely morphologically and syntactically separate from the perfective verb stem.

It is wise to consider the perfect as a lexicalized verb stem for purpose of analysis, although it is possible to analyze it as a perfective verb stem with a non-productive stative suffix.

#### *3.4.1 Morphosyntax of the perfect stem*

Logically speaking, it is most accurate to say that the perfect stem is formed by the addition of the stative suffix to a perfective stem (see Table 13). In §4.1 there will be a brief discussion of the stative suffix with other word classes, which are likely to be considered neither verbal nor perfect.

##### 3.4.1.1 Perfect stem morphology

As demonstrated in §2.7.2 the underlyingly stative suffix assimilates in voicing to preceding segment; furthermore, the suffix is not syllabic and will not be articulated separately from the verb stem.

It is often but not always possible to infer the perfect stem from a known perfective stem. Even though perfect stems can be recognized by their morphology, producing a perfect stem is a non-productive morphophonemic process. Perfective stem plus stative suffix appears to be the underlying form, diachronically speaking, but the forms are

phonologically fixed. In the table below a small selection of perfect forms are listed beside their corresponding perfective form to demonstrate various morphophonemic alternations.

Table 13. Comparison of Sarikoli perfective and perfect stems

PFV	PRF	English Gloss
ʒʁud	ʒʁudz	‘chew’
ðokt	ðoktɕ	‘lick’
naɣmyg	naɣmyɣdz	‘hide’
sasud	sasudɕ	‘rub’
syryd	syɾɛðdz	‘divide’
xykɛwg	xykəɣdz	‘search_for’
intsyvɔ (3SG.IPFV intsivɔ)	intsivdz	‘sew’
vydzid (3SG.IPFV vyzand)	vydzandz	‘press’
rid (3SG.IPFV rizd)	rizdz	‘blacken’

The stative suffix will rarely, if ever, appear on a perfective stem without modification. If the perfective stem ends an alveolar stop (as most perfective stems do), the alveolar stop may be deleted. This is clearly demonstrated in the first two rows of the chart.

Not all alveolar stops are deleted with the addition of the stative suffix. Some final stops undergo lenition (in this case, fricativization without change in voicing) of a perfective stem's final stop (see rows 3 and 4 of the chart). This process may also be accompanied by a vowel change, as seen in the form *syɾɛðdz*. Further lenition or deletion occurs in very heavy syllables as seen in the loss of the labiovelar glide *w* to form *xykəɣdz* in most dialects. In a few instances the perfect form bears more similarity

to the imperfective or infinitive stem, as in the final three verbs of the chart, which share more segmental makeup with the third-person imperfective form.

#### 3.4.1.2 Perfect stem syntax

Perfect stem syntax resembles that of perfective stems. The head verb, a perfect stem, is preceded in the clause by an agreement marking clitic (usually second-position), as fully described in §2.6.2. I label the agreement marking clitic as perfective, because the evidence points to perfect aspect being built on perfective morphosyntax.

(115) pa jatoq = an        nalystɕ  
      at room = 1PL.PFV sit.PRF  
      ‘We have been sitting around our room.’

(115) is grammatical because it meets two requirements. First, it conforms to usage conventions for the perfect in resultative situations. Second, the agreement clitic lies in the most accepted position. Moving the agreement clitic makes the sentence ungrammatical.

(116) \*pa jatoq nalystɕ = an  
      at room sit.PRF-1PL.PFV/IPFV

(116) is ungrammatical solely because of the location of the clitic. This demonstrates, firstly, that the position of the clitic is a salient and obligatory part of the grammar, and secondly, that an agreement marking suffix as used with imperfective stems is not permissible. The first-person plural clitic and suffix have identical segmental makeup, but differ in their location in relation to a verb stem.

The agreement marking enclitic in (117) attaches directly to the perfect stem when it is the first or only phrasal head in a clause. As with the perfective stem, this is only permitted when no phrasal heads precede the verb.

(117) ranyxtϕ = am  
forget.PRF = 1SG.PFV  
'I have forgotten.'

Despite having the same form and position as the 1SG.IPFV suffix, the morphology in (117) is a perfect stem with agreement marking enclitic, and this is evident in every instance because of the presence of the stative marker on the perfective stem.

Perfect stem syntax is essentially identical to perfective syntax. The morphology of the stem is the primary signal of perfect aspect, with context and lexical aspect playing strong roles in utterance interpretation for the various uses of the perfect form.

### *3.4.2 Uses of the perfect stem*

It is possible to use the perfect stem under most of the same temporal conditions as the perfective stem. It is not possible to use an unmodified perfect stem experientially (i.e., as an experiential perfect); such use gives rise to an interpretation of surprise and sounds odd to native speakers.

(118) waz = am      stɛwr gyxt χyϕdz  
1SG = 1SG.PFV yak    meat eat.PRF  
'I have [surprisingly] eaten yak meat!'

Only very specific contexts allow a speaker to produce (118). It is not the acceptable form for either experiential perfect or merely ongoing relevance. Nevertheless, it is an element of continuing relevance that demands the use of the perfect form over the

perfective. In some instances the perfect and perfective result in the same interpretation, including resultative aspect of achievement verbs, and some narrative uses.

The experiential interpretation results from a perfect participle, not a form inflected for subject agreement.

(119) waz stəwr gyxt χyγdz = endz  
1.SG yak meat eat.PRF = ADJZ  
'I have (experientially) eaten yak meat.'

(119) demonstrates the most frequent way to express experience in Sarikoli. There is no sense of surprise. If stativity is the central denotation of the perfect suffix, then we can expect that all perfect verb forms are stative in some way, but not all encode surprise, and this is borne out by the data.

#### 3.4.2.1 Resultative aspect

Resultative is the primary or core use of the perfect stem in Sarikoli. This is entirely sensible if *-dz* is considered to be a stative suffix. A completed punctual action can be expressed in the perfect, provided that the resultant state is still in effect. In most instances, it is also grammatical to use a perfective stem without a noticeable change in meaning.

(120) raçid tçi noχ xuvdz  
PN on bed sleep.PRF  
'Rashid has fallen asleep on the bed.'

(121) raçid tçi noχ xuvd  
PN on bed sleep.PFV  
'Rashid fell asleep on the bed.'

Instead of using the perfect form as in (120), a speaker might just as well use a perfective verb stem as in (121). For achievements, there is no difference in interpretation between perfective and perfect forms, except that the perfect without further modification can only mean that the resultant state is still in effect. For resultant states, both forms are used.

The perfective verb stem takes on an ingressive rather than resultative meaning but the inference is nearly identical — the resultant state is still in effect.

(122) pa jatoq = an        nalystɕ  
at room = 1PL.PFV sit.PRF  
'We are sitting around our room.'

In English it is nearly impossible to use a perfect form to translate the verb in the Sarikoli utterance. 'We have sat around our dorm room' yields an experiential interpretation or the combination of a current state and some additional implicatures in English. In Sarikoli, however, the perfective and perfect forms logically merge for achievements. The perfective stem of an achievement verb forces ingressive interpretation; a consequent state has begun and will continue until it is interrupted. The perfect stem indicates a resultant state rather than the completion of the action and ingressions into a state.

#### 3.4.2.2 Evidential or mediative uses

The perfect is frequently employed when a resultant state is a change from a previous condition, or contravenes the expectation of the participants (usually the speaker).<sup>4</sup> Some such instances fall under the broad category of "evidentiality". Sarikoli

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<sup>4</sup>Soh (2009) includes thorough discussion of the use of the perfect in Mandarin Chinese, which are used mainly for change of state or for results contrary to the speaker's expectation.

thus does not have a system of grammatical evidentiality, because it has neither a morpheme dedicated to evidentiality nor any morphological distinction between the various evidential functions of the perfect.<sup>5</sup> The specific use of the perfect (whether evidential or merely resultative), and the type of evidentiality, must be inferred by the listener in context. Given the constellation of evidential functions in Sarikoli, it is best to consider this use as *mediative*. In mediative systems, a single morphosyntactic form encodes all evidentiality, and this is true for Sarikoli, although no dedicated morpheme or grammaticalized form exists.

The mediative use of the perfect stem may be divided into several logically distinct categories: 1. Surprise (often called *mirative*): The speaker is surprised about a situation. 2. Sensory (including visual and non-visual): The speaker directly observed or is currently witnessing a situation. 3. Hearsay (non-firsthand/indirect/reportative): The speaker did not witness the situation but received the information secondhand. 4. Inference (non-firsthand or indirect discovery): The speaker discovered unwitnessed new information by synthesizing available information.

The evidential use of the perfect takes one of three closely related forms. 1. INF-DAT *veðdz* (for various aspects, usually not completive) 2. Perfect verb stem (for completed situations) 3. Utterance-final *veðdz* (for copular clauses). The first and third types differ only in whether there is an embedded clause. The third differs from the second only in that the verb is a perfect form of the copula and not some other verb.

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<sup>5</sup>In Relevance Theory, evidentiality or mediativity without dedicated morphological markers is often discussed as *interpretive use*. This terminology is not widely employed in grammar writing and typology, is somewhat unclear, and is unnecessary to describe the phenomenon in grammar writing. Furthermore, many “interpretive use” forms are described as “particles” rather than syntactic verbs. Therefore I propose using the term *evidentiality* to discuss the phenomenon, and *mediativity* to describe the particular system of evidential uses in Sarikoli.

The number of forms depends on the analyst's categorization. Any form can be used to express any of the four categories listed above.

All evidential perfect forms, like other perfect verbs, require perfective subject agreement clitics as described in 3.4.1.2. Since the 3SG agreement clitic is null, many evidential clauses in Sarikoli surface without an overt clitic for discourse reasons. All evidential perfects, including the copula, follow the same constraints as other perfect verbs. The evidential perfect copula has not grammaticalized to become a clitic or particle, but remains a verb syntactically.

(123)  $jy = \emptyset$                        $yt\zeta$      $farbe$      $ve\ddot{d}dz$   
           3SG = 3SG.PFV    very    fat        be.PRF  
           ‘He is very fat!’

(124) \* $tudz\dot{z}ik$      $\chi alg-\chi ejl$      $yt\zeta$      $byland$      $ve\ddot{d}dz$   
            $tudz\dot{z}ik$      $\chi alg-\chi ejl = af$      $yt\zeta$      $byland$      $ve\ddot{d}dz$   
           Tajik    person-PL.NOM = 3PL.PFV    very    tall        be.PRF  
           ‘Tajik people are very tall!’

In (123) the null agreement clitic has been included; even though no overt form surfaces, all other persons require a clitic which is most frequently second-position. It is ungrammatical not to include such clitics as demonstrated by (124), in which the top line is ungrammatical for lack of the subject agreement clitic, rectified in the second line by adding the clitic.

The perfect stem of the copula can rarely be translated from Sarikoli into English as ‘has been’. In fact, the (grammaticalized) copula would normally not be translated at all, because it has an evidential function and not denotative function. In (54) from §3.1.2.2, repeated in (125) below, it might also be possible to translate with a perfect

construction in English. The Sarikoli use primarily indicates source of information outside the speaker's prior knowledge.

(125) wi            maktab wi-ri            pyl    ðod-ir            vεðdž  
 3SG.NNOM school 3SG.NNOM-DAT money give.INF-DAT be.PRF  
 ‘Her school gives/will give/has given money to her.’

(126) wi            maktab wi-ri            pyl    ðudž  
 3SG.NNOM school 3SG.NNOM-DAT money give.PRF  
 ‘Her school has given money to her.’

(127) pyl    pyr    vεðdž  
 money much be.PRF  
 ‘It's a lot of money.’

(125) in its original context indicated that the speaker did not directly witness the school giving money. She likely heard it from another source, or made an inference based on indirect evidence. Nevertheless, the same overt form would also be used to show surprise or sensory evidentiality. The time reference or aspect for the embedded clause is not specified. By contrast, (126) indicates that the situation is completed, with the same set of potential evidential interpretations. (127) may also express any evidential function, but the clause is copular and its unmarked (indicative) counterpart would not include an overt verb.

The various evidential functions of the perfect are not commonly distinct from one another, even though some may be logically incompatible.

(128) raps at    xytym levdž = af = iko  
 fox    and rabbit say.PRF = 3PL.PFV = COMP  
 žer    xarbedž ytç    asto    tid-ir            vεðdž  
 rock frog        very slow go.INF-DAT be.PRF  
 ‘The fox and the hare said, “The turtle goes very slow!”’

Since the characters in this version of the fable of the tortoise and the hare actually witnessed the turtle moving slowly, it is not possible to assert the hearsay function in (128). Evidential perfects as seen in (128) may express the speaker's surprise and a sensory source of information simultaneously, however. Sarikoli speakers report that perfect verbs convey surprise in most situations.

Not all situations expressed with perfect stems are equally surprising, however. Some are merely a change of state with a sensory component.

(129) tamaç tɕoj ɕtu sɛðdʒ  
2PL tea cold become.PRF  
'Your tea has gotten cold.'

(130) tamaç tɕoj ɕtu syt  
2PL tea cold become.PFV  
'Your tea has gotten cold.'

In (129) the verb *sɛt* 'become.INF' is found in perfect form. Change of state expressions frequently include the form *sɛðdʒ* 'become.PRF'. (130) is equally common in such instances, and usually interpreted identically, except that it does not indicate a sensory source of information.

Some truly surprising situations are expressed by means of perfect verbs. The speaker's unpreparedness or surprise itself is not encoded in the perfect verb form, but it is a common interpretation given the appropriate context.

(131) dzam zɛw ratsystɕ  
all cow escape.PRF  
'All the cows have escaped!'

Like other uses of the perfect stem, the context must allow for the interpretation that the resultant state is still in effect. For evidential uses, it is usually true that speech time coincides with the time of discovery, as is likely the case for the elicited utterance in (131). If the speaker is describing the same situation at a later time, she uses a perfective verb stem.

§3.4.2.1 demonstrates that perfect verbs are not always used evidentially; some are merely resultative. Both (120) and (122) can be interpreted evidentially, though, given an appropriate context.

Sarikoli speakers tend to interpret utterances with perfect verb forms as recent, dynamic, and surprising. This gives credence to the notion of mirativity, but there is no grammatical morpheme dedicated to any evidential function. The broader category of mediativity is more sensible given the range of evidential uses of the perfect. Mediativity should not be asserted as a grammatical mood in Sarikoli, but as a use or set of uses of the grammatical category *stative* (cf §3.4 through §3.4.2.1).

### 3.4.2.3 Narrative uses

Speakers may choose to use the perfect stem in telling events of a story, describing an image, even when the use of perfect verbs would be otherwise ungrammatical.

(132) wi      az-zabu    iθtç      i    mɛrgan  
      3.DIST from-after come.PRF one hunter  
      ‘After that, a hunter came.’

The excerpt from a story in (132) shows that narrative events can be related in perfect aspect. This is a different use of the perfect, because it is grammatical in narrative even in contexts that would make it ungrammatical in conversation.

It would be extremely unusual, to the point of being ungrammatical, to use an English perfect form to translate (132) (\*‘After that, a hunter has come.’). Such use could be conceived as supplanting expectations, but could not occur in introductory or baseline portions of narrative. In Sarikoli the perfect form is used in both ways.

#### 3.4.2.3.1 Exposition

The use of the perfect in narrative aperture is found in every *səwg* ‘traditional story’ opening, involving the verb form *veðdʒ* in the formula *veðdʒ na veðdʒ*. Sarikoli is like other Pamir languages such as closely-related Shughni in this respect Edelman & Dodykhudoeva (2009b:807). The first mention of main characters and background or setting frequently include perfect verbs as well, although it is not obligatory.

(133) *veðdʒ na veðdʒ i toz veðdʒ*  
 be.PRF NEG be.PRF one bald be.PRF  
 ‘Once upon a time there was a bald man.’

(134) *jy dos wurun ɣal veðdʒ=i ko tʃer na tʃejg-ir veðdʒ*  
 3SG.NOM like lazy man be.PRF=COMP work NEG do.INF-DAT be.PRF  
 ‘He was such a lazy man that he didn't do any work.’

The excerpt in (133) and (134) contains the first two sentences as extracted from a traditional story. The narrator went on to relate the baseline narrative with perfective (not perfect) verbs. This technique — relating the exposition or opening with perfect verbs and then switching to perfective forms — is common among experienced and older storytellers.

### 3.4.2.3.2 Baseline narrative

Speakers may tell stories in which the bulk of the events are relayed in unmodified perfect aspect. This is extremely uncommon for relating personal events, which are most frequently couched in perfective aspect. It is also common to use a narrative perfect to describe still images or video when translating events from visual media into a narrative. The use of the perfect in all sorts of narratives is formally identical.

Traditional stories may be told using primarily perfect verb stems.

(135) i    maθ i    lagi wi-εf    a-jaχ    tej=af    tçεwydʒ  
one day one time 3DIST-PL ACC-sister wedding=3PFV do.PRF  
'One day they had their sister's wedding.'

(136) wi            az-zabu    i    tçand    sul    nardʒεðdʒ  
3SG.DIST from-after one amount year pass.PRF  
'After that, a few years passed.'

Again, it is nearly impossible to use English perfect verb forms to translate (135) and (136). Some speakers prefer to relate an entire baseline narrative with perfect forms, reserving perfective and imperfective for dialogue and other narrative functions. Within dialogue sections of a text, the perfect form is employed when it is contextually appropriate. It is not known to what degree this difference in grammatical aspect for baseline narrative reflects an ongoing change in the grammar of the language, influence from other languages, or persistence of longstanding grammatical structures. Considering the other uses of the perfect stem described here, the use in baseline narrative is surprising and worthy of deeper investigation.

#### 3.4.2.4 Perfect participles

Perfect participles are perfect stems adjectivized through suffixation. They may be used as adjectives in a noun phrase (preceding the head noun) or as verbless clause or copular complements. The perfect participle as a predicate adjective also serves as a de facto experiential perfect. Perfect participles are not marked for subject agreement.

A perfect participle may be used as a copular complement, in which case it is either an attribution of the subject or an experiential perfect.

- (137) *tɛw raskomejdʒ malym wandʒ-ɛndʒ = o*  
2SG.NOM from\_Raskom teacher see.PRF-ADJZ = POLAR.Q  
'Have you seen/met the teacher from Raskom?' (lit. 'Are you one who has seen the teacher from Raskom?')

The idiomatic and more literal translations for (137) make it clear that while the typical interpretation aligns better with an English experiential perfect, the central (encoded) meaning of the participial suffix is adjectivization.

When the perfect participle appears in attributive position within a noun phrase (that is, before the head noun), the participial clause functions as an adjective describing the head noun. In such instances, intransitive verbs commonly produce active perfect participles.

- (138) *woqtɕ-ɛndʒ kyd tɕɛd ar daryn joðd*  
bark.PRF-ADJZ dog house in inside come.3SG.IPFV  
'The dog who was barking came into the house.'

Since intransitive verbs do not have objects, there is only one possible interpretation for (138). The dog cannot be interpreted as an undergoer of barking.

However, transitive verbs may produce either passive or active participles, depending ultimately on the agency of the head noun. In some instances a non-agent head noun can only result in a passive interpretation.

(139) jy            zuxtç-ændz    xipik   maç-ir    vird  
           3SG.NOM get.PRF-ADJZ bread 1PL-DAT bring.3SG.IPFV  
           ‘He will bring us purchased bread.’

The inanimate noun ‘bread’ cannot perform an action such as ‘buy’; therefore, the head noun described by the participle in (139) can only be an object, and the perfect participle is properly considered a passive participle.

An animate head noun with a transitive verb allows for the possibility of either active or passive interpretation of the participle, depending on syntax, semantic restrictions, and context.

(140) buxtç-ændz    batçø   pa   maktab   fript  
           send.PRF-ADJZ child at school arrive.PFV  
           ‘The child who was sent arrived at the school.’

(141) a-sandεq   buxtç-ændz    batçø   χy            patiç   wand  
           ACC-box send.PRF-ADJZ child REFL.NNOM cousin see.PFV  
           ‘The child who sent the box saw his/her cousin.’

Not all participles or participial clauses carry additional core arguments. (140) shows a participle formed from a transitive verb. Since there is no additional argument in the participial clause, the participle can be passive and the head noun is underlyingly an object of the participle. If the participial clause includes a core argument, as in (141), it will be the direct object, which ensures that the head noun must be interpreted as an agent. Thus, the participle in (141) is active.

The construction that I consider a perfect participle may be described as a relativization strategy without reference to participles. The notion of a participle is helpful, however, because of the unique morphology and syntax of the construction, as well as the frequency of its use. The infinitival participle as discussed in §3.1.2.4 is morphologically different but both participles are adjectivized verbs.

#### 3.4.2.5 Pluperfect

The Sarikoli pluperfect does not normally translate as an English past perfect, but commonly serves as a more distant perfect which also accepts a reference time that is in the past.

Pluperfect forms are perfect stems with the aspectual suffix *-it*. The suffix *-it* is difficult to gloss or encapsulate logically, because it is ungrammatical with other stems which are pragmatically already past or complete (perfective), or never complete (imperfective). In some instances the pluperfect can be understood experientially. There is no other inflected verb form which can be considered experiential perfect.

(142) waz = am                      (paraxɛb)      tid      alo      syɬɛwr gyxt      χyɣdz-it  
 1SG.NOM = 1SG.PFV (two\_days\_ago) go.INF when yak      meat eat.PRF-CESS  
 ‘When I went, I had/have eaten yak meat (two days ago).’

It is at first unclear whether we should consider the perfect stem with *-it* suffix to be pluperfect or experiential perfect. The logical framework of perfect stem plus cessative suffix supports either view, but as I have indicated in §3.4.2.4, the experiential use of the perfect participle is both frequent and sufficient to express experience. (142) makes it clear that time designations are acceptable to use with the pluperfect (although it is unacceptable or at least problematic to use a time reference with participles). Most

situations that allow for a perfect participle to be used experientially remain grammatical when the clause is altered to include a pluperfect verb form.

In my collected narratives, the perfect participle is not used for backgrounding, but the pluperfect may be, since the situation is considered to have been completed at a past time reference.

(143)  $\chi\gamma$  i  $\nu$ ots bat $\zeta$ o pa darax $\tau$  bark nalyst $\zeta$ -it  
then one girl child at tree stem sit.PRF-CESS  
'There had been a girl sitting beside a tree trunk.'

In the narrative from which (143) was drawn, the girl must have been sitting by the tree before she speaks or is noticed by the main character. Prior to this sentence, the main character had been performing most of the story's action, but the next sentence describes the girl laughing at the main character. At this point she enters the story. The bare perfect or perfective stems are used in the exposition or introductory portions of a narrative. It is most logical to conclude that this is a pluperfect being used to provide background for the entrance of a new character. In this instance, the verb is an achievement verb. I claimed in §3.4.2.1 that achievement verbs produce nearly identical inference in perfect and perfective stems, viz, that the action was completed before speech or reference time. Here we might claim that the pluperfect is intended to push the resultant state into the past as well.

The idea of pluperfect is nearly a non-starter in cross-linguistic typology and applied descriptive work, because it doesn't seem to convey very much at all. Historically, the term was used in describing highly inflected languages such as Greek and Latin that had verb forms which seem to reach further into the past than a mere perfect. The pluperfect is "perfect plus" but the exact nature of "plus" is elusive. In

Sarikoli one might say that “plus” nearly means past (tense). However, all perfect verbs must have had their culminating event in the past. Therefore, it is only the consequent phase of a situation that we can claim has relevance in the discussion of most pluperfect situations. The marker *-it* in Sarikoli can be said to end the consequent phase of a situation. Therefore, either the notion of completive (which is redundant for perfective verbs and illogical for imperfectives) or past (which is logical for both imperfective and perfective verbs, although the marker *-it* is not used for those stems in Sarikoli) might be applied. Perhaps the most accurate term is cessative, which carries the assertion that a state has terminated.

The idea of “experiential perfect” does not map exactly onto the Sarikoli language. It can be argued that pluperfect verbs are one way of producing an experiential perfect, because the occurrence of the situation continues to hold at the time of utterance. However, the same could be said for all realis situations. In fact, for a pluperfect verb, the resultant state has ceased, which is precisely the difference between the pluperfect and the (resultative) perfect. Using the term “experiential perfect” for Sarikoli verbs is unhelpful because it projects the experiential use of the English perfect onto another language, rather than simply describing the language. In §3.4.2.4 I have argued that the Sarikoli perfect participle is interpreted experientially, and it should by now be clear that perfect forms derive from a stative suffix and continue to convey a resultative sense.

#### 3.4.2.6 Counterfactuals

Counterfactuals are constructed with a pluperfect verb in combination with the durative marker. Since the pluperfect is based on the perfect stem, counterfactuals are

based ultimately on perfect stems. Counterfactuals also require durative marking; they will be explored properly under the uses of the durative in §3.5.2.4.

### 3.5 Durative

Having already explained the syntax and uses of the durative marker in combination with some verb stems, in this section I present examples of and comment specifically on durative aspect(s). Durative aspect is not encoded in the verb stem itself, so there is no distinct form for durative verbs. Durativity is a lesser aspect that occurs in combination with verb stems.

#### 3.5.1 Morphosyntax of the durative marker

The durative marker is the second-position enclitic =*ik*. The clitic most frequently attaches to the first phrasal head, including time words or phrases.

(144) *my*            *sevd = ik*            *ǒizd*  
1SG.NNOM shoulder = DUR ache.3SG.IPFV  
'My shoulder hurts.'

As with the perfective agreement clitic, the durative clitic can appear later in the clause, but speakers nearly always reconstitute the clause to place the clitic earlier. It is uncommon for the clitic to attach to a verb, but not ungrammatical. When a clause consists of only a verb, the clitic attaches to it. Especially in instances of zero anaphora, like the answer to a question when the subject (and direct object, if there is one) is already salient in the discourse, a clause may be single word.

(145) *ǫizd = ik*  
ache.3SG.IPFV = DUR  
'It hurts.'

The durative marker acts predictably as a second-position clitic, as explained previously in §2.6.1. Inserting the clitic after the verb, as in (145), is fully grammatical when the verb is the first or only phrasal head in an utterance, and marginally grammatical in longer clauses.

The durative clitic does not encode aspect in infinitive clauses, although there is no constraint prohibiting it from attaching to an infinitive as part of an inflected matrix clause.

The impact of stress and voicelessness in pronouncing the durative clitic has been elaborated in §2.7.4.

### 3.5.2 *Uses of the durative marker*

The durative marker is used when a temporary situation has duration in some sense. Punctiliar situations, such as becoming or sitting down, tend to exclude durative aspect unless they are viewed internally or interpreted iteratively. On the other hand, some states, e.g., knowing, preclude durativity because they have no natural endpoint; The term *delimitative* would also be accurate for at least some situations. I use the term *durative* for *= ik* because it has the underlying function of giving a finite duration to a situation, that is, either expanding the view of a lexically punctiliar event, limiting the duration of an otherwise infinite state, or most often, viewing a non-punctiliar event as ongoing (continuous or progressive).

Less precise analyses might lead to the speculation that the morpheme =*ik* marks something like present continuous tense/aspect, but the durative label is more sensible considering the full range of its uses, including inchoative and (past) habitual aspects, and counterfactual modality. I propose that this clitic, and morphemes with similar function in related languages, be labeled simply as *durative* and glossed accordingly.

### 3.5.2.1 Continuous aspect

Using the durative marker with an imperfective stem in an independent clause most frequently indicates that the situation is continuous or in progress.

(146) *asan = ik zuzd*  
 PN = DUR run.3SG.IPFV  
 ‘Asan is running.’

(147) *tew = ik χy tɕɛd wejð*  
 2SG.NOM = DUR SELF house pour.IPFV  
 ‘You are building your house’

As one might expect, in (146) and (147), telicity — whether a situation has a natural endpoint — has little effect on the grammaticality of the durative marker. Acts that are progressing toward a goal can accept durative marking, as can atelic activities (those without a natural endpoint), and some states, although using the durative marker with a state will more likely lead to an inchoative (beginning or coming about) interpretation.

The typical interpretation of a durative marked clause is that the situation is ongoing at a given reference time. Some, but not all, ongoing states can accept the durative marker. For instance, the verb *ðizd* ‘ache’ must be marked duratively in the present, in contrast to an analogous English utterance.

(148) my            səvd = ik            ðizd  
 1SG.NNOM shoulder = DUR hurt.3SG.IPFV  
 ‘My shoulder hurts.’

(149) \*my            səvd            çitç    ðizd  
 1SG.NNOM shoulder now hurt.IPFV

(150) my            səvd            ðizd  
 1SG.NNOM shoulder hurt.IPFV  
 ‘My shoulder will hurt/\*(currently) hurts.’

The free translation in (148) could as easily be ‘My shoulder is hurting.’ The implication is either that the aching is a temporary state or that it requires continual stimulus. (149) is ungrammatical because the stated time frame (‘now’) is not compatible with a state whose duration is not delimited. Without a time reference, as seen in (150), the most likely inference is that the speaker is predicting her shoulder will ache in the future, or that she is stating a habitual occurrence. As the consequent of a conditional clause, or an answer to a question in the proper context, for example, the clause is considered grammatical.

It is ungrammatical to use the durative marker for present indefinitely continuing states, or for completed achievements.

(151) \*zylfia tağarmejdž            bəts = ik    wazond  
 PN        from\_Tagharmi girl = DUR know.3SG.IPFV  
 [‘\*Zulfia is knowing a girl from Tagharmi./??Zulfia is beginning to know a girl from Tagharmi.’]

(152) \*kyraç = ik    xufst  
 PN = DUR    sleep.3SG.IPFV  
 [‘\*Kirash is sleeping./??Kirash is in the act of falling asleep.’]

(153) *waz = ik            niθ-am*  
1sg.nom = DUR sit.IPFV-1SG  
'I am (in the act of) sitting down./\*I am sitting.'

The constraint that makes (151) ungrammatical in Sarikoli also operates in English. Generally, current states do not require a durative marker, because durativity is already a feature of states. This gives some reason to reconsider the lexical aspect of verbs that seem to be states, yet actually require the marker that is prohibited with other states, such as *ðizd* 'hurt' as seen in examples (148) and (149). It should be noted that durative marking is not absolutely prohibited with verbs like *wazond* 'know', but it gives rise to an inchoative rather than continuous interpretation. The inchoative use of the durative marker is discussed in 3.5.2.2.

(152) being ungrammatical is not surprising if lexical aspect is taken into account. Verbs of sleeping and sitting are achievements in Sarikoli, and a continuous form cannot be used for the resultant state. Roughly analogous continuous forms for similar verbs are grammatical in English, but only because sleeping and sitting in English are states that have a prescribed or natural endpoint (specifically, living persons change their body position in daily life). In Sarikoli, sleeping and sitting are punctiliar, so that only overriding the lexical aspect to view the situation internally (e.g., being in the act of sitting down, as in (153)) allows the speaker to use the durative marker in such instances.

### 3.5.2.2 Inchoative aspect

The inchoative use of the durative involves either the imperfective or perfective stem. There is a clear distinction between the inchoative and the somewhat logically similar ingressive use of the perfective stem. The terms "inchoative" and "inceptive"

have been used nearly interchangeably in literature, and the lines between ingressive, inchoative, and inceptive aspects are not always well-defined.

The durative marker can be used inchoatively when a situation is beginning or coming about, but may not yet be fully realized.

(154)  $\text{çitç} = \text{ik}$      $\text{wazon-am}$   
now = DUR know.IPFV-1SG  
'Now I am beginning to know.'

The type of utterance in (154) is fairly infrequent but perfectly grammatical. The speaker uttered it in a context of first not knowing the correct path, then seeing how she could arrive at the destination when being led by a friend.

The durative marker is also used for inchoative aspect in future time frames.

(155)  $\text{ilu}$      $\text{wejn-an}$      $\text{tçi niwd} = \text{at} = \text{ik}$      $\text{syt}$   
moment see.IPFV-1PL.IPFV on cry.INF = 2SG.PFV = DUR become.PFV  
'We will see soon when you have begun crying'

While most utterances with *syt* 'begin.PFV' should be considered ingressive without additional aspectual marking, adding the durative marker might be said to perform a sort of "anti-resultative" function. Using the durative marker with a perfective verb in this way allows another situation ('we will see') to be placed within the inchoate situation ('your crying is beginning').

### 3.5.2.3 Past habitual aspect

The durative marker used with a perfective verb often results in a past habitual inference. That is to say, it is not a past progressive or past continuous inference. The reasons for the habitual rather than progressive or continuous inference are related to

the aspectual encoding of verbs. It is not possible to view a situation in its totality and in progress at the same time, unless the situation is deemed to be complete but repeated. This is not altogether different from iterative interpretation of semelfactive<sup>6</sup> verbs with durative marking.

(156) waz        dzyl    wid    alo    my        mom = ik  
          1SG.NOM small be.INF when 1SG.NNOM grandmother = DUR  
          a-my                doim pa dom jud  
          ACC-1SG.NNOM often at back carry.PFV  
          ‘When I was little, my grandmother used to carry me on her back.’

Grammatically speaking, there is little formal difference between the past habitual clause in (156) and the inchoative clause in (154), but the hearer infers the meaning based on the totality of the utterance and the context. The speaker of the above utterance was an adult male; even if the durative-marked clause were uttered in isolation, it is unlikely that a hearer would infer it to mean \*[When] my grandmother has begun carrying me on her back’.

#### 3.5.2.4 Counterfactual modality

The counterfactual interpretation of the durative is inferred when a clause has both a durative marker and a pluperfect verb. The particle *tsa*, indicating supposition or conditionality, is also present in many instances.

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<sup>6</sup>Semelfactive verbs have no natural endpoint and no duration, so that durativity or continuation is interpreted as repetition of the action.

(157) tudzik tej = ik                    tsa    veðdz-it  
 Tajik   wedding = DUR   COND   be.PRF-CESS  
 waz = am = ik                    a-ta                    juðdz-it  
 1SG.NOM = 1SG.PFV = DUR   ACC-2SG.NNOM   carry.PRF-CESS  
 ‘If it had been a Tajik wedding, I would have taken you.’

Counterfactuals can be formed likewise with negation. The only difference is the negation particle.

(158) waz = am = ik                    bejt   tsa    na    levdz-it  
 1SG.NOM = 1SG.PFV = DUR   song   COND   NEG   say.PRF-CESS  
 jy = ik                    a-my                    tçardz   na    wandz-it  
 3SG.NOM = DUR.   ACC-1SG.NNOM   good   NEG   see.PRF-CESS  
 ‘If I hadn't sung a song, he/she wouldn't have liked me.’

(158) remains grammatical when the negator from either or both of the clauses is removed.

Sarikoli does not have a morphological method for marking irrealis on verbs; the interpretation that a situation has not taken place is based on syntax and context, as well as the verb stem. It is logically sound that irrealis moods tend to correlate with imperfective aspect and realis mood with perfective aspect, because most imperfective situations are not complete, while most perfective situations are. Irrealis is better considered a pragmatically inferred mood category.

## CHAPTER 4

### Other aspectual marking

Aspectual marking is strongly associated with the verb, but similar overt marking is found elsewhere. Sometimes identical morphemes attach to other word classes, giving some insight into aspectual encoding or a grammaticalization process. There are also particles or conjunctions which temporally situate clauses with respect to other clauses or events in discourse.

#### 4.1 Aspectual marking on other word classes

Some morphemes used for grammatical aspect marking on verbs are also found appended to other word classes. Some such items have been concretely lexicalized; others vary in form according to the context and the intent of the speaker.

##### 4.1.1 *Stative marking on other word classes*

Complex case or location markers such as *az-zabu* can receive the stative suffix *-dz*. The addition of the suffix presumably transforms the noun phrase into a state, although speakers may consider the stative and non-stative forms to have the same meaning.

If *az-zabu* (sometimes *pa-az-zabu*) means ‘after’, then *az-zabudz* could be translated ‘being after’. This change has not been concretely lexicalized, and the non-stative form is currently more frequent. In most contexts, either form is grammatically acceptable.

Other instances of stative marking have become lexicalized. The adjective *marzun* ‘hungry’ (which appears in Shaw's (1876) transcriptions) has been replaced by *marzundz*. In this case, the stative form has been lexicalized and the non-stative form has become obsolete.

There is little reason to doubt that the *-dz* suffix is underlyingly stative, and no logical reason why it cannot be appended to other word classes. There is also no prohibition on using stative suffixes more than once in a clause.

- (159) wi            pa-az-zabu-dz        xiθp iθtɕ  
                   2SG.NNOM at-from-after-STAT wolf come.PRF  
                   ‘A wolf came behind/following him.’

In (159) the stative suffix is found both on the locative complex and on the perfect verb stem.

A non-trivial number of words and grammatical morphemes end in *-dz/-tɕ* and have no direct counterpart without that segment. At least some of these words can be seen as derived through suffixation before becoming fixed lexical entries, but more etymological work is necessary to definitively parse their morphemes.

Table 14. Morphemes ending in *-dz*

mejdz	‘intending’*
mεχtudz	‘needing’*
yywejdz	‘feral goat’
budz	‘porridge’
grindz	‘rice’
tɕardz	‘good’
toθtɕ	‘tray’
*used modally	

Some words ending in *-dz* either have no recorded non-stative form, or are original, simplex forms simply ending in *-dz*. Examples of complex forms are *mεχtudz* ‘needing’ and *mejdz* ‘intending’. The use of *mejdz* in intent constructions has been discussed in §3.1.2.5, without reference to its morphology. Since *mejdz* bears overt similarity in both form and meaning to *umejð* ‘wish’, it can reasonably be speculated that it was derived from a common morpheme through suffixation of *-dz*; a similar claim might be made about *mεχtudz* if cognates can be found. It is likewise possible for some common nouns to have arisen out of suffixation, including animals and foods such as *yywejdz* ‘feral goat’ and *budz* ‘porridge’, which can be thought to have changed state. On the other hand, while words such as *grindz* ‘rice’, *tcardz* ‘good’, and *toθtɕ* ‘tray’ also end in alveolopalatal affricates, but there is currently no compelling evidence that they were formed through suffixation.

Finally, there are a limited number of suffixes which end in *-dz* but it is not known whether they derived historically from the stative suffix to form a complex suffix. A sample is provided in Table 15.

Table 15. Potentially complex suffixes ending in *-dz*

Suffix	Stem	Stem-Suffix
<b>-ejdz</b>	yin ‘wife’	yin-ejdz ‘[female] fiancée’
	tyng ‘Tung (village name)’	tyng-ejdz ‘[person or object) from Tung’
<b>-endz</b>	χyydz ‘[has/have] eaten’	χyydz-endz ‘having eaten/having been eaten’
<b>-nendz</b>	qir ‘mountain’	qir-nendz ‘from a mountain’
<b>-undz</b>	ewrat ‘woman’	ewra-tundz ‘women's (e.g., clothing)’

There is no reason to believe that the notion of a stative suffix is psychologically salient or synchronically productive in derivational suffixation that uses the forms in

Table 15. For the suffix *-ejdʒ* the two examples appear to have different core meanings of the suffix. In words like *yinejdʒ* the suffix appears to be no longer productive, but the *-ejdʒ* in ethnonyms like *tyngejdʒ* remains fully productive. Nearly all words with true *-dʒ* suffixes, except for perfect verb forms, are in some sense nominal, and the examples given in Table 15 are no exception.

#### 4.1.2 Diminutive suffixation

The derivational suffix *-ik* can be characterized as diminutive. Most of the words which include it also have a standard (non-diminutive) form.

The adjective *dzyl* means ‘small’; adding the diminutive *-ik* renders the form *dzylík* meaning ‘tiny’. Similarly, the noun *waditʃ* ‘sparrow’ can be diminished into *waditʃík* ‘little\_sparrow’.

The diminutive has been extended metaphorically so that it denotes not just small physical size but perhaps the speaker's affection/affinity to or even disconnection from an object or concept. The word *tʃarejn* means most generally ‘man’ (specifically in the sense of being male) and is the physical gender opposite of *ewrat* ‘woman’. The word *tʃur* may be said to mean ‘man’, or more accurately, ‘husband’, and is the gender counterpart of *yin* ‘wife/bride’ or *parʒox* ‘wife’. When relating incidents or stories, speakers frequently use the word *tʃurík*, literally ‘little\_man’. This is in fact a less formal way of saying ‘man’ and roughly correlates to English words such as ‘guy’ or ‘bloke’.

The suffix *-ik* is further used on deictic location words, especially *ewd/mewd* ‘here’ and *ym* ‘there’. Most commonly when a speaker refers to a specific place, he or she will use a word such as *mewdik* ‘right here’(?) or *umik* ‘right there’(?). It is difficult to ascertain the underlying meaning or purpose of the diminutive suffix because it has

been conventionalized and speakers claim not to make semantic distinctions for deictic locatives. It probably does not denote certainty or exactness of a location. It may limit the area in question, so that it functions like a true diminutive, i.e., ‘this/that little place’. It may also indicate the speaker's specific knowledge of the location, i.e. ‘**exactly** here/there’. Or it is possible simply that speakers phonotactically prefer two-syllable deictic terms.

The suffix *-ik* is stressed, while the clitic *=ik* is not stressed. There is a logical connection between the two; just as the suffix *-ik* may limit the size or scope of a concept, the clitic *=ik* may be a grammaticalized version of the suffix, serving to limit the duration or temporal scope of a situation. In the absence of cross-linguistic or historical evidence, the notion of grammaticalization is conjectural but logical.

Finally, it should be noted that the (stressed) suffix and (unstressed) clitic may appear in the same clause, and even in direct succession.

(160) mɛwd-ik = ik      tamoq χor-an  
       here-DIM = DUR food    eat.IPFV-1PL.IPFV  
       ‘We are eating here.’

The presence of both a diminutive suffix and a durative clitic in the same clause in (160) is unsurprising if they are synchronically separate lexical items. In practice such utterances are rare but there is nothing grammatically or phonotactically objectionable about them.

Although diminutive suffixation on other word classes is neither strictly verbal morphology nor an indicator of verbal aspect, it is relevant in the discussion of Sarikoli grammaticalization, and may be of further use in historical study of Pamir and other Iranian languages, as well as cross-linguistic typology.

## 4.2 Clausal linkage

Some words situate events temporally or logically, but function less specifically than aspectual marking. Most common in discourse are  $\chi\gamma$  ‘then/next/afterwards’ and *tom* ‘then/consequently’.

- (161) *tom jy a-narsa-ef zuxt  $\chi\gamma$*   
then 3SG.NOM ACC-thing-PL take.PFV then  
*tar tçed ryun syt*  
toward house journey become.PFV  
‘Then he took the things and began the journey to his house.’

(161) was excerpted from a traditional story during baseline narrative. In some portions of a story, nearly every sentence may end with  $\chi\gamma$ , or less commonly, *tom*. In typical conversation they are equally frequent and understood to have nearly equivalent meaning.

Clausal linkage markers can also be used to make fine distinction in speech acts, most commonly *bur* ‘then’.

- (162) *maç = an bur tyjd*  
1PL = 1PL.PFV then go.PFV  
‘Well, we’re leaving.’

Although *bur* as used in (162) has nearly the same denotation as *tom*, and *tom* can nearly always be used in place of *bur* (the reverse is less common), *bur* is a marker of the way the clause functions. In the above instance it is a polite way to change topic and signal that the speaker's party are leaving. Nearly all Sarikoli conversations end with a similar formula. The perfective verb stem has many uses; clausal linkage markers

may help to make the appropriate interpretation. The marker *bur* is (non-obligatorily) associated with leave-takings, and especially with the verb stem *tyjd* 'go.PFV'.

Clausal linkage words or particles are neither verb morphology nor aspectual marking proper, but they can provide information used for interpreting temporal deixis of clauses. A deep analysis and discussion of clausal linkage is beyond the scope of this thesis, but I have briefly demonstrated that clausal linkage markers function to situate clauses temporally, and even to aid the hearer in interpreting the use of a verb form.

## CHAPTER 5

### Conclusion

#### 5.1 Summary

In this thesis I have first given an overview of verbal morphosyntax in Sarikoli, an unwritten and underdescribed Eastern Iranian language situated of the Pamir sprachbund. Verbal morphosyntax includes the use of clitics and suffixes for marking both subject agreement and aspect. I have further explored morphological and phonological topics that contribute to utterance interpretation. Verb stems are lexically fixed forms which are marked for major aspects and for third-person (singular) imperfective. Causative stems, which are regularly inflected, are in frequent use.

Next, I have described the use of verb stems according to their encoded aspects. This description deviates little from established typological work on grammatical aspect. At the same time, it presents a challenge to researchers who might otherwise use the language of “tense” rather than “aspect” in describing the verbal system of Sarikoli. I have provided ample evidence that Sarikoli verbs encode for aspect and not tense. I have also considered durativity as a major and morphologically encoded aspectual category, showing that the durative enclitic is used to encode lesser aspects and modalities. I assert that the Sarikoli system of verb stems is mainly aspectual, and is employed in particular ways that allow the listener to infer tense and sometimes modality.

Finally, the Sarikoli lexicon includes suffixes and words from other (non-verb) lexical classes that bear segmental similarity to aspectual morphemes. The origin of these forms is not fully established, but their existence points to the possibility of grammaticalization processes, either ongoing or already completed.

## **5.2 Future research**

There is a dearth of historical material on Pamir languages, as has become evident during the course of this research. Further investigation in the languages of the region should serve to establish connections between the various Pamir languages (and the Pamir substrate), especially concerning verbal morphology and grammatical aspect. The same topics must also be investigated to link Pamir languages to early Indo-European.

Terms such as “past” and “non-past” or “present” are frequent in the writings of researchers in some Iranian languages. These terms should be re-examined in light of evidence from Sarikoli to ensure that they accurately reflect encoded aspect (or tense as appropriate). The encoded and inferred meanings of Sarikoli verbs and aspectual morphemes are thus offered for comparative work in related languages and for cross-linguistic typological research.

Through the research and writing of this thesis, desiderata in Sarikoli research and grammar writing have come to light. Specifically, a complete description of Sarikoli verbs and the Sarikoli verb phrase, including mood, modality, transitivity, and serial verb constructions, is lacking. A thorough collection of verbs and their stems, including lexicology and etymology, could be tackled in the interest of describing Sarikoli verbs, or could be subsumed under the umbrella of a larger dictionary or documentation project.

## References

- Aikhenvald, Alexandra Y. and R. M. W. Dixon. 2006. *Serial verb constructions*. Oxford, UK: Oxford University Press.
- Arlund, Pam S. 2006. *An acoustic, historical, and developmental analysis of Sarikol Tajik diphthongs*. Arlington, TX: University of Texas at Arlington dissertation.
- Dixon, R. M. W. 2010. *Basic Linguistic Theory: Grammatical topics*. 2. Oxford: Oxford University Press.
- Dixon, R. M. W. 2010a. *Basic Linguistic Theory: Methodology*. 1. Oxford: Oxford University Press.
- Dixon, R. M. W. 2010b. *Basic Linguistic Theory: Grammatical topics*. 2. Oxford: Oxford University Press.
- Dixon, R. M. W. 2012. *Basic Linguistic Theory: Further grammatical topics*. 3. Oxford: Oxford University Press.
- Dodykhudoeva, Leila R. 2007. Revitalization of minority languages: Comparative dictionary of key cultural terms in the languages and dialects of the Shugni-Rushani group. In Peter K. Austin, Oliver Bond, and David Nathan (eds), *Proceedings of conference on language documentation and linguistic theory*. 69-79. London: SOAS.
- Dryer, Matthew S. 2006. Descriptive theories, explanatory theories, and Basic Linguistic Theory. In Felix K. Ameka, Alan Dench, and Nicholas Evans, *Catching language: The standing challenge of grammar writing*, 207-34. Berlin: Mouton de Gruyter.
- Edelman, Džoy I. and Leila R. Dodykhudoeva. 2009a. The Pamir languages. In Gernot L. Windfuhr, *The Iranian languages*, 773-86. London: Routledge.

- Edelman, Džoy I. and Leila R. Dodykhudoeva. 2009b. Shughni. In Gernot L. Windfuhr, *The Iranian languages*, 787-824. London: Routledge.
- Lewis, M. Paul, Gary F. Simons, and Charles D. Fening. 2016. *Ethnologue: Languages of the World, Nineteenth edition*. Dallas, TX: SIL International.
- Gao Erqiang. 1985. Tajikeyu jianzhi. *Zhongguo Yuwen*, 123, 161-75. Beijing: Nationalities Publishing House.
- Haspelmath, Martin. 2014. The generic style rules for linguistics. <http://www.eva.mpg.de/lingua/pdf/GenericStyleRules.pdf>. (July 1, 2016.)
- International Phonetic Association. 1999. *Handbook of the International Phonetic Association: A guide to the use of the International Phonetic Alphabet*. Cambridge, UK: Cambridge University Press.
- Kim, Deborah. 2014. *Subordination in Sarikoli*. Grand Forks: University of North Dakota thesis.
- Kim, Deborah. 2015. The Sarikoli reflexive pronoun. *Open Linguistics* 1. 788-99.
- Comrie, Bernard, Martin Haspelmath, and Balthasar Bickel. 2015. The Leipzig glossing rules: conventions for interlinear morpheme-by-morpheme glosses. <http://www.eva.mpg.de/lingua/pdf/Glossing-Rules.pdf>. (July 1, 2016.)
- Pakhalina, Tatiana N. 1966. *Sarykol'skij jazyk (Sarikoli language)*. Moscow: Akademia Nauk SSSR (Institute of Linguistics, Soviet Academy of Sciences).
- Shaw, Robert B. 1876. On the Ghalchah languages (Wakhi and Sarikoli). *Journal of the Asiatic Society of Bengal* XIV.
- Soh, Hooi Ling. 2009. Speaker presupposition and Mandarin Chinese sentence final -le: A unified analysis of the “change of state” and the “contrary to expectation” reading. *Natural Language and Linguistic Theory* 27(3). 623-57.

Sperber, Dan and Wilson, Deirdre. 2004. Relevance Theory. In Horn, Laurence and Ward, Gregory, *Handbook of pragmatics*, 607-32. Cambridge: John Wiley & Sons.

Stump, Gregory. 2009. Shughni verb forms table.

<http://www.rch.uky.edu/Shughni/shughni%20verb%20forms%205%2011%2009.xls>. (July 1 2016.)