Detelicization and argument suppression: evidence from Godoberi

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Abstract. This paper focuses on the interaction between *actionality* and *antipassivization*, specifically, on how *(a)telicity* is related to *patient suppression*. In the literature, data from a number of languages are discussed showing that cross-linguistically, antipassive markers tend to induce atelicity of verbal predicates. In this paper I establish that the relation between the argument structure and actionality can be the opposite, whereby *actional modification* of a verbal predicate results *in antipassivization.* Relying on evidence from *Godoberi* (North Caucasian, Nakh-Daghestanian, Andic) I argue that lexical and syntactic distribution of the apparent antipassive marker is best accounted for on the assumption that the patient suppression is driven by a more general mechanism of detelicization. Also, I identify effects of detelicization on verbs of different actional classes and examine intricate relations between detelicization and event plurality.

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1. Introduction: Antipassivization and (a)telicity

Antipassivization, being primarily an operation on argument structure of a verbal predicate, may (although need not) affect its actional characteristics. Consider the antipassive in Kalkatungu in (1)–(2):

(1) Kalkatungu

marapai-thu	*rumpa-mi*	*ithirr*	*matyamirla-thu*
woman-ERG	grind-FUT	seed-(NOM)	grindstone-ERG

'The woman will grind the seed with the grindstone.'

(2) Kalkatungu

marapai	*rumpa-yi-mi*	*ithirr-ku*	*matyamirla-thu*
woman.NOM	grind-AP-FUT	seed-DAT	grindstone-ERG

'The woman will grind seed with the grindstone.'
(Blake 1994)

The clause in (2) has the hallmarks of prototypical antipassive (see, e.g., Dixon and Aikhenvald 2000:9): applying to a transitive clause in (1), the antipassive marker *-yi-* forms a derived intransitive, whereby the underlying A becomes S, while the underlying O acquires a peripheral function and receives the instrumental case marking. However, the antipassive clause shows some further difference from a corresponding transitive clause. In (1), the verbal predicate 'grind the seed' is telic, since the event has an inherent endpoint associated with the spatial extent of the patient. The DP *ithirr* 'the seed' refers to a specific quantity of seed, and as soon as this quantity is ground, grinding necessarily culminates. In contrast, in (2) the demoted patient DP is interpreted similarly to bare uncountable DPs in English whereby it does not denote a specific quantity of seed. Grinding seed, then, does not involve an inherent endpoint, hence the clause in (2) is atelic. Crucially, the difference in telicity (as well as in the interpretation of the patient DP) can only be attributed to the antipassive, since no other trigger of the actional shift can be detected in (2).

In the literature, one can easily find a lot of empirical data, extensive discussion, and various theoretical considerations about the same or similar phenomena. Hopper and Thompson (1980: 268) indicate that antipassive clauses (as opposed to transitive clauses) tend to have the imperfective aspect, partitive or indefinite patient, and stative or involuntary verb. Tsunoda (1988) points out that antipassivization produces a corollary effect of changing the aspectual value of the verb from perfective to imperfective. Bittner and Hale (1996) observe that the antipassive may introduce "atelic aspect" or irrealis mood. Cooreman (1994) indicates that antipassives induce habitual, iterative or distributive aspectual change in the predicate; furthermore, they frequently imply low affectedness of the patient in a sense that the effect of the event on the patient is incomplete or temporary. Van Valin (2004) cites data from Dyirbal (via Dixon 1972) and Sama (via Walton 1986) showing that antipassivization can yield atelicity. A lot of other connections between aspect, actionality, and antipassive are discussed in detail in Dixon (1994). Finally, aspect and actionality have been a constant topic within studies of antipassive in individual languages (e.g., the relevant literature on Eskimo-Aleut languages includes at least Bittner 1987; Benua 1995, 2000; Seigel 1997; Spreng 2001, 2006, Beach 2003, Johns 2006; see also Smith-Stark 1978, Pye and Quixtan Poz 1988, Davies and Sam-Colop 1990 on Mayan, Tchekoff 1985, Austin 2005 on Australian, Rude 1988 on Penutian, Gerdts 1988, Cooreman 1988 on Austronesian, Gerdts and Hukari 2005 on Salish languages).

The basic intuition behind different proposals accounting for why antipassivization triggers atelicity, as in (1)–(2), is virtually the same: the antipassive highlights the agent and its activity and backgrounds the patient and the change of its state. Since it is the patient/direct object that "measures out" the event, as we know from theories of aspectual composition (Krifka 1989, 1992, 1998, Tenny 1994, Verkuyl 1972, 1993, 1999, Rothstein 2004, a. o.), its backgrounding through demotion or suppression amounts to removal of the inherent endpoint of an event and makes the clause atelic.

The idea of patient backgrounding can be implemented in different ways. Functional theories highlight discourse-related aspects of backgrounding. Givón (1984), for instance, observes that the antipassive is used when the degree of referentiality, topicality, or discourse importance of the object is low. In contrast, formal theories tend to reduce backgrounding to some or other sort of structural deficiency of the internal argument. The incorporation theory of antipassive (Baker 1988) assumes, for instance, that the antipassive morpheme is an incorporated noun that merges as an internal argument of a transitive verb (see, e.g., Hale 2002 for the analysis of the antipassive in K'ichee' (Mayan) along these lines). Bowers (2004), on the other hand, suggests that the internal argument is realized as PRO in antipassive clauses.

Semantically, as many theorists agree (see, e.g., Krämer and Wunderlich 1999:455, Wharram 2003), antipassivization involves existential binding of the patient,[1] and this is the reason why antipassive clauses are atelic: such an operation, as Krämer and Wunderlich (1999:455) indicate, "takes the possible effects for granted and focuses on the action taken by the agent".

Evaluation of various analyses of antipassives goes far beyond the scope of this paper. In what follows, I will try to answer a question that, to the best of my knowledge, has not been addressed so far. If antipassivization can affect actional characteristics of a predicate, can it be the case that *actional modification results in antipassivization*? Below I will try to show that this is exactly what happens in Godoberi (North Caucasian, Nakh-Daghestanian, Andic). Godoberi is listed in Polinsky 2005 among languages that possess the antipassive. However, I will argue that the lexical and syntactic distribution of the "antipassive" marker in Godoberi is best accounted for on the assumption that the patient suppression is driven by a more general mechanism of detelicization. In this respect, Godoberi and Kalkatungu exemplified in (1)–(2) represent, in effect, the opposite cases: in the latter, antipassivization makes a clause atelic, in the former, antipassive clauses are created by detelicization.

The rest of the paper is structured as follows. In Section 2, I will present data from Godoberi, outline a previous analysis of these data in terms of antipassivization, and mention a few problems for this analysis. In 2.3, I will propose an alternative: the detelicization hypothesis (DH). DH states that Godoberi possesses a grammatical mechanism of suppressing the telic interpretation of verbal predicates and that antipassivization effects emerge as a by-product of detelicization. Sections 3–5 are devoted to elaborating DH and testing its predictions. Section 3 provides an overview of actionality in Godoberi and identifies two major actional classes: verbs with lexically vs. compositionally determined (a)telicity. Section 4 plays a central role in the study. Here I account for all grammatical and semantic manifestations of detelicization, showing, in particular, that the antipassivization effects only obtain if telicity of the verbal predicate is determined compositionally. Section 5 extends main generalizations of Section 4 to reduplicated verbs, which are also problematic for the traditional analysis. Main findings of the study as well as wider cross-linguistic implications are summarized in Section 6.

2. Argument suppression in Godoberi

2.1. Basic examples

To begin with, consider (4a–c) from Kibrik 1996:258:

(3) a. *ʕali-di q'iru b-el-ata-da.*
Ali-ERG wheat N-thresh-IPFV.CONV-AUX
'Ali is threshing wheat.'
b. *ʕali w-ol-a-da.*
Ali M-thresh-A.CONV-AUX
'Ali is threshing.'

(3a) is an example of a transitive clause involving the ergative-absolutive alignment, whereby the Absolutive DP triggers verbal agreement. Morphologically, the verb form in (3a), the periphrastic Present,[2] consists of the Imperfective Converb in *-ata-* and a cliticized present tense auxiliary *-(i)da* (see Appendix for a partial verbal paradigm). (3b) demonstrates a clause in which the single argument corresponding to the agent in (3a) is represented by the absolutive DP that triggers agreement. Morphologically, in (3b) a different form of the lexical verbs occurs, which is referred to as *"antipassive converb in –a"* in Kibrik 1996. From now on, I will label this form as *A-converb*; accordingly, periphrastics based on the A-converb (see Appendix) will be referred to as *A-forms* (A-Present, A-Preterite, and so on).

(4) shows that the verb stem *b-eli* 'thresh' is lexically transitive. Since the transitive clause containing the Present form of the verb in (3a) and the intransitive one with the A-Present in (3b) are equally morphologically marked, the direction of derivation is not immediately obvious. But in (4a–b) the Preterite, the least morphologically marked verb for m occurs, and as the ungrammaticality of intransitive (4b–c) suggests, *b-eli* is indeed transitive.

(4) a. *ʕali-di q'iru b-eli.*
Ali-ERG wheat N-thresh.PST
'Ali threshed (the) wheat.'

b. **ʕali w-oli.*
Ali M-thresh.PST
'Ali did (some) threshing.'

c. **q'iru b-eli.*
wheat N-thresh.PST
'The wheat got threshed.'

Given that (3b) involves detransitivization through the patient suppression, and this process is formally marked by the *-a-* morpheme, one has every reason to suggest that (3b) is a result of antipassivization of (3a). Actually, this is what Kibrik (1996) proposes:

(5) What happens in antipassives in terms of both semantic derivation and grammatical marking is that *patient is altogether suppressed* and *agent is highlighted*, both semantically (becomes the sole distinct participant of the event) and referentially (is the topic). (Kibrik 1996:142)

However, further observations show that there are facts not predicted by the antipassive analysis: the distribution of A-forms differ significantly from that of prototypical antipassives. We will see this in the next section.

2.2. Problems for the antipassive analysis

2.2.1. Intransitive verbs. The crucial observation about the lexical distribution of A-form is: less than half of the verbs that can combine with the A-morpheme are transitive. Kibrik (1996: 144) lists the following transitive verbs that form the A-converb:

(6) Transitive verbs producing A-forms

b-eʟ'i ‘plow’, *b-eli* ‘thresh’, *č'anč'adi* ‘chew’, *harqi* ‘mill’, *ĩhi* ‘do, make’, *kanni* ‘plane (wood)’, *lami* ‘lick’, *q^{w}ardi* ‘gnaw’, *quqabi* ‘saw’, *susuk'i* ‘sift’, *šunni* ‘sniff’, *šːami* ‘whistle’, *šːušːuk'i/šːušːudi* ‘whisper’, *χːanni*‘mow’, *χːudi* ‘drink’, *χ^{w}ardi* ‘dig’.

A-forms are not restricted to verbs in (6), however: they can readily be derived from intransitives:

(7) Intransitive verbs producing A-forms
b-ikːi ‘laugh’, *burdi* ‘fly’, *gergeči* ‘dangle’, *girgisi* ‘tremble’, *gulati* ‘talk’, *ħãjdi* ‘play (intr.)’, *hališːi* ‘look’, *čabi* ‘defecate’, *ħapi* ‘bark’, *hikːut'i* ‘leak’, *ħinčːidi* ‘sneeze’, *k'anc'i* ‘jump’, *k^{w}ːardi* ‘swim’, *oħudi* ‘cough’, *qadi* ‘cry’, *ʁumi* ‘sleep’, *χːamdi* ‘scold’, *wõwõdi* ‘howl’, *χaradi* ‘whirl’ , *ɬunq'idi* ‘sob’, *žurdi* ‘crawl’.

When applied to intransitives, the *-a-* morpheme does not affect the argument structure of a predicate: the single argument is still in the subject position, cf. (8a) and (8b). And as (8c–d) indicate, the A-Present *qad-a-da* cannot go without its argument, nor with the argument demoted to the Dative, Contessive or Contelative, most common case forms that mark oblique arguments in Godoberi.

(8) a. *pat'imati* *qad-ata-da.*
Fatima cry-IPFV.CONV-AUX
‘Fatima is crying.’

b. *pat'imati* *qad-a-da.*
Fatima cry-A.CONV-AUX
‘Fatima is crying.’

c. **qad-a-da.*
cry-A.CONV-AUX
‘There is (some) crying.’

d. **pat'imati-ɬi* || *pat'imati-č'u* || *pat'imati-č'u-ru* *qad-a-da.*
Fatima-DAT Fatima-CONT Fatima-CONT-EL cry-A.CONV-AUX
‘There is (some) crying to || at || from Fatima.’

If the function of the antipassive is backgrounding the patient and foregrounding the agent, we only expect to find transitive stems in the antipassive form. Productive “antipassivization” of intransitives comes out as a complete surprise.

Furthermore, many of the intransitive verbs in (7) (e.g., *b-ikːi* ‘laugh’, *gulati* ‘talk’, *ħãjdi* ‘play (intr.)’, *hališːi* ‘look’, *k'anc'i* ‘jump’, *k^{w}ːardi* ‘swim’, *χːamdi* ‘scold’) are agentive. Such verbs lack the patient argument altogether, while the agent, by virtue of being a single argument, is maximally foregrounded to begin with. Cross-linguistically, such verbs are least likely to accept the antipassive marking — yet, A-forms from these verbs are readily available.[3]

2.2.2. Transitive result verbs. The next observation is that there is a class of transitive stems that do not produce A-forms. Consider (9):

(9) **ima* *χ^{w}ab-a-da.*
father open-A.CONV-AUX
‘(My) father is opening (something).’

Other transitive verbs that pattern with *χ^{w}abi* ‘open’ in disallowing A-forms are, e.g., *b-aqani* ‘break’ and *qabali* ‘tear’. What these verbs have in common is that they all are instances of Rappaport

Hovav and Levin's (1998) result verbs. But if the antipassive operates on the argument structure and enforces patient demotion, what prevents it from applying to transitive result verbs?

In the literature, one can easily find examples of antipassivized result verbs, as in (13) from West Greenlandic Inuttut (Sadock 2003):

(10) a. *Toquppaa.*
toqut-Va-a
kill-IND.TR-3s/3s
'He killed him.'

b. *Toqutsivoq.*
toqut-si-Vu-q
kill-AP-IND.INTR-3s
'He killed (something), he committed a murder.'

Rasmussen (2002) cites a lot of examples from Keekonyokie Maa (Nilo-Saharan) in which the antipassive applies to result verbs, as in (11) with the Present and Past of the verb 'close':

(11) a. *è-y-kén-íshó*
3-CL-close-AP.PRS
'He is closing (something).'

b. *è-y-kén-ˈíshé*
3-CL-close-AP.PST
'He did the closing.'

As examples like (10)–(11) clearly illustrate, there are no principled constraints that prevent the antipassive from being combined with result verbs. If so, the antipassive analysis does not explain why A-forms cannot be derived from 'open' and 'break'.

2.2.3. Obligatory reduplication. The third fact problematic for the antipassive analysis is that there is a class of verbs that must be reduplicated to enable the formation of A-forms:

(12) a. *maħamadi ʁumi.*
Mohammed fall.asleep
'Mohammed fell asleep.'

b. *maħamadi ʁumʁud-a-da* || **ʁum-a-da.*
Mohammed fall.asleep(Red)-A.CONV-AUX fall.asleep-A.CONV-AUX
'Mohammed is sleepy (sleeping and waking up all the time).'

In (12a), the Preterite of *ʁumi* 'fall asleep' occurs, and (12b) illustrates the A-Present of the same verb that can only be formed from the reduplicated stem *ʁumʁad-*/*ʁumʁud-*.

Reduplication in Godoberi does not change the argument structure of a verb. As examples in (13) show, it does not make a transitive verb out of the intransitive:

(13) a. *maħamadi ʁumʁadi.*
Mohammed fall.asleep(Red).PST
'Mohammad was sleepy (falling asleep and waking up all the time).'

b. **imu-di maħamadi ʁumʁadi.*
father-ERG Mohammed fall.asleep(Red).PST
'The father made Mohammed sleep.'

Had it been the case, this could have explained why the antipassive applies after reduplication: the output of reduplication would have been a transitive clause, a suitable input for antipassivization. But comparing (13a–b) to (12a) shows that reduplicated and non-reduplicated verbs are both intransitive.

A few other verbs that, like *ʁumi* ‘fall asleep’, require reduplication to produce A-forms, are listed in (14):

(14) *k'ardi* ‘vomit’, *t'urdi* ‘drip’, *sːurdi* ‘slide’, *k'anc'i* ‘jump’, *qardi* ‘comb’, *ganni* ‘drag’

Under the antipassive analysis, it is difficult, if at all possible, to explain the implicational relation between “antipassivization” and reduplication.

2.3. An alternative: detelicization

A solution to the puzzles outlined above begins to emerge if we take into account that, crucially, all clauses containing VPs headed by the A-converb are atelic. All of them pass the most reliable diagnostic for atelicity, co-occurrence with measure adverbials like ‘for two hours’, and are incompatible with time-span adverbials like ‘in two hours’.

Consider the verb *b-eli* ‘thresh’ again. In (15), its non-derived form occurs:

(15) a. *ʕali-di k'eda saʔati-di q'iru b-eli.*
Ali-ERG two hour-ERG wheat N-thresh.PST
‘Ali threshed wheat for two hours.’

b. *ʕali-di k'eda saʔati-ʟi q'iru b-eli.*
Ali-ERG two hour-INTER wheat N-thresh.PST
‘Ali threshed (a specific quantity of) wheat in two hours.’

The verb *b-eli* ‘thresh’ in (15a–b) allows for both telic and atelic interpretations. (15a) indicates that the agent was involved in a wheat-threshing activity that started at some time in the past, continued for two hours and stopped at some other point in the past. In contrast, (15b) is an accomplishment: it entails that there was a certain amount of wheat that has been threshed completely, and this happened within the period of two hours.

In Godoberi, like in English, telicity of VP and of the whole clause depends on the reference properties of the patient. If the patient DP based on a mass noun refers to a specific quantity of substance, as in (15b), the VP is telic (cf. English *thresh the wheat in two hours*), while the indefinite interpretation of the patient DP, as in (15a), yields atelic VPs (cf. English *thresh wheat for two hours*).

Compare (15) with (16), in which the A-Preterite occurs:

(16) a. *ʕali k'eda saʔati-di w-ol-a w-uk'a.*
Ali two hour-ERG M-thresh-A.CONV M-AUX.PST
‘Ali threshed/was threshing for two hours.’

b. **ʕali k'eda saʔati-ʟi w-ol-a w-uk'a.*
Ali two hour-INTER M-thresh-A.CONV M-AUX.PST
‘Ali threshed (something) in two hours.’

(16a) refers to the activity performed by the agent that lasts for two hours without attaining a culmination. As inappropriateness of the time-span adverbial in (16b) suggests, the verbal predicate *wola wuk’a* is not associated with any natural endpoint at which the activity necessarily ends. The A-form form is therefore obligatorily atelic.

The same is true of A-forms of *qadi* ‘cry’ in (8). Intransitives like *qadi* ‘cry’ allow for both telic and atelic interpretations in their non-derived form, (17a), but can only be atelic in the A-form, (17b):

(17) a. *pat'imati* *qadi.*
Fatima cry.PST
1. 'Fatima started crying.'
2. 'Fatima cried (for a certain time).'
b. *pat'imati* *qad-a* *j-ik^{w}a.*
Fatima cry-A.CONV F-AUX.PST
1. *'Fatima started crying.'
2. 'Fatima cried/was crying (for a certain time).'

The verb *qadi* 'cry', unlike its English counterpart, is actionally ambiguous, as (17a) shows: it can refer to the atelic process of crying in (17a.2) as well as to the entry into this process in (17a.1) (the latter interpretation is the first choice of native speakers in the null context, see Section 3.3 for more details). Again, in contrast with the non-derived verb, the A-form, as we see from (17b), can only receive an atelic interpretation. A similar observation can be made about other verbs listed in (6) and (7).

Examples like (16)–(17), together with the observations in Section 2.2.1, suggest that atelicity is what all the occurrences of A-forms have in common, while the patient suppression only characterizes their subclass. Now we are in a position of formulating a hypothesis about the function of A-forms in Godoberi:

(18) Detelicization hypothesis (DH)
Applying to a verbal predicate, the morpheme *-a-* induces detelicization, that is, actional modification that suppresses the telic interpretation.

DH makes a correct prediction about the atelicity of A-forms. Moreover, this hypothesis accounts straightforwardly for the fact that the *-a-* morpheme applies to both transitive and intransitive verbs: since its primary function is detelicization, its distribution is not expected to be restricted to transitives. It may be not immediately clear, however, how DH deals with other facts described in 2.2: why reduplication, why not result verbs, and most importantly, why patient suppression. In subsequent sections, I will show that DH explains these facts as well. But before examining these far-reaching consequences of DH, an overview of actionality in Godoberi is due.

3. Actionality

3.1. Two sources of (a)telicity

Main classes of verbs in Godoberi are represented in Figure 1. As the reader can easily see, this classification departs in a number of ways from Vendler's (1957/1967) four-way distinction between states, activities, accomplishments and achievements and as well as from its later developments (Bach 1986, Bache 1995, Breu 1994, 1996, Bulygina 1982, Comrie 1976, Dahl 1981, Dowty 1979, 1986, Filip 1999, Krifka 1989, 1992, Mourelatos 1978/1981, Moens 1987, Moens and Steedman 1988, Paduceva 1996, Parsons 1989, 1990, Rothstein 2004, Smith 1991, 1995, 1996, Verkuyl 1972, 1993, 1999, among many others).

<FIGURE 1 AROUND HERE>

First and foremost, I assume that the primary distinction is between verbs that are lexically specified for telicity and those that are lexically underspecified. By themselves, the latter are

neither telic nor atelic: telicity of complex predicates based on such verbs is calculated compositionally by taking into account properties of their *incremental argument*. Depending on the semantic type of this argument, such verbs are further divided into two subclasses, incremental theme verbs, and incremental path verbs.[4] They will be discussed and illustrated in more detail shortly.

(A)telicity of the rest of verbs is lexically specified and is not sensitive to the characteristics of arguments. This class of verbs falls into three subclasses: *obligatorily telic*, *obligatorily atelic*, and *actionally ambiguous*. Telic verbs include the majority of Vendler's accomplishments (e.g. *χʷabi* 'open', *qabali* 'tear', *hiši* 'close') and achievements (e.g. *b-isã* 'find'); atelic verbs include Vendler's states, and some of Vendler's activities. The difference between accomplishments and achievements, on the one hand, and between states and atelic activities is not significant for the further discussion and will not be addressed. Finally, within the class of actionally ambiguous verbs two major groups can be identified: *process-ingressive verbs* and *semelfactive-multiplicative verbs*. The former can refer to an atelic eventuality or to a telic inception of that eventuality; the latter describe a punctual or near-punctual change of state or an indefinite number of repetitions of that change of state.

Let us now take a closer look at verbs representing different classes from Figure 1.

3.2. Compositional (a)telicity

Semantic theories, mostly formal, but also functional have been interested in how telicity interacts with properties of arguments at least since Verkuyl 1972. The main observation here is that sentences like (19a) are telic, but those like (19b) are atelic:

(19) a. John ate an apple || a plate of soup {in two minutes || *for two minutes}.
b. John ate apples || soup {??in two minutes || for two minutes}.

In (19a–b), the same verb form *ate* is used, so the difference in telicity can only be attributed to the properties of the direct object. In (19a), the direct object is a singular countable DP *an apple* or *a plate of soup* whereas in (19b) the bare plural DP *apples* or mass DP *soup* occur.

In Godoberi, much the same interaction between telicity and properties of arguments is attested, cf. (20a–b):

(20) a. *ʕali-di* *k'eda* *minuti-ʟi* *ɬeni-ʟi* *buraʟi* *χːudi.*
Ali-ERG two minute-ERG water jug drink.PST
'Ali drank a/the jug of water in two minutes.'
b. *ʕali-di* *k'eda* *minuti-di* *ɬeni* *χːudi.*
Ali-ERG two minute-ERG water drink.PST
'Ali drank water for two minutes.'

In (20a), 'drink a jug of water' is telic, similarly to 'eat a plate of soup' in (20a). In contrast, 'drink water' in (20b) is atelic, exactly as 'eat soup' in (20b).[5]

Various theories have been developed to explain phenomena like that in (19)–(20). In what follows, I will rely on Krifka's (1989, 1992, 1998) mereological account for (a)telicity. In a nutshell, Krifka suggests that natural language predicates, both nominal and verbal, can be characterized in terms of *cumulativity* and *quantization*. A predicate is quantized iff whenever it applies to an entity, it does not apply to its proper parts. Thus, for instance, the predicate *apple* is quantized since no part of any apple is an apple. Similarly, *eat an apple,* if analyzed as an event predicate, is quantized, since no proper part of an event in which an apple is eaten is an event in which an apple is eaten. In contrast, *apples* and *eat apples,* if analyzed as predicates, are not quantized. Any part of an entity to which *apples* meaningfully applies falls under the denotation

of *apples* as well (down to individual apples), and whenever an event can be described as *eating apples*, the same is true of its parts (down to individual apple-eatings).

A predicate is cumulative iff sums of entities from its denotation are in its denotation, too. *Apples* is cumulative, since two portions of apples count as *apples*. Similarly, if someone eats apples from 3 p.m. to 4 p.m. and from 4 p.m. to 5 p.m., it is true that he eats apples from 3 p.m. to 5 p.m. In contrast, *apple* is not cumulative, since an entity consisting of two apples is not an apple. Nor is the predicate *eat an apple* cumulative: two eatings of an apple does not amount to one eating of an apple.[6]

Telic verbal predicates, not taking into account a few special cases not relevant for the present discussion, are quantized and not cumulative, while atelic predicates, conversely, are cumulative and non-quantized. Given that *an apple* and *a plate of soup* in (19a), as well as 'a jug of water' in (20a), if analyzed as nominal predicates, are quantized and not cumulative, while *apples* and *soup* in (19b) and 'water' in (20b) are cumulative and not quantized, the generalization follows: the cumulativity and quantization status of the direct object (*an apple, a plate of soup, a jug of water* vs. *apples, soup, water*) determines that of the verbal predicate (*eat an apple, eat a plate of soup, drink a jug of water* vs. *eat apples, eat soup, drink water*).

The crucial component of the theory identifies a condition which is necessary and sufficient for the properties of an argument to determine those of a verbal predicate. Transfer of reference properties obtains when the relation between the argument and the event denoted by the verb is *incremental*. If somebody eats an apple, this apple gradually disappears, and change that happens to the apple corresponds to the progress of the eating event: every part of the apple is mapped to some part of the event and vice versa. The incremental relation is thus a one-to-one mapping between parts of the objects and parts of the event.[7] Due to this mapping, which is a homomorphism with respect to the part structure of the argument (see Krifka 1989, 1992, 1998), whatever quantization/cumulativity status the argument has, the verbal predicate will have the same.

In (19)–(20), the relation between the patient and the event is incremental, and the temporal progress of the event corresponds to the spatial extent of what is being eaten/drunk. Therefore, the theory correctly predicts that (19a) and (20a) are telic (since the incremental arguments *an apple*, *a plate of soup* and *a jug of water* are quantized and not cumulative), while (19b) and (20b) are atelic (because *apples*, *soup*, and *water* possess the opposite properties).

The incremental relation can hold not only between an event and incremental theme. Predicates based on verbs of motion (as in *drive from New York to Chicago* or *swim the channel*) define the incremental relation between an event and a path traversed by an argument (hence the term incremental path (Dowty 1991), parallel to incremental theme). The more the driving (or swimming) event develops, the bigger part of the path from New York to Chicago (or of the path across the channel) is covered.

Unlike incremental themes, however, incremental paths need not be syntactically realized. Paths can be identified indirectly, by locative adjuncts referring to the source and goal of motion, its length, etc. Crucially, incremental path verbs yield telic predicates, if the path is quantized, and atelic predicates otherwise:

(21) John walked for two minutes || ??in two minutes.

(22) John swam the channel in two hours || ??for two hours.

(23) John ran 7 km in an hour || ??for an hour.

(24) John walked to the station in two minutes || ??for two minutes.

In (24), for example, the adjunct PP specifies the goal, making the path quantized. As a result, the verbal predicate that denotes movement along this path is quantized, too: since a part of the path to the station is not a path to the station, walking a part of the path to the station is not walking to the station. (22)–(23) are other examples of a quantized path: no part of the path across the channel is a path across the channel, and no part of a 7km path is a 7km path. Both sentences are telic, as expected. In (21), in which no overt constituent refers to a path, it gets an existential interpretation ('there is a path walked'). As a result, (21) fails to be quantized: if *e* is an event in which some path has been walked, any part of *e* is an event in which some (shorter) path has been walked. And as the measure adverbial *for two hours* indicates, (21) is atelic.

As far as characteristics of incremental path verbs are concerned, Godoberi patterns with English again. Consider (25a–b) with the verb *burdi* 'fly':

(25) *a.* *samalot* *k'eda* *saʔati-di* *burdi.*
plane two hour-ERG fly.PST
'The plane was in flight for two hours.'

b. *??samalot* *k'eda* *saʔati-ʟi* *burdi.*
plane two hour-INTER fly.PST
'The plane was in flight in two hours.'

Similarly to (21) from English, in (25) the path is implicit and is interpreted existentially ('there is a path covered by the plane'). Therefore, the sentence is atelic, accepting a measure adverbial in (28a) and disallowing a time-span adverbial in (25b).

(26) differs from (25) in that the goal PP *maskwa-jalda* 'to Moscow' specifies the goal of the flight:

(26) a. *samalot* *k'eda* *saʔati-ʟi* *maskwa-jalda* *burdi.*
plane two hour-INTER Moscow-PLACE fly.PST
'The plane reached Moscow (lit. flew to Moscow) in two hours.'
b. **samalot* *k'eda* *saʔati-di* *maskwa-jalda* *burdi.*
plane two hour-ERG Moscow-PLACE fly.PST
'The plane was in flight to Moscow for two hours'.

Again, in (26), which is parallel to (24), specifying a goal makes a path quantized, and the whole sentence is telic.

3.3. Lexical (a)telicity

If an argument does not stand in the incremental relation to an event, its properties do not affect telicity. For verbs that denote such non-incremental relations, the whole range of actional interpretations must be lexically specified. In Figure 1, such verbs fall into three major types — obligatorily telic, obligatorily atelic and ambiguous.

The former two behave in much the same way as their counterparts in other languages. Thus, *obligatorily telic* verbs include a wide variety of lexical items that are traditionally characterized as accomplishments or achievements. In particular, Rappaport Hovav and Levin's (1998 and elsewhere) result verbs like 'break' or 'open' can be found in this actional class:

(27) *im-u-di* *{k'eda* *minuti-ʟi* || **k'eda* *minuti-di}* *hincu* *χʷabi.*
father-OBL-ERG two minute-INTER two minute-ERG door open.PST
'My father opened the door {in two minutes || *for two minutes}.'

As inappropriateness of the measure adverbial *k'eda minutidi* 'for two minutes' indicates, the only reading of (27) is telic, whereby the event culminates and the door attains a state of being open. Note that result verbs are non-incremental — it is not the case, for instance, that the more one opens a door, the larger part of the door is open. Their telicity is thus not compositional but lexical: as Rappaport Hovav and Levin (1998 and elsewhere) suggest, among many others, its source is a result state specified in the lexical representation.

The same is true of punctual or near punctual change of state verbs like *ʁumi* 'fall asleep' in (28) (see also (12a) above):

(28) *maħamadi* *{k'eda* *minuti-ʟi* ‖ **k'eda* *minuti-di}* *ʁumi.*
Mohammed two minute-INTER two minute-ERG fall.asleep.PST
1. 'Mohammed fell asleep in two minutes.'
2. *'Mohammed slept for two minutes.'

(28) refers to a change of state (from 'not sleep' to 'sleep') and cannot describe a state of sleeping, which comes to existence after the culmination, hence the measure adverbial 'for two minutes' cannot pick out the duration of this state.

Instances of *obligatorily atelic* verbs are less frequent in Godoberi: the majority of potential candidates for being atelic allow not only an atelic, but also an ingressive interpretation, which will be discussed shortly. One instance of genuine atelicity is *b-ihi* 'live' in (29):

(29) *maħamadi* *anži-jalda* *w-uhi.*
Mohammed Makhachkala-PLACE M-live.PST
1. 'Mohammed lived in Makhachkala (for some time).'
2. *'Mohammed settled down in Makhachkala.'

So far we have seen that the actional system of Godoberi resembles that of English. However, Godoberi exhibits much more actional ambiguity than English does, and it is *actionally ambiguous verbs*, allowing for both telic and atelic interpretations, that are most significant for our present discussion. They fall into two major subtypes, *process-ingressive* and *semelfactive-multiplicative*.

Process-ingressive verbs can refer to a process (atelic interpretation) as well as to an entry into that process (telic interpretation). We have already seen one member of this class, *qadi* 'cry', in (8) and (17). Other examples include *b-ikːi* 'laugh', *wõwõdi* 'howl', *sːurdi* 'slide', *χaradi* 'whirl', *gulati* 'talk', *hališːi* 'look', and a lot of other lexical items. Consider (30) with *gulati* 'speak, talk':

(30) a. *maħamadi* *pat'imati-ʟi* *gulati.*
Mohammed Fatima-INTER speak.PST
'Mohammed started talking about Fatima.'
b. *maħamadi* *{k'eda* *saʔati-di* ‖ **k'eda* *saʔati-ʟi}* *pat'imati-ʟi* *gulati.*
Mohammed two hour-ERG two hour-INTER Fatima-INTER speak.PST
'Mohammed talked about Fatima {for two hours || *in two hours}.'

(30a) demonstrates an ingressive interpretation of *gulati* involving a culmination in which the process of talking is initiated. (30b), in contrast, refers to a talking process itself with no reference to its initiation. As the adverbial *k'eda saʔatidi* 'for two hours' indicates, (30b) is atelic.

Normally, English counterparts of verbs like *qadi* 'cry' are considered actionally unambiguous and uniformly characterized as Vendler's activities. If their ingressive uses are addressed at all, they are usually treated as some or other kind of 'derived', 'shifted' or 'coerced' actional type (see, e.g., de Swart 1998 for an articulated coercion theory of actional shifts). Remarkable exceptions are Breu 1994, 1996, Ebert 1995, Johanson 1971, 1996, 1999, and Sasse 1991 who discuss verbs akin to *qadi* in a number of languages. For such verbs, which are quite common in Altaic, Uralic, North-Caucasian and many other languages, they reserve a special class of bi-phasal verbs (Ebert), initiotranformatives (Johanson), and TTER+ACTI ("totally terminative" + "activity") verbs (Sasse). Breu 1994, 1996 separates inceptively stative verbs, a subclass of what I call here ingressive atelic predicates, that refer to a culmination as well as to a subsequent state. See also Tatevosov 2002 for a cross-linguistic survey of rare actional types of verbal predicates.[8]

There are two crucial pieces of evidence supporting the view that in languages like Godoberi verbs like *qadi* 'cry' and *gulati* 'speak' form a separate actional class. First, process and ingressive readings are readily available in the null context, without any trigger of shift and coercion, e.g., adverbials or aspectual operators. There are, therefore, no empirical reason to identify one of these interpretations as basic and another one as derived.

Secondly, and most significantly, verbs like *qadi* 'cry' and *gulati* 'speak' contrast sharply with true atelic verbs like *b-ihi* 'live' in (29) in that the latter are unable to acquire the ingressive interpretation. Even if combined with adverbials that favor the ingressive shift/coercion, e.g., 'suddenly', 'unexpectedly' or 'finally', *b-ihi* 'live' does not produce a 'start living, settle down' reading. Compare (31a) and (31b):

(31) *a.* *aχir-la* *pat'imati* *qadi.*
end-SUP Fatima cry.PST
1. 'Finally, Fatima started crying.'
2. ??'Finally, Fatima was crying (for a certain time).'

b. ??*aχir-la* *maħamadi* *anži-jalda* *w-uhi.*
end-SUP Mohammed Makhachkala-PLACE M-live.PST
1. *'Finally, Mohammed settled down in Makhachkala.'
2. ??'Finally, Mohammed lived in Makhachkala (for some time).'

If the adverb 'finally' co-occurs with a process-ingressive verb, it tends to force the ingressive interpretation. What happens in (31a) is actional disambiguation: the atelic interpretation in (31a.2) disappears, and the ingressive interpretation in (31a.1) is the only remaining option. In (34b), in exactly the same way, 'finally' eliminates the atelic interpretation in (34b.1). But unlike *qadi* 'cry', *b-ihi* 'live' does not possess the ingressive interpretation to begin with; nor does it acquire this interpretation through coercion. As a result, (31b) is extremely awkward, if not ungrammatical.

The difference between verbs like *qadi* 'cry' and *b-ihi* 'live' can hardly be captured unless their actional difference is properly recognized. If both are analyzed as activities, it remains unclear how to derive the ingressive interpretation for the former without obtaining the same result for the latter. Therefore, to explain data like (31a-b) it is necessary to treat these verbs as actionally distinct. Within the present system, this is done by separating obligatory atelic and process-ingressive actional classes.

Semelfactive-multiplicative verbs exhibit another sort of actional ambiguity. Consider *oħudi* 'cough' in (32):

(32) a. *ʕali* *k'eda* *minuti-di* *oħudi.*

Ali two minute-ERG cough.PST
'Ali coughed for two minutes.'

b. *ʕali (*k'eda minuti-di) oħudi.*
Ali two minute-ERG cough.PST
'Ali coughed (once) (*for two minutes).'

In (32a), the verb *oħudi* 'cough' exhibits a multiplicative interpretation (in terms of Xrakovskij 1986, 1989 and Dolinina 1996, 1999, see also Section 5) whereby the sentence refers to a complex process of coughing consisting of repeating atomic events. On this interpretation, the sentence is atelic, as the usual test demonstrates. In (32b), the same verb refers to a single quantum of the complex event, and the sentence fails to be atelic. Other verbs that can describe both single atomic events and their sums (e.g., *gergeči* 'dangle', *ħapi* 'bark', *k'anc'i* 'jump', *girgisi* 'tremble', *t'urdi* 'drip', *ɬunq'idi* 'sob') show the same range of interpretations.[9]

In the literature, one can find a number of suggestions about how verbs like *cough* in English should be categorized. While the majority analyze *cough* as an achievement, others assume that such verbs constitute a separate actional class, cf. Smith's (1991/1997) semelfactives, Bach's (1986) happenings, Moens' (1987) points. (For instance, Smith (1997:29–30) emphasizes that unlike true achievements, semelfactives are processes of very short duration that do not entail culmination, nor produce an outcome or result.) However, adherents of both positions tend to characterize multiplicative uses of such verbs as a product of semantic shift/coercion triggered by adverbials, aspectual operators, or by the context (see e.g., Smith 1997:53) — in much the same way as ingressive uses of activities. Finally, Rothstein (2004:183–187), too, shares the view that one of the interpretations is basic, and the second one is derived, but the direction of derivation she assumes is right the opposite. In her system, verbs like *cough* are basically activities, and their semelfactive uses are derived by what she calls a natural atomic function.

The two arguments that lead us to separating process-ingressive verbs from other actional classes are valid for semelfactive-multiplicative verbs as well and call for the same decision. Exactly as for process-ingressive verbs, two distinct actional interpretations are available for verbs like *oħudi* 'cough' in the null context, which leaves the claim that one of them is basic and the other is derived with little empirical support. And like for process-ingressive verbs, the range of interpretations of semelfactive-multiplicative verbs cannot be reduced to other actional classes. If the multiplicative interpretation is derived from the semelfactive one through coercion, one should expect that any verb that denotes a punctual or near-punctual change of state can be coerced in this way. This is not the case, however: obligatorily telic verbs like *ʁumi* 'fall asleep' do not allow for such a meaning shift:

(33) **maħamadi k'eda saʔati-di ʁumi.*
Mohammed two hour-ERG fall.asleep
'Mohammed was falling asleep (many times) for two hours.'

Assume, the other way round, that semelfactives (e.g., 'cough once') are derived from activities (e.g., 'cough many times') by the natural atomic function. On this assumption, it is difficult to explain why this function fails to apply to every predicate that possesses a process interpretation (e.g., to predicates like 'walk' or 'talk'), unless one admits that the denotation of 'walk' and 'talk', unlike that of 'cough' and 'jump', does not provide appropriate "natural atoms" to pick out. But this would mean that 'walk' and 'talk', on the one hand, and 'cough' and 'jump', on the other, differ as to the structure of their denotations, hence fall into different actional classes. I

conclude, therefore, that like process-ingressive verbs semelfactive-multiplicative verbs form a legitimate actional class distinct from other classes.

Now that we have established actional classes in Godoberi, we can go back to the detelicization hypothesis, test the predictions it makes for different actional classes, and see how the puzzling data from Section 2.2 are explained.

4. Detelicization: how it works

The detelicization hypothesis in (18) says that the *-a-* morpheme, which creates A-forms, is a detelicizer: its primary function is to remove the telic interpretation of the verbal predicate. Let us take a closer look at what the hypothesis predicts for different actional classes. In Section 4.1, we will see what happens to incremental verbs, for which (a)telicity is derived compositionally. In Section 4.2, verbs with lexically specified (a)telicity including actionally ambiguous process-ingressive and semelfactive-multiplicative verbs are discussed and systematic lexical restrictions on detelicization are identified.

4.1. Detelicizing incremental verbs

In this section, I show that for incremental theme verbs detelicization amounts to argument suppression and argue that it is in this way that antipassivization effects discussed in Section 2 obtain. My argument here is pretty simple. A characterizing property of incremental theme verbs is that they acquire the telic interpretation from their quantized arguments. Hence, suppressing the incremental argument of incremental theme verbs (and only of such verbs) in the syntax guarantees atelicity.

A similar argument extends to incremental path verbs. If the detelicizing morphology prevents an incremental predicate from being telic, it has to block syntactic realization of locative adjuncts, since it is these adjuncts that make an incremental path quantized and lead to telicity. As we will see shortly, this prediction is borne out precisely.

Now I will set out this line of reasoning in more detail.

4.1.1. Telicity and argument realization. In Section 3.2, we have established that telicity of verbal predicates based on incremental verbs is determined by their incremental argument. Now it is easy to see what happens if this argument is not syntactically realized: as (38) shows, the sentence is obligatorily atelic.

(34) John ate for ten minutes || $^{??}$in ten minutes.

Let us see why it is atelic. The natural intuition about (34) is that while the sentence does not convey information about what was eaten, it still entails that there was something. In other words, although the incremental theme is not mapped to a syntactic constituent, it is still present in the semantic representation of (34) and gets an existential interpretation.

In model-theoretic terms, the verb *eat* can be analyzed as having a lexical representation in (35a). (35a) says that this verb is a three-place relation between two individuals, agent and (incremental) theme, and an event in which the former eats the latter. If the agent position in (39) is saturated by a DP argument, while the incremental theme gets existentially bound, we get an event predicate in (35b) that partially represents the meaning of (34):

(35) a. || eat || = $\lambda y \lambda x \lambda e[\text{eat}(e) \wedge \text{agent}(x)(e) \wedge \text{theme}(x)(e)]$
b. || John eat || = $\lambda e \exists y[\text{eat}(e) \wedge \text{agent}(\text{John})(e) \wedge \text{theme}(y)(e)]$

(35b) denotes a set of eating events in which John is the agent and there is something that he eats. Essentially, the event predicate in (35b) is cumulative and not quantized, hence atelic. Indeed, if *e* is an event in which John ate something, a proper part of *e* is also an event in which there is something that John ate, hence (35) fails to be quantized. On the other hand, if it is true that John ate something in an event *e* and something else in an event *e'*, it is also true that John ate something in *e* and *e'*, so (35) is cumulative.

In English, syntactic realization of the theme argument of verbs like *eat* is optional, as in *John ate an apple* vs. *John ate*. Suppose that realization of the incremental theme is not allowed at all, and it gets existentially bound obligatorily. As soon as this happens, the predicate can only be atelic, since the only source of telicity — the quantized incremental theme — is not available anymore. In other words, whenever the incremental theme decides between telic and atelic interpretations, its suppression in the syntax removes the telic interpretation altogether.

But this is exactly what A-forms in Godoberi, according to DH, are supposed to do. If its function is filtering out the telic interpretation of a verbal predicate, then for incremental verbs like *eat*, *write,* and *thresh* suppressing an incremental argument will accomplish exactly this task, since telicity comes from that argument. If the incremental theme is present in the syntax, it can be either cumulative or quantized, hence the verbal predicate can be either telic or atelic. If it is suppressed syntactically, being existentially bound in the semantic representation, the verbal predicate can only be cumulative and not quantized, and the sentence containing this predicate can only be atelic. Therefore, the argument suppression guarantees detelicization. In this way, DH explains the 'antipassive' properties of A-forms.

4.1.2. Incremental theme verbs. If the above line of reasoning is correct, we can predict that application of the detelicizing morpheme only results in argument suppression for incremental theme verbs, since only these verbs acquire a telic interpretation from the argument. This prediction is borne out precisely, and this is one of the strongest arguments for DH.

Consider again transitive verbs listed in (6) that drop the patient argument after attaching the detelicizing morphology:

(36) Transitive stems:
b-eʟ'i 'plow', *b-eli* 'thresh', *č'anč'adi* 'chew', *harqi* 'mill', *ĩhi* 'do, make', *kanni* 'plane (wood)', *lami* 'lick', *q^{w}ardi* 'gnaw', *quqabi* 'saw', *susuk'i* 'sift', *šunni* 'sniff', *šːami* 'whistle', *šːušːuk'i/šːušːudi* 'whisper', *χːanni*'mow', *χːudi* 'drink', *χ^{w}ardi* 'dig'.

In this list, verbs *ĩhi* 'do, make', *χ^{w}ardi* 'dig', *b-eʟ'i* 'plow', *b-eli* 'thresh', *quqabi* 'saw', *kanni* 'plane (wood)', *χːanni* 'mow', *harqi* 'mill', *susuk'i* 'sift', *χːudi* 'drink' are prototypical incremental theme verbs, as expected.

Sound emission verbs like *šːami* 'whistle' and *šːušːuk'i/šːušːudi* 'whisper' are incremental if their patient is interpreted as the object of performance. When such a patient is quantized, it yields a telic interpretation:

(37)	*ʕali-di*	*k'eda*	*minuti-ʟi*	*kenč'i*	*šːami.*
	Ali-ERG	two	minute-INTER	song	whistle.PST

'Ali whistled a song in two minutes.'

Blocking syntactic realization of the patient yields an obligatorily atelic predicate, as before:

(38) *ʕali {k'eda minuti-di || *k'eda minuti-ʟi} šːam-a w-uk'a.*
Ali two minute-ERG two minute-INTER whistle-A.CONV M-AUX.PST
'Ali whistled {for two minutes || *in two minutes}.'

Verbs *šunni* 'sniff, smell' and *lami* 'lick' have incremental uses, too. Both of them allow for the interpretation in which the surface of the patient stands in the incremental relation to a sniffing/licking event. Again, both verbs are telic if the incremental theme is quantized, as illustrated in (39) with 'sniff':

(39) *χʷaji-di ce-b minuti-ʟi ʟ'edir šunni.*
dog-ERG one-N minute-INTER lamb sniff.PST
'The dog sniffed the lamb all about in a minute.'

As expected, by removing the patient the A-form creates a predicate that can only be atelic:

(40) *χʷaji {k'eda minuti-di || *k'eda minuti-ʟi} šunn-a b-uk'a.*
dog two minute-ERG two minute-INTER smell-A.CONV N-AUX.PST
'The dog sniffed around for two minutes || *in two minutes.'

Verbs *č'anč'adi* 'chew' and *qʷardi* 'gnaw' exhibit much the same behavior in allowing both non-incremental and incremental ('gradually destroy by gnawing/chewing') uses. Their A-forms behave like that of 'sniff' in (39): the patient is suppressed and the atelic reading becomes obligatory.

Crucially, no verbs are attested that do not take the incremental theme but do exhibit antipassivization effects when combined with the detelicizing morphology. On the antipassivization analysis of A-forms, this implicational relation between the incremental theme and antipassivization is mysterious, but on the detelicization analysis this is exactly what we expect.

One important but nevertheless fully predictable departure from this pattern are intransitive incremental verbs like 'melt' or 'rot' that possess a single theme argument standing in the incremental relation to an event. Similarly to transitive incremental theme verbs, they are telic if the incremental argument is quantized and atelic otherwise:

(41) a. *kokom k'eda zibu-ʟi tanni.*
plum two day-INTER rot.PST
'A/the plum rotted in two days.'
b. *kokom k'eda zibu-di tanni.*
plum two day-ERG rot.PST
'Plums ||*a/the plum rotted for two days.'

In Godoberi, nouns like *kokom* 'plum' are ambiguous between count and mass interpretations (thus, like other count nouns, they can be combined with numerical expressions, e.g. *k'eda kokom* 'two plums', but, like mass nouns, they do not accept plural number marking). If *kokom* is interpreted as a singular countable noun and is therefore quantized, as in (41a), the sentence is telic. In contrast, in (41b) *kokom* is cumulative, that is, identifying a plurality of plums as a mass[10] (similarly to bare mass DPs like *wheat* in English). Not surprisingly, (41b) is atelic. In (41), therefore, the same compositional effects are observed as with transitive incremental verbs: quantization/cumulativity of the argument corresponds to (a)telicity of the verbal predicate.

Since the source of telicity of verbs like *tanni* 'rot' is an argument, atelicity of such verbs can only be guaranteed by suppressing this argument in the syntax — in the same way as in case

of transitive incremental verbs listed in (36). However, impersonal clauses with no surface subject are ungrammatical in Godoberi. Consider (42):

(42) a. **tanni.*
rot.PST
'There was (some) rotting.'

b. **kokom-ɬi || kokom-č'u tanni.*
plum-DAT plum-CONT rot.PST
'There was (some) rotting to || at a/the plum.'

(42a–b) (cf. also (8c) above) demonstrate that the single argument cannot be unrealized, nor can it surface in oblique cases. Whatever the reason for this constraint is, one can predict that it prevents verbs like *tanni* from detelicization, since the output of detelicization would exactly be a clause with no DP in the subject position. This prediction is borne out again: forms based on the A-converb of incremental intransitives are consistently inappropriate, as examples in (43) show:

(43) a. **tann-a-da* 'rot'
b. **b-ic'-a-da* 'melt'
c. **č'irk'yat'-a-da* 'wither'

4.1.3. Incremental path verbs. The next piece of evidence supporting DH comes from incremental path verbs. If the function of A-forms is detelicization, we can predict that they block syntactic realization of adjuncts that make the path quantized, since quantized paths lead to telicity. This prediction is borne out, as (44) with the goal PP *maskwa-jalda* 'to Moscow' indicates:

(44) *samalot burd-a b-uk'a (*maskwa-jalda).*
plane fly-A.CONV N-AUX.PST Moscow-PLACE
'The plane flew/was flying (*to Moscow).'

In (44), suppressing the locative adjunct yields the same effect as suppressing the theme argument for incremental theme verbs: the source of quantization disappears. As a result, the path can only receive an existential interpretation, yielding an atelic verbal predicate.

Other manner of motion verbs listed in (7) (e.g., *k^{w}ːardi* 'swim' and *žurdi* 'crawl') exhibit exactly the same behavior, and DH thus receives additional strong support.

Now we are in a position of addressing detelicization of verbs for which (a)telicity is lexically specified.

4.2. Detelicization and lexical (a)telicity

In Section 3.3, four classes of verbs have been identified whose telicity comes from a lexical specification — lexically telic, lexically atelic, process-ingressive and semelfactive-multiplicative. One can expect, given DH, that detelicization of process-ingressive and semelfactive-multiplicative verbs results in disambiguation through the suppression of the telic interpretation, and this expectation is fulfilled.

For process-ingressive verbs, the detelicizing morpheme blocks the ingressive interpretation, creating a predicate that can only refer to a subsequent atelic process. One example of such possibility is (17b), repeated as (45):

(45) *pat'imati qad-a j-ik^{w}a.*
Fatima cry-A.CONV F-AUX.PST
1. *'Fatima started crying.'
2. 'Fatima cried/was crying (for a certain time).'

Unlike the Preterite *qadi* (see (17a)), the A-Preterite *qad-a j-ikʷ'a* in (45b) cannot have the ingressive interpretation and is obligatorily atelic. The same happens to *gulati* 'talk' in (46), cf. (30):

(46) *maħamadi (pat'imati-ʟi) gulat-a w-uk'a.*
Mohammed Fatima-INTER speak-A.CONV M-AUX.PST
1. 'Mohammed spoke/was speaking (about Fatima).'
2. *'Mohammed started speaking (about Fatima)'.

Similarly, for semelfactive-multiplicative verbs we predict that the multiplicative (atelic) interpretation can only survive after detelicization. The prediction is borne out, as (47) with *oħudi* 'cough' shows (cf. the non-derived form in (32) above):

(47) *ʕali oħud-a w-uk'a.*
Ali cough-A.CONV M-AUX.PST
1. 'Ali coughed/was coughing (for some time).'
2. *'Ali coughed (once).'

Two actional classes not discussed so far are unambiguously atelic and unambiguously telic verbs. A natural expectation about these verbs is that they do not accept detelicizing morphology at all.

Obligatory atelic verbs like *b-ihi* 'live' in (29) possess no telic interpretation to filter out. If the function of the *-a-* morpheme is to guarantee atelicity of a verbal predicate, its application to verbs like *b-ihi* 'live' is vacuous, since the output will be the same as the input. Indeed, speakers consistently judge sentences like (48) odd, if not ungrammatical.

(48) *??maħamadi anži-jalda w-uh-a w-uk'a.*
Mohammed Makhachkala-PLACE M-live-A.CONV M-AUX.PST
'Mohammed lived/was living in Makhachkala.'

We can expect that obligatorily telic verbs do not combine with the detelicizer either, although for a different reason. For such verbs, the telic interpretation is the only interpretation available. Obviously, the single interpretation cannot be suppressed, since otherwise a verbal predicate will denote an empty set of events.

An example of lexically telic verb is intransitive *ʁumi* 'fall sleep', see (33) above repeated as (49a):

(49) *a. maħamadi (*k'eda minuti-di) ʁumi.*
Mohammed two minute-ERG fall.asleep.PST
'Mohammed fell asleep (*for two minutes).'
*b. *maħamadi ʁum-a-da.*
Mohammed fall.asleep-A.CONV-AUX

The non-derived form in (49a) only possess a telic interpretation, and (49b) shows that the A-form is ungrammatical, as expected.

Now the reason why A-forms are not available for result verbs like 'open', 'break', and 'tear' (see Section 2.2.2) becomes clear. This happens because result verbs in Godoberi are unambiguously telic, falling within the same actional class as telic intransitives like *ʁumi* 'fall

asleep'. Therefore, result verbs are not a suitable input for detelicization: the only available interpretation cannot be suppressed.

Let us make a summary of the above observations. In this section we found three pieces of evidence supporting DH. First, we observed that antipassivization effects only obtain with incremental theme verbs, the only class of verbs whose telicity is determined by the quantization status of the internal argument. DH explains this restriction in a principled way: for these, and only for these verbs, suppressing an incremental argument necessarily results in atelicity. Secondly, we found that incremental path verbs pattern with incremental theme verbs: a constituent that induces telicity, most typically, the Goal PP, is not allowed under detelicizing morphology. Again, this is what DH predicts: to make sure that an incremental path predicate is atelic one has to get rid of locative adjuncts making the path quantized. Thirdly, the generalization that the distribution of A-forms is constrained by actionality is further supported by evidence from verbs whose (a)telicity is lexically specified. In accordance with DH, actionally ambiguous verbs lose their telic interpretation. Actionally unambiguous verbs do not combine with the detelicizing morphology at all, either avoiding vacuous modification or preserving the only available interpretation. Therefore, detelicization is essentially an *ambiguity resolution*: it only applies if a verbal predicate can potentially be interpreted as either telic or atelic.

Now we have all we need to account for reduplication data from Section 2.2.3.

5. Reduplication and detelicization

As discussed in Section 2.2.3, in some cases the A-converb can only be formed after reduplication. I will show that for a certain class of verbs reduplication stands in the feeding relation to detelicization, and it is for these verbs that A-forms must be derived from a reduplicated stem. Therefore, according to DH, detelicization-after-reduplication is what we expect.

Below, we will see how reduplication modifies actional characteristics of a verbal predicate. In Section 5.1 I will identify two main interpretations of reduplicated verbs, the multiplicative and distributive ones. Sections 5.2–5.3 provide detailed discussion of actional behavior of reduplicated verbs on these two interpretations. In Section 5.4 I will show how the actional meaning of reduplicated verbs interacts with detelicization.

5.1. Two interpretations

In Godoberi, reduplication[11] creates verbs that denote *pluralities* of events from the original denotation of a non-reduplicated verb stem. Consider (50a–b):

(50) *a.* *ʕali* *k'anc'i.*
Ali jump.PST
'Ali jumped (once).'

b. *ʕali* *k'anc'ac'i.*
Ali jump(Red).PST
'Ali jumped (a few times).'

Whereas (50a) refers to a single jump performed by the agent, (50b), in which the reduplicated verb occurs, involves multiple jumps.

There are two types of pluralities in the denotation of reduplicated stems. If individuals that participate in each atomic event are the same, as in (50b), the *multiplicative* reading obtains. If participants are different, as in (51), the interpretation is *distributive*:[12]

(51) *waši-bedi* *k'anc'ac'i.*
boy-PL jump(Red).PST
'The boys jumped (one after another and/or at difference places).'

In (51), similarly to (50b), there is a plurality of jumping events, but, unlike in (50b), each event is associated with its own subset of participants referred to by the subject DP 'boys'. The preferred reading of (51) involves distinct times or locations for atomic events: the sentence is odd if the boys jumped simultaneously at the same place (in the latter case, the non-reduplicated form is preferred).

With these observations, we are prepared to look at how reduplication affects telicity.

5.2. Distributivity and (a)telicity

Let us first look at two obligatorily telic verbs, intransitive *ʁumi* 'fall asleep' and transitive *kːanni* 'milk'. As we saw in (49a), *ʁumi* refers to a change of state from 'not sleep' to 'sleep', but cannot describe a state of sleeping. *kːanni* 'milk' in (52) fails to produce an atelic interpretation, too: it refers to an event that attains its culmination:

(52) *pat'imati-di {hac'ada minuti-ʟi ‖ *hac'ada minuti-di} zini kːanni.*
Fatima-ERG ten minute-INTER ten minute-ERG cow milk.PST
'Fatima milked a/the cow {in ten minutes ‖ ??for ten minutes}.'

Being obligatorily telic, both *kːanni* 'milk' and *ʁumi* 'fall asleep' disallow detelicization:

(53) **kːann-a-da*
**ʁum-a-da*

Let us see what happens if these verbs are reduplicated. Consider *kːankːadi* derived from *kːanni* first. In (54)–(55), the distributive reading of *kːankːadi* is illustrated:

(54) *pat'imati-di {hac'ada minuti-ʟi ‖ *hac'a-da minuti-di} zin-ē kːankːadi.*
Fatima-ERG ten minute-INTER ten minute-ERG cow-PL milk(Red).PST
'Fatima milked the cows (at distinct times or distinct locations) {in ten minutes ‖ *for ten minutes}.'

(55) *pat'imati-di {hac'ada minuti-di ‖ *hac'ada minuti-ʟi} zin-ē kːankːadi.*
Fatima-ERG ten minute-ERG ten minute-INTER cow-PL milk(Red).PST
'Fatima milked cows (at distinct times or distinct locations) {for ten minutes ‖ *in ten minutes}.'

Both (54)–(55) refer to a plurality of milking events whereby cows are distributed over atomic parts of this plurality. Crucially, on the distributive reading the reduplicated form allows for both telic, (54), and atelic, (55), interpretations. Furthermore, in these sentences the familiar compositional effect obtains: the atelic reading corresponds to the indefinite interpretation of the plural argument in (55), whereas telicity requires a specific quantity of cows in (54).

These effects are easily explained along the lines of the compositional theory of telicity discussed in Sections 3.1–3.2. Indeed, in (54)–(55) the relation between the overall plural event (consisting of atomic milkings) and *zinē* 'cows', the plural participant of this event, *is* incremental: the more milking of cows goes on, the more cows are milked. 'Cows' is therefore an incremental theme. If the incremental theme is quantized, that is, if the quantity of cows is contextually specified, as in (54), there will be a moment at which the last cow is milked, and the whole event necessarily culminates. The sentence is thus telic, exactly for the same reason as the sentence *John ate an apple* in (19a). But if the quantity of cows is not specified, as on the

indefinite interpretation in (55), the sentence is atelic, since [∅ cows], being cumulative and not quantized, do not provide a natural endpoint for the event 'Fatima milks cows'. Again, in (55) atelicity emerges in exactly the same way as in *John ate soup/apples* in (19b).

The same range of possibilities is available for *ʁumʁadi*, a reduplicated stem of *ʁumi* 'fall asleep':

(56) *waš-ibedi* *k'aːc'ada* *minuti-Li* *ʁumʁadi.*
boy-PL twenty minute-INTER fall.asleep(Red).PST
'The boys fell asleep (at distinct times and/or locations) in twenty minutes.'

(57) *waš-ibedi* *k'aːc'ada* *minuti-di* *ʁumʁadi.*
boy-PL twenty minute-ERG fall.asleep(Red).PST
'Boys fell asleep (at distinct times and/or locations) for twenty minutes.'

(56)–(57) refer to a plurality of falling asleep events, in which different (subsets of) boys participate. Like in (54)–(55), the relation between the overall event consisting of atomic fallings asleep and the plural theme is incremental. The larger part of the whole event we take, the more boys are sleeping. Quite predictably, the quantized incremental theme, a DP referring to a specific plurality of boys, yields a telic interpretation in (56), whereas the indefinite, non-quantized, interpretation of that argument results in atelicity in (57). *ʁumʁadi* thus resembles intransitive incremental theme verbs like *tanni* 'rot' exemplified in (41) in Section 4.1.

Therefore, the distributive pluralization of a verbal predicate, as we see from (54)–(57), changes systematically the actional class of a verb. Whereas both *kːanni* 'milk' and *ʁumi* 'fall asleep' are lexically telic, their distributive reduplicated counterparts produce incremental theme predicates whose telicity is determined compositionally. We have already seen in Section 3 what happens to non-derived incremental theme verbs combined with the detelicizing morpheme, and we have every reason to expect that *kːankːadi* and *ʁumʁadi* behave in the same way. This is indeed the case, as we will see shortly, after examining their multiplicative interpretation.

5.3. Multiplicativity and (a)telicity

On the multiplicative interpretation, the same individual participates in an event many times. Consider *ʁumʁadi* in (58):

(58) *maħamadi* *{k'aːc'ada minuti-di* ‖ **k'aːc'ada minuti-Li}* *ʁumʁadi.*
Mohammed twenty minute-ERG twenty minute-INTER fall.asleep(Red).PST
'Mohammed was sleepy, falling asleep and waking up all the time {for twenty minutes ‖ *in twenty minutes}.'

(58) refers to a plurality of events 'Mohammed falls asleep' conceived of as a single event. (As it is not possible to fall asleep twice without waking up in between, (58) implies that periods of sleeping alternate with periods of being awake, which amounts to the discontinuous sleeping.)

(58) accepts a measure adverbial 'for twenty minutes', not a time-span adverbial 'in twenty minutes'. Indeed, the reduplicated predicate is cumulative and not quantized. If Mohammed was sleepy from 2 p.m. to 3.p.m and from 3 p.m. to 4 p.m., he was sleepy from 2 to 4 p.m., hence the predicate is cumulative. Also, if an event can be described as 'Mohammed was sleepy', there will be parts of this event at which Mohammed was sleepy as well, hence the predicate is not quantized. Cumulativity and non-quantization of the predicate in (58) are not argument-induced. The

argument ‘Mohammed’ is quantized, but it does not affect telicity of a predicate, because the relation between a complex event ‘be sleepy, falling asleep and waking up all the time’ and that argument is not incremental: it is not obviously the case that the more event goes on, the larger part of Mohammed is sleepy. In other words, *ʁumʁadi* in (58) is *obligatorily atelic.*

The verb *kːankːadi* exhibits exactly the same characteristics:

(59) *pat'imati-di {*k'eda saʔati-ʟi ‖ k'eda saʔati-di} zini kːankːadi.*
Fatima-ERG two hour-INTER two hour-ERG cow milk(Red).PST
‘Fatima milked a/the cow (again and again) {*in two hours ‖ for two hours}.’

(59) is somewhat odd pragmatically, since multiple milkings of the same cow cannot normally be conceived of as a single event. Supplying an appropriate context (e.g., ‘Fatima is an inexperienced dairymaid’), however, repairs a sentence considerably.

Crucially, like (58) with *ʁumʁadi*, (59) with *kːankːadi* is obligatorily atelic and does not denote an incremental relation between a complex event and its participant: it is not the case that parts of the cow are mapped to parts of the multiple milking. On the multiplicative interpretation, reduplicated verbs are atelic regardless of the properties of the argument.

Let us take a summary of the actional semantics of reduplication. So far, we observed that reduplicated verbs exhibit compositional telicity on the distributive interpretation and are obligatorily atelic on the multiplicative interpretation. In the latter case, reduplicated verbs resemble lexically atelic verbs like *b-ihi* ‘live’ in (49). In the former, telicity is induced by the reference properties of the argument in exactly the same way as for non-derived incremental theme verbs like ‘thresh’ or ‘rot’ discussed in Section 4.1. The range of interpretations of reduplicated verbs is summarized in Table 1.

<TABLE 1 AROUND HERE>

With these generalizations, we are ready to look at the detelicization of reduplicated verbs.

5.4. Detelicizing reduplicated verbs

In Section 4, we have established that the domain of detelicization are verbs that are actionally ambiguous, either due to their lexical characteristics or to aspectual composition. The function of A-forms is to resolve the actional ambiguity by removing the telic interpretation. In Sections 5.1–5.3 we saw that reduplicated verbs allow for both telic and atelic interpretations even if their non-reduplicated counterparts are obligatorily telic. As a result, lexically telic verbs like *ʁumi* ‘fall asleep’ or *kːanni* ‘milk’, which cannot undergo detelicization by themselves, acquire potential to do so after reduplication, and it is in this sense that reduplication stands in the feeding relation to detelicization.

Given this overall picture, we can now determine the precise result of detelicization for different types of reduplicated verbs. DH makes three predictions as to the properties of A-forms derived from such verbs. The obvious one is that they should be atelic: this is what all A-forms have in common.

The second prediction concerns transitive reduplicated verbs like *kːankːadi* ‘milk’. Since for such verbs the source of telicity, as Table 1 shows, is the internal incremental argument, it should be suppressed — in exactly the same way as the argument of non-derived incremental theme verbs like ‘thresh’ from Section 4.1. The prediction is borne out precisely:

(60) *a.* *pat'imati* *{*k'eda* *saʔati-ɬi* ‖ *k'eda* *saʔati-di}* *kːankːad-a* *j-ik^{w}a.*
Fatima two hour-INTER two hour-ERG milk(Red)-A.CONV F-AUX.PST
‘Fatima did milking repeatedly {*in two hours || for two hours}.’

b. **pat'imati-di* *zini* *kːankːad-a* *j-ik^{w}a.*
Fatima-ERG cow milk(Red)-A.CONV F-AUX.PST

(60a) is atelic, as expected. Also, the patient argument is suppressed, and the agent argument receives the Absolutive case, cf. ungrammatical (60b). Finally, in (60) and similar sentences the distinction between multiplicative and distributive interpretations is blurred: since there is no overt patient argument in (60a), the sentence cannot be explicit about whether the same or different patients participate in each atomic milking event. (60) is compatible with either scenario — ‘Fatima did milkings of different cows’ vs. ‘Fatima did milking of the same cow’.

The third prediction has to do with intransitive reduplicated verbs like *ʁumʁadi* ‘be sleepy’ in (56)–(58). On the distributive interpretation, *ʁumʁadi* is an intransitive incremental theme verb like *tanni* ‘rot’ from (41)–(42) in Section 4.1.2. Recall from Section 4.1 that to guarantee atelicity of such a verb its single argument has to be suppressed. But a clause cannot go without an argument, and this is the reason why *tanni* ‘rot’ and other verbs of this type resist detelicization. Like *tanni* ‘rot’, *ʁumʁadi* has a single argument, but, crucially, DH *does not* predict that reduplicated verbs like *ʁumʁadi* disallow detelicization.

Verbs like *ʁumʁadi* differ semantically from verbs like *tanni* in one significant respect. For *tanni*, argument suppression is *necessary* to guarantee atelicity. For *ʁumʁadi* it is *not necessary*: unlike *tanni* ‘rot’, *ʁumʁadi* possesses a multiplicative atelic interpretation which does not originate from the properties of the argument. Interpretations available for *tanni* and *ʁumʁadi* are summarized in (61):

(61) a. *tanni:* telic interpretation with a quantized argument, see (41a);
atelic interpretation with a cumulative argument, see (41b).
b. *ʁumʁadi:* telic distributive interpretation with a quantized argument, see (56);
atelic distributive interpretation with a cumulative argument, see (57);
atelic multiplicative interpretation independent of properties of arguments, see (58)

If the detelicizing morpheme suppresses the distributive interpretation altogether, but preserves the multiplicative interpretation, we will achieve the desired result: the actional ambiguity will be resolved in favor of the atelic multiplicative interpretation and the single argument will remain in place. For *tanni*, this option is not available in principle: this verb, as (61a) indicates, does not have an atelic interpretation independent of the properties of arguments. Consider (62):

(62) *waš-ibedi* *{k'aːc'ada* *minuti-di* ‖ **k'aːc'ada* *minuti-ɬi}*
boy-PL twenty minute-ERG twenty minute-INTER
ʁumʁud-a *b-ak^{w}a.*
fall.asleep(Red)-A.CONV HPL-AUX.PST
1. The boys were sleepy, falling asleep and waking up all the time {for twenty minutes || *in twenty minutes.}
2. *The boys fell asleep (one after another) in twenty minutes.
3. *Boys fell asleep (one after another) for twenty minutes.

(62) is atelic and only allows for the multiplicative reading in (62.1): nether the telic distributive reading in (62.2) nor its atelic counterpart in (62.3) is available. Therefore, the prediction is borne out again: A-forms remove the distributive interpretation, since under this interpretation, the quantization status of the argument determines that of the verbal predicate; if the argument is quantized, the predicate cannot escape from being telic. The atelic multiplicative interpretation survives, however.

Other verbs that require reduplication before detelicization (see (14) in Section 2.2.3) pattern either with *kːanni* 'milk' or *ʁumi* 'fall asleep'. Like in case of *ʁumi* 'fall asleep', A-forms of intransitives *k'ardi* 'vomit', *t'urdi* 'drip', *k'anc'i* 'make a jump' yield a multiplicative interpretation without affecting a single argument, cf. *k'ark'ad-a(-da)* 'vomit repeatedly', *t'urt'ud-a(-da)* 'drip', *k'anc'ac'-a(-da)* 'jump repeatedly'. Like *kːanni* 'milk', other transitives, e.g. *qardi* 'comb', *ganni* 'jerk (once)' suppress their internal argument after reduplication and detelicization, cf. *qarqad-a(-da)* 'scratch (repeatedly)', *gangad-a(-da)* 'make jerkings'.

We see, therefore, that non-derived verbs exhibit distinct actional characteristics as compared to their reduplicated counterparts. The former are either lexically or compositionally (a)telic, whereas for the latter these types of (a)telicity are not mutually exclusive: on the distributive interpretation, telicity is determined compositionally, whereas on the multiplicative interpretation a verbal predicate is atelic regardless of properties of the argument. DH, however, makes correct predications for this class of verbs, too: for reduplicated transitives, detelicization results in suppression of the internal argument; reduplicated intransitives lose the distributive interpretation. The detelicization-after-reduplication phenomenon is thus successfully accounted for.

6. Summary of results and wider implications

We started out with the observation that the *-a-* morpheme in Godoberi, which derives A-forms, looks at first sight like a genuine antipassive marker. A closer look reveals, however, that this marker has a bulk of structural and semantic characteristics as well as lexical restrictions that can hardly be accounted for if we try to maintain the antipassive analysis: the *-a-* morpheme applies freely to intransitives, it fails to apply to a certain class of transitives, and there are verb stems that must reduplicate before the A-converb is formed.

Having observed that all A-forms in Godoberi are atelic, we hypothesized that antipassivization is a by-product of a more general mechanism of detelicization. We proposed, essentially, that A-forms suppress the telic interpretation, producing unambiguously atelic verbs, VPs and clauses. We identified a class of verbs underspecified with respect to (a)telicity, for which the source of (a)telicity is an incremental theme argument. The most striking fact about A-forms is that they enforce the patient suppression (=antipassivization) if and only if a verb falls under this class.

The same relation between incrementality, detelicization and syntactic realization of arguments is observed with incremental path verbs. For these verbs, the source of telicity are adjuncts making the path quantized (e.g., goal PPs), and it is these adjuncts that are blocked by the detelicizing morpheme. DH provides a principled account for these facts.

As the discussion in Sections 4–5 suggests, the detelicizing morphology applies freely, only subject to two independent constrains: it cannot suppress *a single argument* in a clause (see Section 4.1.2) or *a single interpretation* of a clause (see Section 4.2). These are the reasons why the A-converb is not available for incremental intransitive verbs like *tanni* 'rot' and for transitive result verbs like *χʷabi* 'open'. Due to the latter constraint, detelicization is essentially an ambiguity resolution: whenever a verb has potential for yielding both telic and atelic interpretations, it constitutes a suitable input for the application of the detelicizing morpheme.

This generalization is further supported by reduplication facts. As we saw in Section 5, reduplication always creates actional ambiguity, and unambiguously telic verbs, which cannot form the A-converb by themselves, acquire this possibility via reduplication.

The material from Godoberi confirms observations and generalizations made elsewhere (see Section 1) that various implicational relations hold between argument structure and actionality. Many natural languages possess morphosyntactic mechanisms that affect both of these dimensions simultaneously. To be specific, I would like to point towards a striking parallelism between the detelicizing morpheme in Godoberi and a class of telicizing prefixes in Russian and other Slavic languages. This parallelism is especially prominent if incremental transitive verbs are taken into account.

In Godoberi, the detelicizer applied to such verbs makes VPs atelic and removes the incremental argument. In Russian, telicizing prefixes accomplish exactly the opposite task: they make internal arguments obligatory and VPs telic. As a result, as the theory of aspectual composition correctly predicts, this argument can only be quantized. These characteristics are illustrated in (63a–c):

(63) a. *Vasja na-pisa-l pis'm-a {za dva čas-a ||*
Vasja TEL-write-PST.M letters-ACC.PL in two hour-GEN
**dva čas-a}.*
two hour-GEN
1. 'Vasja wrote the letters in two hours.'
2. *'Vasja wrote letters for two hours'

b. **Včera Vasja na-pisa-l.*
yesterday Vasja TEL-write-PST.M

c. *Včera Vasja pisa-l dva čas-a.*
yesterday Vasja write-PST.M two hour-GEN
'Yesterday, Vasja wrote for two hours.'

(63a) shows that the prefixed verb *napisat'* 'write, write up' can only occur in a telic clause. The incremental theme DP *pis'ma* 'letters' in (63a) is quantized and corresponds to the definite DP *the letters* in English: it can only denote a specific quantity of letters, identified in the preceding piece of discourse. The indefinite interpretation of this DP is not available, as (63a.2) indicates. Furthermore, (68b) demonstrates that the argument of the prefixed incremental verb cannot drop, unlike what happens to the non-prefixed atelic verb *pisat'* 'write' in (63c). Therefore, prefixation results, among other things, in telicization of a verbal predicate as well as in obligatorization of the incremental argument. Whatever analysis for prefixes like *na-* in *napisat'* one adopts (for a recent discussion, see, e.g., Romanova 2006 and references therein), the empirical generalization is crystal clear: the same morphosyntactic device, the prefix, affects both telicity and argument structure.

Given this parallelism, a more general question arises: what are the parameters of cross-linguistic variation in the domain of morphosyntactic devices affecting both actionality and argument structure and what are the restrictions on that variation? While we have not yet got a general answer to this question, I believe that proper understanding of interactions between actionality and argument realization in languages like Godoberi will help us in finding such an answer in the future.

Appendix

<TABLES 2–3 AROUND HERE>

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[1] Thus, Wharram 2003 analyses the antipassive morpheme as a function that takes a two-place relation between individuals and events, a denotation of transitive verbs, and yields a new function that takes a one-place nominal predicate and yields a one-place event predicate by binding existentially the individual variable: $\lambda R_{<e,<s,t>>} \lambda P_{<e,t>} \lambda e \exists x [R(x)(e) \wedge P(x)]$. Deal (2007) argues for a modalized analysis along similar lines: $\lambda P_{<e<s,<w,t>>>} \lambda Q_{<e,<w,t>>} \lambda e \lambda w \forall w' [w' \text{ is compatible with intent(e) in } w \rightarrow \exists x [Q(x)(w') \wedge P(x)(e)(w')]]$

[2] I follow the long-standing tradition of capitalizing labels for language-specific categories.

[3] Note that the same problem arises if one takes a different perspective, assuming with Bobaljik and Branigan 2006, Hale 2002, Wharram 2003 that the function of the antipassive is to produce derived unergative verbs. Cross-linguistically, non-derived verbs like 'laugh' and 'swim' in (10) tend to show characterizing properties of syntactic unergatives. If A-froms in Godoberi are antipassive, one can be wondering why the antipassive applies to verbs that are unergative already.

[4] One further type of incremental verbs is incremental degree verbs (also referred to in the literature as degree achievements, gradual completion verbs, etc.). In what follows this class of verbs will not be discussed in any detail. The reader can refer to the extensive literature on degree achievements (e.g., Dowty 1979, Tenny 1994, Bertinetto 1995, Krifka 1998, and especially Hay et al. 1999, Kennedy, Levin 2008, and references therein). Below I will assume that what is said about other types of incremental verbs can be naturally extended to incremental degree verbs, possibly with minor adjustments.

[5] In Godoberi, undetermined DPs are ambiguous between indefinite and definite readings: *łeni* 'water' can refer to a contextually salient portion of water ("the water") or to a non-specified quantity of water ("∅ water"). Therefore, a telic sentence corresponding to (23b) is not ungrammatical:

(i) *ʕali-di* *k'eda* *minuti-ʟi* *łeni* *χːudi.*
Ali-ERG two minute-INTER water drink.PST
'Ali drank (all the) water in two minutes.'

However, (i) requires a different interpretation of the patient DP: unlike in (23b), the portion of water in (i) must be specific and definite.

[6] Notions similar to quantization/cumulativity came into linguistic theory much earlier, of course. Greenberg (1972:22-23), for example, discusses a [+/-structured] feature that distinguishes between entities with "internal organization into an integrated and organic whole", e.g., *dog,* from those without such internal organization, e.g., *meat*.

[7] For a precise definition see, e.g., Krifka 1998: 211–213.

[8] I am grateful to the anonymous reviewer of this paper who turned my attention to a similar material from Modern Greek. She indicates that the perfective past ("Aorist") form of verbs like 'sleep', 'be silent', 'love', etc., demonstrate the same ambiguity as verbs like 'cry' in Godoberi: they can refer to a culmination ('fell asleep', 'grew silent', 'got fond of') as well as to an atelic eventuality that comes to existence after the culmination ('slept (for a certain time)', 'remained silent (for a certain time)', 'loved (for a certain time)'). I agree completely with the reviewer's suggestion that "it is particularly temporary ("stage-level") states that are susceptible to membership in the 'process-ingressive' class".

[9] I fully agree with the anonymous reviewer who indicates that semelfactive-multiplicative verbs constitute a class not confined to Godoberi. In addition to Modern Greek mentioned by the reviewer, this actional class is found in a number of other languages cited, e.g., in Tatevosov 2002.

[10] For the analysis of mass nouns as inherent plurals, see Chierchia 1998.

[11] The base of reduplication is a stressed syllable; the reduplicant, a light syllable σ_{μ}, is suffixed to the base. The consonant in the reduplicant is copied from the base; the vowel is either a copy of a corresponding vowel in the base or a fixed segment *-a.*

[12] In using terms 'multiplicative' and 'distributive' I follow a slightly modified version of Khrakovskij's (1989, 1996) theory of event plurality, see also Dolinina 1999. Alternative approaches to event plurality can be found in Cusic 1981, Lasersohn 1995, Landman 2000, among many others. Interactions between reduplication and distributivity are discussed extensively in Gil 1988.

References

Austin, Peter K. 2005. Causative and applicative constructions in Australian Aboriginal Languages. Ms., Department of Linguistics, SOAS University of London.

Bach, Emmon. 1981. On time, tense, and aspect: An essay in English metaphysics. In Peter Cole (ed.), *Radical Pragmatics,* 62–81. New York: Academic Press.
Bach, Emmon. 1986. The algebra of events. *Linguistics and Philosophy* 9: 5–16.
Bache, Carl. 1995. *The Study of aspect, tense and action: Toward a theory of the semantics of grammatical categories.* Frankfurt am Main: Peter Lang.
Baker, Mark. 1988. *Incorporation: A theory of grammatical function changing.* Chicago: University of Chicago Press.
Beach, Matthew. 2003. Asymmetries between Passivization and Antipassivization in the Tarramiutut Subdialect of Inuktitut. Paper presented at the 2003 Lexical Functional Grammar Conference Saratoga Springs, July 2003.
Benua, Laura. 1995. Yup'ik Antipassives. In Audra Dainora, Rachel Hemphill, Barbara Luka, Barbara Need & Sheri Pargman (eds.), *Papers from the 31st regional meeting of the Chicago Linguistic Society*, 28–44. Chicago: Chicago Linguistic Society.
Benua, Laura. 2000. Yup'ik antipassive and the AspP hypothesis. In Elena Benedicto (ed.), *The UMass Indigenous Languages Volume* (University of Massachusetts Occasional Papers 20), 107–138. Amherst: GLSA.
Bertinetto, Pier Marco & Mario Squartini. 1995. An attempt at defining the class of 'gradual completion' verbs. In Pier Marco Bertinetto, Valentina Bianchi, Östen Dahl & Mario Squartini (eds.), *Temporal reference, aspect, and actionality, vol. 1*, 11–26. Torino: Rosenberg and Sellier.
Bittner, Maria & Ken Hale. 1996. The structural determination of case and agreement. *Linguistic Inquiry* 27: 1–68.
Bittner, Maria. 1987. On the semantics of the Greenlandic antipassive and related constructions. *International Journal of American Linguistics* 53: 194–231.
Blake, Barry. 1994. *Case*. Cambridge: Cambridge University Press.
Bobaljik, Jonathan D. and Phil Branigan. 2006. Eccentric agreement and multiple case-checking. In Alana Johns, Diane Massam & Juvenal Ndayiragije (eds.), *Ergativity: emerging issues*, 44–77. Dordrecht: Springer.
Bowers, John. 2004. Toward a unified theory of argument structure and grammatical function changing morphology. Paper presented at the Workshop on argument structure, Center for Advanced Study in Theoretical Linguistics, University of Tromsø.
Breu, Walter. 1994. Interations between lexical, temporal, and aspectual meanings. *Studies in Language* 18: 23–44.
Breu, Walter. 1996. Komponentenmodell der Interaktion von Lexik und Aspekt. In Wolfgang Girke (ed.), *Slavistische Linguistik 1995*, 37–73. München: Otto Sagner.
Bulygina, Tatjana. 1982. K postrojeniju tipologii predicatove v russkom jazyke [On establishing a typology of predicates in Russian]. In Olga N. Seliverstova (ed.), *Semanticheskije tipy predicatov* [Semantic types of predicates], 7–85. Moscow: Nauka.
Chierchia, Gennaro. 1998. Plurality of mass nouns and the notion of 'semantic parameter. In Susan Rothstein (ed.), *Events and Grammar,* 53–103. Dordrecht: Kluwer Academic Publishers.
Comrie, Bernard. 1976. *Aspect: An introduction to the study of verbal aspect and related problems.* Cambridge: Cambridge University Press.
Cooreman, Ann. 1988. The antipassive in Chamorro: variations on the theme of transitivity. In Masayoshi Shibatani (ed.), *Passive and voice*, 561–594. Amsterdam: John Benjamins.
Cooreman, Ann. 1994. A functional typology of antipassives. In Barbara A. Fox & Paul J. Hopper (eds.), *Voice: form and function*, 49–88. Amsterdam: John Benjamins.
Cusic, David D. 1981. Verbal plurality and aspect. Stanford: Stanford University Ph.D. dissertation.
Dahl, Östen. 1981. On the definition of the telic-atelic (bounded-unbounded) distinction. In Philip Tedeschi & Annie Zaenen (eds.), *Tense and Aspect* (Syntax and Semantics 14), 79–90. New York: Academic Press.
Davies, William D. & Luis Enrique Sam-Colop. 1990. K'iche' and the structure of antipassive. *Language* 66: 522–549.
Deal, Amy Rose. 2007. Property-type objects and modal embedding. Ms., University of Massachusetts, Amherst.
Dixon, Robert Malcolm W. 1972. *The Dyirbal language of North Queensland.* Cambridge: Cambridge University Press.
Dixon, Robert Malcolm W. 1994. *Ergativity.* Cambridge: Cambridge University Press.
Dixon, Robert Malcolm W. & Alexandra Aikhenvald (eds). 2000. *Changing Valency.* Cambridge: Cambridge University Press.
Dolinina, Inga B. 1996. Kolichestvennost' v sfere predicatov (kategorija glagol'noj mnozhestvennosti) [Quantity in the predicative domain (the category of verbal plurality)]. In Alexander V. Bondarko (ed.), *Teorija funktsionalьnoj grammatiki. Kachestvennost'. Kolichestvennost'* [A theory of functional grammar. Quality. Quantity], 219–245. St.-Petersburg: Nauka.
Dolinina, Inga B. 1999. Distributivity: more than aspect. In Werner Abraham & Leonid Kulikov (eds.), *Tense-aspect, transitivity, and causativity: Essays in honor of Vladimir Nedjalkov*, 185–206. Amsterdam: John Benjamins.
Dowty, David R. 1979. *Word meaning and Montague grammar.* Dordrecht: Reidel.
Dowty, David R. 1986. The effect of aspectual class on the temporal structure of discourse: semantics or pragmatics? *Linguistics and Philosophy* 9: 37–61.
Dowty, David R. 1991. Thematic proto-roles and argument selection. *Language* 67: 547–619.
Ebert, Karen. 1995. Ambiguous prefect-progressive forms across languages. In Pier Marco Bertinetto, Valentina Bianchi, Östen Dahl & Mario Squartini (eds.), *Temporal reference, aspect, and actionality,* vol. 2, 185–204. Torino: Rosenberg and Sellier.
Filip, Hana. 1999. *Aspect, eventuality types and noun phrase semantics.* New York, London: Garland Publishing.

Gerdts, Donna and Thomas Hukari. 2005. Multiple antipasssives in Halkomelem Salish. *Proceedings of the 26th Meeting of the Berkeley Linguistics Society*, 51–62. Berkeley: Berkeley Linguistic Society.
Gerdts, Donna. 1988. Anti-passives and causatives in Ilokano: Evidence of an ergative analysis. In Richard McGinn (ed.), *Studies in Austronesian linguistics* (Ohio University monographs in international studies, Southeast Asia Series #76], 295–321. Athens, Ohio: Center for Southeast Asia Studies, Ohio University.
Gil, David. 1988. Georgian reduplication and the domain of distributivity. *Lingustics* 26: 1039–1065.
Givón, Talmy. 1984. *Syntax: A functional-typological introduction*, vol. I. Amsterdam: John Benjamins.
Greenberg, Joseph H. 1972. Numeral classifiers and substantial number: problems in the genesis of a linguistic type. *Working Papers on Language Universals* 9: 1–39.
Hale, Ken. 2002. Eccentric Agreement. In Beatriz Fernández & Pablo Albizu (eds.), *Kasu eta Komunztaduraren gainean* [On Case and Agreement], 15–48. Vitoria-Gasteiz: Euskal Herriko Unibetsitatea.
Hay, Jennifer, Christopher Kennedy & Beth Levin. 1999. Scalar structure underlies telicity in 'degree achievements'. In Tanya Matthews & Devon Strolovitch (eds.), *SALT IX*, 127–144. Ithaca: CLC Publications.
Hopper, Paul and Sandra Thompson. 1980. Transitivity in grammar and discourse. *Language* 56: 251–299.
Johanson, Lars. 1971. *Aspect im Türkischen: Vorstudien zu einer Beschreibung des türkischen Aspektsystems*. [Aspect in Turkish: studies preliminary to a description of the Turkish aspectual system.] (Acta Universitatis Upsaliensis, Stuidia Turcica Upsaliensis, 1.) Uppsala: Almqvist & Wiksell.
Johanson, Lars. 1996. Terminality operators and their hierarchical status. Betty Devriendt, Louis Goossens & Johan van der Auwera (eds.), *Complex Structures: A functionalist perspective* (Functional grammar series 17), 229–258. Berlin and New York: Mouton de Gruyter.
Johanson, Lars. 1999. Typological notes on aspect and actionality in Kipchak Turkic. In Werner Abraham & Leonid Kulikov (eds.), *Tense-aspect, transitivity, and causativity: Essays in honor of Vladimir Nedjalkov*, 171–184. Amsterdam: John Benjamins.
Johns, Alana. 2006. Ergativity and change in Inuktitut. In Alana Johns, Diane Massam & Juvenal Ndayiragije (eds.), *Ergativity: emerging issues*, 293–312. Dordrecht: Springer.
Kennedy, Christopher and Beth Levin. 2008. Measure of change: The adjectival core of degree achievements. In Louis McNally & Christopher Kennedy (eds.), *Adjectives and Adverbs: Syntax, Semantics and Discourse*, 156–182. Oxford: Oxford University Press.
Kibrik, Andrei. 1996. Transitivity in lexicon and grammar. In Aleksandr E. Kibrik (ed.), *Godoberi*, 108–145. München: Lincom Europa.
Krämer, Martin & Dieter Wunderlich. 1999. Transitivity alternations in Yucatec, and the correlation between aspect and argument roles. *Linguistics* 37: 431–479.
Krifka, Manfred. 1989. Nominal reference, temporal constitution and quantification in event semantics. In Renate Bartsch, Johan van Benthem and Peter & Emde Boas (eds.), *Semantics and contextual expression*, 75–115. Dordrecht: Foris Publications.
Krifka, Manfred. 1992. Thematic relations as links between nominal reference and temporal constitution. In Sag, Ivan A. & Anna Szabolsci (eds.), *Lexical matters,* 29–53. Stanford: CSLI Publications.
Krifka, Manfred. 1998. The origins of telicity. In Susan Rothstein (ed.), *Events and Grammar,* 197–235. Dordrecht: Kluwer Academic Publishers.
Landman, Fred. 2000. *Events and plurality: The Jerusalem lectures.* Dordrecht: Kluwer Academic Publishers.
Lasersohn, Peter. 1995. *Plurality, conjunction, and events.* Dordrecht: Kluwer Academic Publishers.
Moens, Marc and Mark Steedman. 1988. Temporal onthology and temporal reference. *Computational Linguistics* 14: 15–28.
Moens, Marc. 1987. Tense, aspect, and temporal reference. Edinburgh: University of Edinburgh Ph.D. dissertation.
Mourelatos, Alexander P. 1978. Events, processes, and states. *Linguistics and Philosophy* 2: 415–434.
Mourelatos, Alexander P. 1981. Events, processes, and states. In Philip Tedeschi & Annie Zaenen (eds.), *Tense and Aspect* (Syntax and Semantics 14), 191–212. New York: Academic Press.
Paducheva, Elena V. 1996. *Semanticheskije isslledovanija* [Essays in semantics]. Moscow: Jazyki russkoj kultury.
Parsons, Terence. 1989. The progressive in English: events, states and processes. *Linguistics and Philosophy* 12: 213–241.
Parsons, Terence. 1990. *Events in the semantics of English.* Cambridge: MIT Press.
Polinsky, Maria. 2005. Antipassive constructions. In Haspelmath, Martin, Matthew Dryer, David Gil & Bernard Comrie (eds.), *The world atlas of language structures,* 438–442. Oxford: Oxford University Press.
Pye, Clifton and Pedro Quixtan Poz. 1988. Precocious passives (and antipassives) in Quiche Mayan. *Papers and Reports on Child Language Development* 27: 71–80.
Rappaport Hovav, Malka & Beth Levin. 1998. Building verb meanings. In Miriam Butt & Wilhelm Geuder (eds.), *The projection of arguments: lexical and compositional factors,* 97–134. Stanford: CSLI Publications.
Rasmussen, Kent. 2002. Verb tone in Il-Keekonyokie Maa. University of Oregon M.A. Thesis.
Romanova, Evgenia. 2006. Constructing perfectivity in Russian. Tromsø: University of Tromsø Ph.D. dissertation.
Rothstein, Susan. 2004. *Structuring events: a study in the semantics of lexical aspect.* Malden: Blackwell Publishing.
Rude, Noel. 1988. Ergative, passive, and antipassive in Nez Perce. In Masayoshi Shibatani (ed.), *Passive and voice,* 547–560. Amsterdam: John Benjamins.
Sadock, Jerrold. 2003. *A grammar of Kalaallisut (West Greenlandic Inuttut).* Münich: Lincom Europa.
Sasse, Hans-Jürgen. 1991. Aspect and aktionsart: A reconciliation. In Carl Vetters & Willy Vandeweghe (eds.), *Perspectives on aspect and Aktionsart. Belgian Journal of Linguistics* 6: 31–45.

Seigel, Laura. 1997. Argument Structure and Antipassivization in Inuit. In Harley Heidi (ed.), *Papers from the UPenn/MIT Roundtable on Argument Structure and Aspect* (MIT Working Papers in Linguistics 32), 41–72. Cambridge: MIT.
Smith, Carlota. 1995. The range od aspectual situation types: derived categories and a bounding paradox. In Pier Marco Bertinetto, Valentina Bianchi, Östen Dahl & Mario Squartini (eds.), *Temporal reference, aspect, and actionality,* vol. 2, 105–124. Torino: Rosenberg and Sellier.
Smith, Carlota. 1996. Aspectual categories in Navajo. *International Journal of American Linguistics* 62: 227–63.
Smith, Carlota. 1997. *The parameter of aspect* (2nd edn.). Dordrecht: Kluwer Academic Publishers.
Smith, Carlota. 1999. Activities: events or states? *Linguistics and Philosophy* 22: 479–508.
Smith-Stark, Thomas. 1978. The Mayan antipassive: some facts and fictions. In Nora England (ed.), *Papers in Mayan linguistics,* 169–187. Colubmia: University of Missouri-Columbia.
Spreng, Bettina. 2001. Little *v* in Inuktitut: Antipassive revisited. *Linguistica Atlantica* 23: 155–190.
Spreng, Bettina. 2006. Antipassive morphology and case assignment in Inuktitut. In Alana Johns, Diane Massam & Juvenal Ndayiragije (eds.), *Ergativity: emerging issues,* 247–270. Dordrecht: Springer.
Swart, Henriette de. 1998. Aspect shift and coercion. *Natural Language and Linguistic Theory* 16*:* 347–385.
Tatevosov, Sergej. 2002. The parameter of actionality. *Linguistic Typology* 6: 317–401.
Tchekoff, Claude. 1985. Aspect, transitivity, 'antipassives' and some Australian languages. In Franz Plank (ed.), *Relational typology,* 359–390. Berlin: Mouton de Gruyter.
Tenny, Carol. 1994. *Aspectual roles and the syntax-semantix interface.* Dordrecht: Kluwer Academic Publishers.
Tsunoda, Tasaku. 1988. Antipassives in Warrungu and other Australian languages. In Masayoshi Shibatani (ed.), *Passive and voice,* 595–650. John Benjamins: Amsterdam.
Van Valin, Robert D. 2004. Lexical representation, co-composition, and linking syntax and semantics. Ms., University at Buffalo.
Vendler, Zeno. 1957. Verbs and times. *The Philosophical Review* 66: 143–160.
Vendler, Zeno. 1967. *Linguistics in Philosophy.* Cornell: Cornell University Press.
Verkuyl, Henk J. 1972. *On the compositional nature of the aspects.* Dordrecht: Reidel.
Verkuyl, Henk J. 1993. *A theory of aspectuality: The interaction between temporal and atemporal structure.* Cambridge: Cambridge University Press.
Verkuyl, Henk J. 1999. *Aspectual issues. Studies in time and quantity.* Stanford: CSLI.
Walton, Charles. 1986. *Sama verbal semantics: Classification, derivation and inflection.* Manila: Linguistic Society of the Philippines.
Wharram, Douglas. 2003. On the interpretation of (un)certain indefinites in Inuktitut and related languages. University of Connecticut Ph. D. dissertation.
Xrakovskij, Victor S. 1986. Semanticheskije tipy mnozhestva situatsij (opyt klassificatsii) [Semantic types of multiple situations: a classification]. *Izvestija AN SSSR. Jazyk i Literatura* 45: 149–158.
Xrakovskij, Victor S. 1989. Semanticheskije tipy mnozhestva situatsij i ikh jestestvennaja klassifikatsija [Semantic types of multiple situations and their natural classification]. In Victor S. Xrakovskij (ed.), *Tipologija iterativnykh konstruktsij* [Typology of iterative constructions], 5–53. Leningrad: Nauka.

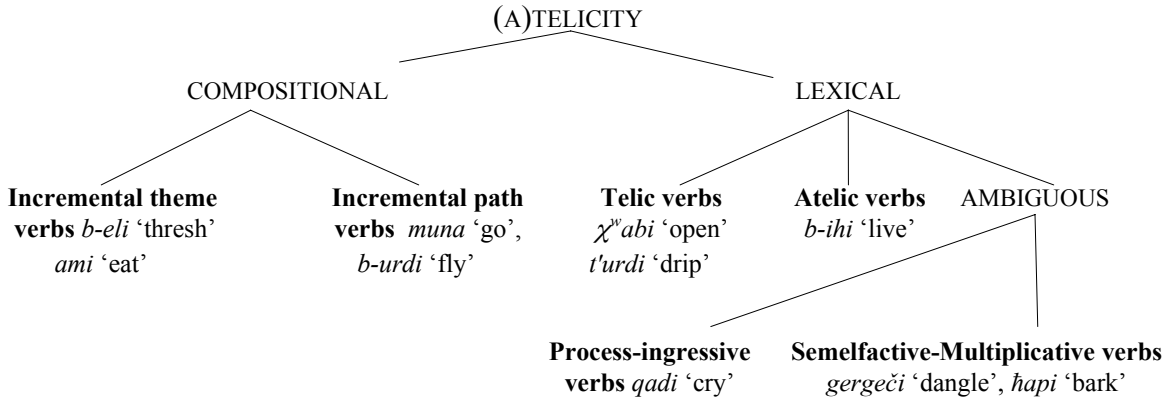

Figure 1. Actional classes in Godoberi

Table 1. Telicity of reduplicated verbs

	Cumulative argument	Quantized argument
Distributive interpretation	atelic	telic
Multiplicative interpretation	atelic	

Table 2. Synthetic forms (*qadi* ‘cry’)

Label	Form	Gloss
The Preterite	qadi	‘cried’, ‘started crying’
Future definite	qadi-sːu	‘will cry’
Habitual	qad-ida	‘cries’
Imperative	qadi	‘cry!’
Infinitive	qad-i	‘to cry’
Masdar	qadi-r	‘crying’

Table 3. Periphrastic forms (*qadi* ‘cry’)

Non-finite forms	Forms with the present auxiliary *(i)da*	Forms with the past auxiliary *b-uk’a*
Imperfective converb qad-ata	Present qad-ata-da ‘is crying’	Imperfect qad-ata b-uk’a ‘was crying’
Perfective Converb qad-u	Perfect qad-u-da ‘must have cried’	Past Perfect qad-u b-uk’a ‘had cried’
Future participle qad-iLi-bu	Future qad-iLi-bu-da ‘will cry’	Past Future qad-iLi-bu b-uk’a ‘was going to cry’
A-converb qad-a	A-Present qad-a-da ‘is crying’	A-Preterite qad-a b-uk’a ‘was crying’, ‘cried’