

Nonunitary structure of unergative verbs in Georgian

1.1. Outline/Abstract

This article investigates grammatical properties of unergativity. I argue that unergative predicates, traditionally defined as intransitive activity denoting verbs with agent argument, can be structured in various ways in a language. In some languages, grammatical encoding of unergatives is straightforward. In others, where agentivity and dyadicity are interdependent, unergatives can be subject to argument structure modification, and construed as causatives with *Agent* but without *Theme*.

The present analysis of Georgian unergative verbs contributes to two central theoretical topics: (in)transitivity and nature of ergative case. Georgian is rare among ergative languages as it displays intransitive split (Dixon 1979): the subject of unergatives is marked as ergative and the subject of unaccusatives as nominative/absolutive. While other ergative languages manifest this split to various degrees and optionally mark the subject of unergatives as absolutive (Basque (Oyahařabal 1992, Aldai 2009), Hindi (Butt & King 2003)), the subject of unergatives in Georgian is always ergative in tenses with ergative case-alignment.

At first sight, Georgian, where unergative and transitive predicates are lumped for case purposes, conforms to Hale & Keyser's (1993) analysis of unergatives as transitives with hidden *Theme*. Yet, structural properties of Georgian unergatives point to the absence of internal argument. Their morphological makeup in perfective tenses suggests that unergatives are not monovalent verbs either, as proposed by Perlmutter (1978) (cf. also Borer 2005, Marantz 2007). Their sensitivity to Viewpoint aspect implies that unergatives pattern with statives, with external Holder argument. The reason why unergatives cannot be underlyingly agentive resides in the fact that *Agent* role is not an inherent property of predicates in Georgian. It is *configurationally* defined by Neo-Burzio Dependency: *Agent*-introducing category must select an argument-selecting complement. But as the traditional hallmark of unergatives is agentivity, i.e. presence of an initiator in the sense of Dowty's (1991) proto-*Agent* role, their stative core must be modified. This is achieved by expanding the core in two ways. In imperfective aspect, bundling of dynamic progressive Aspect features with stative structure enables agentive interpretation of the external argument. In perfective aspect, agenthood is structurally built by causativisation of stative structure. But as the added argument with *Agent* role refers to the same event participant as the Holder, the causative configuration is reflexivised signalled by the appropriate morphology.

If unergatives are structured as reflexive causatives in the perfective, the ergative case on their subject is expected. In current theorizing, two approaches prevail on ergative case-marking: (i) ergative is inherent, tied to agentivity, (Woolford 2006, Nash 1995, Johns 1993, Massam 2002, Legate 2008, a.o.); (ii) ergative is a structural dependent case, assigned to the higher of the two arguments in the same domain (Marantz 1991, Nash 2017, Baker 2014, a.o.).

Analysing unergatives in perfective aspect as bivalent predicates with coindexed *Agent* and Holder supports the dependent case theory: in Georgian, ergative is assigned to the higher argument in a bi-argumental verbal template. The notion of inherent agentive case cannot be applied to Georgian where *Agent* role is configurational and where presyntactically determined agentive predicates do not exist. Georgian should not be defined as an active language in the sense of Sapir (1917) and Mithun (1991), where agents are marked with special semantic case (Harris 1985), but rather as a (split) ergative language where the highest argument of bivalent eventive verbs bears ergative case (Hewitt 1987).

Furthermore, their combination with applied arguments calls for refinement of unergative structures in Georgian. Datives are banned with behaviour denoting unergatives, while other types of unergatives occur with part-whole and addressee datives. This asymmetry is best accounted if behaviour denoting unergatives are construed as complex predicates comprising a light verb and non-verbal predicate, while all others involve simplex verbs. The main conclusion of this study is that unergative predicates in Georgian can be structured in several ways, at vP level and at VoiceP level. These configurational options, shaped by general structural constraints, yield a predicate with one agentive event participant, in conformity with traditional definition of unergativity.

1.2. Basic facts

The sentence in (1) contains a series of verbs, isolated in italics in (2), which constitute a natural semantic and morphological class.* Lexically, the verbs belong to the class of unergatives: they denote an activity or a behaviour, are atelic, agentive and rarely appear with a cognate object or a Rheme argument, as in *play a game, danse a tango, sing an anthem, run a mile* (cf. Ramchand 2008). The verbs in (2) carry the morpheme *i-* in the perfective aorist, but not in the imperfective present.

- (1) mat dalies, datvrnen, icek'ves, icancares, igižes, ibavšves,
 they.ERG drank, got-drunk, danced, shook, acted-crazy, acted-childish,
 ixulignes, imğeres, erti tineijeri bič'i-c galaxes da k'lubidan
 acted-hooligan, sang, one teenager boy-too beat and club.from
 c'amovidnen
 returned
 "They drank, got drunk, danced, boogied around, "crazed", "childed", "hooliganed",
 sang, even beat one teenager and left the club"

<https://www.overclockers.ge>

- (2) a. mat *i-cek'v-es*, *i-cancar-es*, *i-giž-es*,
 they.ERG RMP-dance-AOR.3pl RMP-shake-AOR.3pl RMP-crazy-AOR.3pl
i-bavšv-es *i-xulign-es*, *i-mğer-es*
 RMP-child-AOR.3pl RMP-hooligan-AOR.3pl RMP-sing-AOR.3pl
 "they danced, shook around, acted crazy, acted childish, acted as hooligans, sang"
 b. isini *cek'v-av-en*, *cancar-eb-en*, *giž-ob-en*, *xulign-ob-en*, *mğeri-an*
 they.NOM danse-TS-3pl shake-TS-3pl craze-TS-3pl hooligan-TS-3pl sing-3pl
 "they are dancing, shaking, crazing, hooliganing, singing"

The prefix *i-* is a reflexive-mediopassive voice marker (glossed as RMP) on reflexive, mediopassive and (some) anticausative verbs *both* in perfective and imperfective tenses and signals argument non-realisation, akin to Romance *se/si*. Its occurrence on unergatives only in perfective tenses constitutes a major puzzle that this study tries to elucidate.

Main tense-aspects in Georgian are divided according to Viewpoint aspect. Imperfective tenses include the present and past progressive, while perfective tenses include the aorist, the optative, and the future. Case-alignment is nominative in imperfective tenses, while in perfective tenses two patterns exist: ergative in the aorist and the optative, nominative in the future (on Georgian aspect-split cf. Harris 1981, Nash 1995, 2017).

The subject in (2a) is marked with ergative case. Unergatives share this property with transitive verbs while unaccusatives uniformly take nominative subject in all tense-aspects. Clustering unergatives and transitives for case-marking is an unusual, albeit not exceptional, situation among ergative languages where unergatives and unaccusatives generally mark their sole argument with nominative/absolute case. Unergative-unaccusative split (Dixon 1979) is also manifest in Basque, but less systematically than in Georgian: subjects of some unergative verbs allow case variation between ergative and nominative, and some unergatives only take nominative subjects (Berro 2010, Preminger 2012, Laka 2006).¹

Traditionally labelled as Medial or Medioactive, unergatives have received considerable attention among scholars of Georgian as proper analysis of asymmetric occurrence of RMP *i-* across tense-aspects can shed light on the nature of ergative case and diathesis in the language. (Nozadze 1974, Holisky 1981, Jorbenadze 2006, Šanidze 1973).

Building unergatives is a very systematic process in Georgian: most property-denoting roots, onomatopoeias and sound/light imitating stems, as well as manner of movement roots can serve as their base. Derivation follows a uniform pattern: verbs carry RMP *i-* in perfective

* The following abbreviations are used: 1,2,3=person markers; ABS=absolute; ACC=accusative; ADV=adverbial; AOR=aorist; CAUS=causative; DAT=dative; DET=determiner; DOM=differential object marker; ERG=ergative; GEN=genitive; MV=middle voice; nact=nonactive subject agreement; nom=nominalisation marker; NOM=nominative; prev=perfectivizing preverb; pl=plural; O=object marker; P(A)ST=past tense; PPRT=past participle; REFL=reflexive; RMP=reflexive mediopassive; sg=singular; TS=thematic suffix; VM=Voice Marker.

¹ Some unergatives in Hindi also take ergative subjects. (Montaut 2004, Butt & King 2003), (cf. §6.2.).

tenses, but not in imperfective tenses. In tenses with nominative-accusative case-alignment, unergative verbs, like any eventive verb but unlike statives, carry a Thematic Suffix (TS). Three TS are encountered with unergatives: *-ob*, *-eb*, and *-av*. Their distribution is not arbitrary, and each TS occurs with a specific semantic root-type: *-ob* with property denoting roots commonly found in nouns and adjectives, (3); *-eb* with reduplicated onomatopoeias and light/sound imitating stems (4); *-av* with manner of motion roots, (5). In the future tense, all unergatives carry TS *-eb*. Lexical and structural particularities of each group are detailed in §§ 4 and 5.

		IMPERFECTIVE		PERFECTIVE	
	ROOT	PRESENT	AORIST		FUTURE
(3) a.	√sulel silly “being/act silly, behave in a silly way”	sulel- ob -s silly-TS-3sg	i -sulel-a RMP-silly-AOR.3sg		i -sulel- eb -s RMP-silly-TS-3sg
b.	√maimun monkey “being a monkey, behave as a monkey (do faces), clown around”	maimun- ob -s monkey-TS-3sg	i -maimun-a RMP-monkey-AOR.3sg		i -maimun- eb -s RMP-monkey-TS-3sg
(4)	√caxcax shiver “shiver”	caxcax- eb -s shiver-TS-3sg	i -caxcax-a RMP-shiver-AOR.3sg		i -caxcax- eb -s RMP-shiver-TS-3sg
(5)	√cek’v dance “dance”	cek’v- av -s dance-TS-3sg	i -cek’v-a RMP-dance-AOR.3sg		i -cek’v- eb -s RMP-dance-TS-3sg

1.3. Proposal in a nutshell and a roadmap

In this study, I claim that morphosyntactic properties of unergative verbs in Georgian—RMP *i-* in perfective tenses, and ergative case in the aorist—can be best explained if their base is a verbal category *v* that does not select an internal argument. I propose a correlation that holds in Georgian between the absence of internal argument and the absence of Agent, and put forth a hypothesis, Neo-Burzio Dependency (NBD) in (6): only argument-selecting verbal constituent can be associated with Agent. It is standardly assumed in syntactic theorizing that external arguments are introduced by a Voice category that assigns Agent or Holder role (Kratzer 1996). I hypothesize that the choice between these two roles is configurationally determined by NBD: if conditions in (6) are not met in a verbal projection, Voice assigns Holder role not only to the external argument of stative verbs but to the external argument of any predicate without *another* argument.

(6) **Neo-Burzio Dependency (NBD)**: Voice assigns Agent role to its argument if it selects an argument-selecting complement.

I contend that Georgian unergative verbs are conditioned by NBD: as they do not assign Theme role, their external argument can only be Holder, which makes them structurally similar to stative predicates, in spite of their process meaning. (cf. Borer 2005, Ramchand 2008 on statives; cf. also Čikobava 1950 for a proposal that Georgian unergatives are stative). However, treating unergatives and statives as a natural class is counterintuitive because unergative verbs are agentive and dynamic, unlike statives. I argue that while agentivity is ensured in transitive verbs by the presence of Agent argument in VoiceP (where VoiceP>*v*P), the external argument of unergatives acquires agentive interpretation through other syntactic mechanisms, which vary according to Viewpoint aspect.

In imperfective tenses, the agentive interpretation of unergatives is due to inherently dynamic eventive semantics of imperfective aspect. Unergatives are subject to Viewpoint aspect-shift, or repackaging in the sense of Zucchi (1998) and Rothstein (1999). Structurally, this shift implies bundling (fusion) of Voice and imperfective Asp into one syntactic head, (Pylkkänen 2008, Harley 2017). As a result, the external argument of Asp-Voice category can be interpreted as agentive even when in the absence of NBD.

In perfective tenses, agentivity of unergative verbs is construed via causativisation. This operation adds another Voice category to the core unergative VoiceP. The upper Voice assigns Agent role to its argument as it selects a VoiceP with Holder, respecting NBD. The

resulting causative predicate assigns to semantic roles: Agent and Holder. Both roles are assigned to the same event participant in unergative template in the perfective, yielding a reflexive configuration signalled by RMP *i-*. (cf. Schäfer 2008, Wood 2014). Structurally, unergative predicates in perfective tenses are reflexive causatives where the initiator of the eventuality and the holder of eventuality is the same individual.

This study is organised as follows: a syntactic analysis of Georgian unergative predicates is detailed in Section 2, based on their structural proximity with statives. Sections 3 and 4 offer a closer look at Georgian unergatives: four lexical subclasses of unergatives are presented in Section 3, further grouped in simplex and complex unergatives based on their behaviour with dative applied arguments in Section 4. Sections 5 and 6 compare the present analysis with other studies of unergative predicates in Kartvelology and in generative syntax. Section 7 summarizes main findings of the study.

2.1. What needs to be explained: key properties of Georgian unergatives

This section presents a syntactic analysis of Georgian unergative verbs that accounts for their two key properties in (7).

- (7) Property A: the subject of unergative verbs is marked as ergative in the aorist.
Property B: unergative verbs are marked with RMP *i-* only in perfective tenses.

Property A: unergatives pattern with transitive verbs with respect to subject case marking in tenses with ergative case alignment. The subject of unergative verb and the subject of transitive verb are marked alike with ergative case in (8). The subject of unaccusatives is marked as nominative in (9), just like the object of transitive verbs in (8b).²

- (8) a. *kal-ma* *i-lap'arak'a*
 woman-ERG RMP-speak-AOR.3sg
 “The woman spoke”
 b. *tagv-ma* *erti sit'q'va* *tkv-a*
 woman-ERG one word.NOM say-AOR.3sg
 “The woman said one word”
(9) *kal-i* *mo=vid-a*
 woman-NOM prev=arrive-AOR.3sg
 “The woman arrived”

Property B: unergatives contain a preradical reflexive-mediopassive voice marker RMP *i-*, in perfective/bounded/completed tenses, e.g. the aorist and the future (10a-b), but not in imperfective tenses, e.g. the present and past imperfective (10c).³

- (10) a. *kal-ma* *prangul-ad* *i-lap'arak'-a*
 woman-ERG French-ADV RMP-speak-AOR.3sg
 “The woman spoke in French” (for some interval of time in the past)

² Unaccusative verbs are morphosyntactically distinct from unergatives in Georgian. Besides the subject case difference in the aorist, subject agreement markers on each class differ. Next, as unaccusatives are generally telic and unergative atelic, only the former carry the perfectivizing preverb. Lastly, in the evidential mood, the subject of unergatives (and transitives) is marked as dative, while the subject of unaccusatives is nominative. (cf. Harris 1981, Sanidze 1973, Hewitt 1995).

³ The future tense in Georgian is perfective as it only allows for sequential reading of two events:

(i) *roca moxval* *c'igns* *gadavtargmni*
 when you.come.FUT book.ACC I.translate.FUT
 “‘When you’ll arrive, I’ll translate the book” [translating happens *after* arriving]

The future and the aorist forms carry the perfectivizing preverb, (ii):

(ii) a. *gogo-m* *c'ign-i* *gada=targmn-a*
 girl-ERG book-NOM prev=translate-AOR.3sg
 “The girl translated the book”
 b. *gogo* *c'ign-s* *gada=targmni-s*
 girl.NOM book-ACC prev=translate-3sg
 “The girl will translate the book”

- b. kal-i prangul-ad *i*-lap'arak'-eb-s
 woman-NOM French-ADV RMP-speak-TS-3sg
 “The woman will speak in French”
- c. kal-i prangul-ad lap'arak'-ob-s/ lap'arak'-ob-d-a
 woman-NOM French-ADV speak-TS-3sg/ speak-TS-past-3sg
 “The woman is speaking/was speaking in French”

The two properties, ergative case on the subject and RMP *i*-, are only *partially* correlated, because *i*- occurs on unergative verbs in the future, where case-alignment is nominative. Thus, what RMP *i*- on unergatives is tied to is perfectivity rather than case-alignment. While unergatives share Property A with eventive transitive verbs, Property B does not characterize transitive or unaccusative verbs, which involve same voice morphology (if any) across tense-aspects. However, stative verbs pattern with unergatives with respect to voice marking instability. Compare (10) to (11), where RMP *i*- occurs in the aorist form of the static verb *lie*, but not in the present.

- (11) a. c'ign-i magida-ze dev-s
 book-NOM table-on lie-3sg
 “The book is lying on the table”
- b. c'ign-i magida-ze *i*-do
 book-NOM table-on RMP-lie.AOR.3sg
 “The book lay on the table”

The next section presents evidence in favour of structural similarity between unergatives and statives, which contrary to transitives and unaccusatives, manifest voice morphology variation conditioned by Viewpoint Aspect, i.e. a general version of Property B.

2.2. Structural similarity of unergatives and statives

Although they do not mark their subject as ergative in the aorist, statives share with unergatives three morphosyntactic properties in Georgian that distinguish both types from eventive transitive and unaccusative verbs: (a) voice morphology sensitivity to Viewpoint aspect; (b) shift to a different Aktionsart (verb-template) triggered by Viewpoint aspect; (c) auxiliary support in the present tense with 1/2 person nominative arguments.⁴ Properties (a) and (b) are interconnected: as voice morphology reflects argument structure, its variation entails valency and/or Aktionsart modification. In next sections, each of these properties is discussed. But firstly, a brief introduction to main characteristics of stative predicates in Georgian is in order.⁵

2.2.1. Note on stative verbs in Georgian

At first sight, unergatives and statives are clearly different cross-linguistically as the former are intransitive while the latter do not have to be, e.g. bivalent *know* and *love*. Henceforth, I discuss only monadic statives. Semantically, the two classes are also distinct: stative verbs denote states and unergatives activities (cf. §2.5). But this semantic disparity is not clear-cut, as some verbs that denote non-dynamic eventualities are formally shaped as unergatives in Georgian, such as *arsebobs* ‘exist’ (cf. fn. 17).⁶

⁴ The only stative verb that takes ergative subject in imperfective tenses is the verb *i-c-i-s* “know (something)”. Apart for case quirkiness, *know* is subject to Aktionsart instability typical of stative verbs: it cannot occur in the aorist, and functions as an unaccusative verb with a dative experiencer in the future.

(i) a.	nino-m	matematik'a	<i>i</i> -ci-s	PRESENT	
	Nino-ERG	math.NOM	RMP-know-3sg.		
	b.	nino-s	matematik'a	<i>e</i> -cod-in-eb-a	FUTURE
		Nino-DAT	maths.NOM	VM-know-MV-TS-3sg.nact	
				“Nino knows /will know math”	

⁵ This section does not aim to present an exhaustive description of Georgian statives. Only those properties directly relevant for their comparison with unergatives are evoked. (Cf. Kiguradze 2016 for detailed description).

⁶ Maienborn (2005, 2007) distinguishes between two types of non-dynamic expressions. On the one hand, there are D-states that denote Davidsonian eventualities, i.e. spatiotemporal entities with functionally integrated

Stative verbs form a distinct syntactic class in Georgian.⁷ They are characterized by: (i) general absence of thematic suffixes in imperfective tenses; (ii) dative experiencer subjects, e.g. *sdzinavs* ‘sleep’; (iii) impossibility to appear in (some) perfective tenses: e.g. *ic’onis* ‘weigh’; (iv) argument structure modification signalled by voice morphology for those statives that can appear in the perfective, e.g. *edzina* ‘sleep.AOR’, *idga* ‘stand.AOR’. I focus on the last property as it involves voice marking shift in the perfective, which constitutes a determining Property B of unergatives in (7).

2.2.2. Voice marking instability of statives and unergatives

There are five voice markers (VM) in Georgian, or versionizers, (the term ‘version’ is used in traditional Georgian grammars, but its meaning is close to ‘voice’), that appear pre-radically on finite verbs. They provide information about the argument structure of the predicate, and can be compared to applicative and/or voice morphemes cross-linguistically. VMs do not appear on non-finite forms and do not concatenate. Besides RMP *i-*, there is causative-locative VM *a-* that adds Agent or Place, depending on the context (cf. §2.7.1). Versionizers *u-* and *e-* add dative applicatives discussed in §4, (cf. Nash 2016, Marantz 1989, Harris 1981).

(12) VOICE MARKERS [simplified]

- i-* Reflexive-Mediopassive → signals absence of argument other than Theme
- a-* Causative-Locative → adds Agent or a dative locative argument
- u-* Goal-Experiencer-Benefactive → adds 3rd person dative argument
- e-* Goal-Experiencer-Benefactive → adds dative argument to unaccusatives/mediopassives
- \emptyset - Goal-Experiencer → adds Goal/Experiencer dative argument (rarely used)

We have seen that RMP *i-* occurs only in perfective forms of unergatives, (10). This is an unusual behaviour of the voice marker, which marks perfective *and* imperfective forms of transitive and unaccusative predicates in reflexive-benefactive functions and non-active functions, (13-15).

- (13) a. *katam-i* *xt’un-av-s* / *katam-ma* *i-xt’un-a*
 chicken-NOM jump-TS-3sg / chicken-ERG RMP-jump-AOR.3sg
 “The chicken is jumping/ the chicken jumped”
- (14) a. *mela* *i-k’l-av-s* *tavis tav-s* / *katam-s*
 fox.NOM RMP-kill-TS-3sg self’s self-ACC/ chicken-ACC
 “The fox is killing itself”, “The fox is killing a chicken for itself”
 b. *mela-m* *mo=i-k’l-a* *tavisi tav-i* / *katam-i*
 fox-ERG prev=RMP-kill-AOR.3sg self’s self-NOM/ chicken-NOM
 “The fox killed itself”, “The fox killed a chicken for itself”
- (15) a. *katam-i* *i-gup’-eb-a*
 chicken-NOM RMP-perish-TS-3sg.nact
 “The chicken is perishing”
 b. *katam-i* *da=i-gup’-a*
 chicken-NOM prev=RMP-perish-AOR.3sg
 “The chicken perished”

Stative verbs, just like unergative verbs, show voice-marking instability across aspects. Monadic stative verbs denoting static positions *sit*, *stand*, *lie* do not occur with VM in the present, (16). But in the aorist and future tenses, they carry RMP *i-*. Unlike unergatives that share properties with transitive verbs in the aorist, witnessed by ergative case on the subject,

events: *sleep*, *stink*, *glimmer*, *sit*, *stand*. This class is opposed to K(imian)-states with no spatiotemporal anchorage: *be*, *resemble*, *know*, *love*. In Georgian, structural distinction between monadic D-states and K-states is not clear-cut. While some D-states are structured as unergatives, e.g. *cimcimebs* ‘glimmer’, *icdis* ‘wait’, others, such as static *zis* ‘sit’, *dgas* ‘stand’, are structured as statives. This is contrary to Rappaport & Hovav’s (2000) treatment of static verbs as agentive, (cf. also Rothmayr 2009).

⁷ Šanidze’s (1973) classification of Georgian verbs comprises four types: active (transitive), mediopassive (unaccusative), medioactive (unergatives), and stative.

static verbs with RMP *i-* share unaccusative traits: nominative case on the subject in the aorist, and 3rd person singular and plural *-a/-ian* non-active agreement in the future.⁸

(16) PRESENT	AORIST	FUTURE
a. ia dg-as Ia.NOM stand-3sg “Ia is standing”	ia <i>i</i> -dg-a Ia.NOM RMP-stand-AOR.3sg “Ia stood”	ia <i>i</i> -dg-eb- <i>a</i> Ia.NOM RMP-stand-TS-3sg.nact “Ia will stand”
b. deb-i sxed-an sisters-NOM sit-3pl “The sisters are sitting”	deb-i <i>i</i> -sxd-nen sisters-NOM RMP-sit-AOR.3pl “The sisters sat”	deb-i <i>i</i> -sxd-eb- <i>ian</i> sisters-NOM RMP-sit-TS-3pl.nact “The sisters will sit”

To further illustrate voice-marking change on statives in the perfective, and their resemblance to unaccusatives, consider predicates with dative experiencers, such as *love*. Such stative predicates are marked with VM *u-/ϕ-/s-* that can be taken as dative argument introducing Applicative head (cf. §4.1). The same VMs mark transitive and unaccusative predicates with dative arguments and are insensitive to Viewpoint aspect, (17). On stative verbs however, VMs change across tenses: VM *u-/ϕ-/s-*, employed in imperfective tenses, switch to *e-* on those statives that can occur in perfective tenses, (18). Importantly, as noted in (12) VM *e-* appears on unaccusative verbs.

	PRESENT	AORIST	FUTURE
(17) a.	<i>u</i> -k’l-av-s VM-kill-TS-3sg “X kills Y for Z”	mo= <i>u</i> -k’l-a prev=VM -kill-AOR.3sg “X killed Y for Z”	mo= <i>u</i> -k’l-av-s prev-VM-kill-TS-3sg “X will kill Y for Z”
b.	<i>u</i> -tb-eb-a VM-warm-TS-3sg.nact “X warms for Y”	ga= <i>u</i> -tb-a prev=VM-warm-AOR.3sg “X warmed for Y”	ga= <i>u</i> -tb-eb-a prev-VM-warm-TS-3sg.nact “X will warm for Y”
(18) a.	mo= <i>s</i> -c’on-s prev=3-VM-like-3sg “X likes Y”	mo= <i>e</i> -c’on-a prev=VM-like-AOR.3sg “X liked Y”	mo= <i>e</i> -c’on-eb-a prev=VM-like-TS-3sg.nact “X will like Y”
b.	<i>u</i> -q’var-s VM-love-3sg “X loves Y”	* _____	<i>e</i> -q’var-eb-a VM-love-TS-3sg.nact “X will love Y”

2.2.3. Thematic Suffixes and Aktionsart shift of unergatives and statives

Property A in (7) indicates that unergatives pattern with transitives in Georgian in perfective tenses. Property B, shared with stative verbs, implies that unergatives shift to another Aktionsart in perfective tenses. The latter is not only reflected by VM instability, but is also accompanied by modification of thematic suffixes (TS) in the perfective future tense. As mentioned in §1.2, TS appears on eventive verbs in tenses with nominative-accusative case-alignment, which comprise imperfective tenses but also the perfective future tense. The TS of transitive and unaccusative verbs is constant across tenses, as illustrated in (19). Transitives occur with several TS: *-eb*, *-av*, *-ob*, but causative verbs (with VM *a-*) take TS *-eb*. Unaccusatives occur only with *-eb*. In other words, *-eb* is the most productive TS.

(19) PRESENT	FUTURE
a. xat’- <i>av</i> -s / a-tetr- <i>eb</i> -s draw-TS-3sg / VM-white-TS-3sg “X is drawing, whitening Y”	da=xat’- <i>av</i> -s / ga-a-tetr- <i>eb</i> -s prev=draw-TS-3sg / prev=white-TS-3sg “X will draw, whiten Y”
b. i-xat’- <i>eb</i> -a RMP-draw-TS-3sg.nact “X is being drawn”	da=i-xat’- <i>eb</i> -a prev=RMP-draw-TS-3sg.nact “X will be drawn”

⁸ Sorace (2000) shows that stative verbs, divided into three subclasses of concrete states, positional verbs and verbs denoting psych-states, are the most variable on the Auxiliary Selection Hierarchy. In Italian, the verb of existence (D-state) *exist* is unaccusative as it selects the auxiliary *essere*, whereas in Georgian its homologue is unergative (cf. fn 17). The verb *belong* is unergative in Italian as it selects *habere*, but syntactically stative in its Georgian homologue *ek’utvnis* as it does not have a perfective form.

Statives and unergatives are different. Statives are not marked with TS in the present tense. If TS expresses some aspect of imperfectivity, or eventivity inherent to it, its absence on statives is expected. But those statives that occur in the perfective future tense carry TS *-eb*.

(20) PRESENT	FUTURE
a. c'ev-s/ sxed-an lie-3sg/sit-3pl "X lies/Xs sit"	i-c'v- eb -a / i-sxd- eb -ian RMP-lie-TS-3sg.nact / RMP-sit-TS-3pl.nact "X will lie/ Xs will sit"
b. u-q'var-s / mo-s-c'on-s VM-love-3sg / VM-like-3sg "X loves/likes Y"	e-q'var- eb -a / mo-e-c'on- eb -a VM-love-TS-3sg.nact / prev=VM-like-TS-3sg.nact "X will love/like Y"

Unergatives also manifest TS shift in the future. In imperfective tenses, they are marked with TS *-eb*, *-ob*, *-av*. However, in the perfective future, all unergatives occur with TS *-eb*, (21).

(21) PRESENT	FUTURE
a. xt'un- av -s/ mger-i-s jump-TS-3sg/ sing-3sg "X is jumping/ singing"	i-xt'un- eb -s / i-mger- eb -s RMP-jump-TS-3sg / RMP-sing-TS-3sg "X will jump/sing"

Statives and unergatives bear TS *-eb* in the future tense. How does one know that the former class has shifted to unaccusatives while the latter to transitives? After all, neither TS *-eb* nor RMP *i-* unambiguously flag membership in one of these classes. The answer is provided by agreement markers in (22-23): stative *i-sxd-eb-a* '(s)he will sit' triggers non-active 3rd person subject agreement *-a*, whereas unergative *i-cek'v-eb-s* '(s)he will dance' triggers transitive agreement marking *-s*.

(22) a. xalx-i sxed-s people-NOM sit-3sg "People are sitting"	b. xalx-i i-sxd- eb -a people-NOM RMP-sit-TS-3sg.nact "People will sit"
(23) a. gigo cek'v-av-s Gigo.NOM dance-TS-3sg "Gigo is dancing"	b. gigo i-cek'v- eb -s Gigo.NOM RMP-dance-TS-3sg "Gigo will dance"

To sum up, Aspect-induced sensitivity of voice markers and thematic suffixes reveals that Georgian verbs are split in two groups: transitive and unaccusative verbs show stable behaviour in this respect in imperfective and perfective, but statives and unergatives do not.

(24) <i>Predicate Type</i>	<i>VM stability across aspects</i>	<i>TS stability across aspects</i>
transitive	Yes	Yes
unaccusative	Yes	Yes
stative	No	No
unergative	No	No

2.2.4. AUX-support on statives and unergatives

A third morphosyntactic property shared by statives and a small class of irregular unergatives without TS is the auxiliary support in the present tense with 1/2person nominative arguments. First and second person forms of the verb *be* in the present, *var* and *xar*, obligatorily encliticize to statives and optionally to some unergative predicates, when the nominative argument is first and second person, (AUX-support in unergatives is mostly used in spoken Georgian), (25). I hypothesize that AUX provides support for tense/finiteness marking to verbs that lack TS and superficially look as aspectually deficient. AUX and TS perform the same function, which is to render predicates visible to tense.

- (25) a. UNERGATIVES
 v-t'ir-i-var/ v-k'ivi-var/ v-q'viri-var/ v-c'ux-var
 1-cry-1.AUX/ 1-scream-1.AUX/ 1-shout-1.AUX/ 1-regret-1.AUX
 'I am crying/screaming/shouting/regretting'
- b. MONOVALENT STATIVES
 me v-zi-var/ v-c'ev-var/ v-čan-var/ v-q'ar-var
 I 1-sit-1.AUX/ 1-lie-1.AUX/ 1-seem-1.AUX/ 1-stink-1.AUX
 'I am sitting/lying/I seem/stinking'
- c. BIVALENT STATIVES
 me kal-s v-u-q'var-var/ mo=v-ø-c'on-var/
 I woman-DAT 1-VM-love-1.AUX/ prev=1-VM-like-1.AUX/
 v-u-k'av-i-var
 1-VM-hold-1.AUX
 "The woman loves/likes/holds me"

To summarize, in spite of semantic differences unergative and stative predicates in Georgian share morphosyntactic properties: both verb-types are subject to voice morphology modification across tenses and both types shift to another Aktionsart in the perfective: statives shift to unaccusative class, and unergatives of transitives.⁹ Finally, statives and some unergatives display aspect-marking deficiency in the present compensated by AUX-support.

2.3. Towards an account of Properties A and B

To account for Property B in (7), I contend that unergatives differ from transitive and unaccusative predicates that manifest uniform behaviour across aspects, and pattern with statives that are sensitive to Viewpoint Aspect. To account for Property A, I argue that unergatives shift to the transitive class in the perfective, unlike statives that shift to unaccusatives.

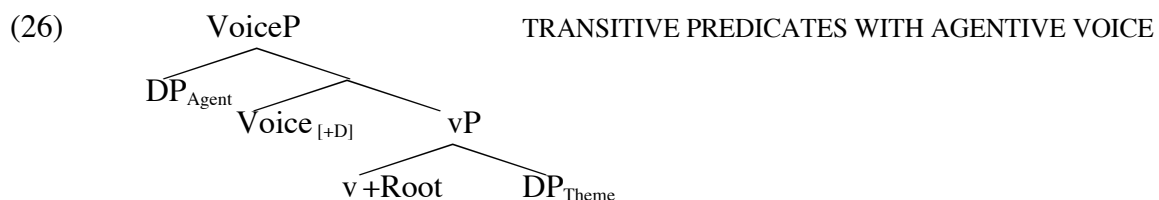
The key factor that splits Georgian predicates into two classes — events on the one hand and non-events on the other — is the capacity of the verb to select an internal argument. Event verbs, which comprise unaccusatives and transitives, are argument-selectors, while non-event predicates, which regroup statives and unergatives, are not. I put forth a Neo-Burzio Dependency that restricts the presence of an argument with Agent role (in short, Agent) only to dyadic verbal templates, i.e. Agent is *dependent* on another argument. The consequence of NBD is that the external argument of monadic verbs is not assigned Agent role in Georgian. I offer a structural explanation as to how unergative predicates acquire agentivity, in spite of their stative core. Agentive interpretation in perfective and imperfective Viewpoint Aspects is construed in different ways. In perfective tenses, it is due to Agent role assigned to the external argument in a configuration obeying NBD. So, in order to be agentive unergatives *must* be structured as dyadic events in the perfective. This is achieved through causativisation, i.e. adding an extra argument-introducing Voice head to monovalent unergative core. In imperfective tenses, the agentive interpretation of the external argument is due to dynamic semantics of imperfective aspect. Specifically, the external argument is introduced by a hybrid head created by syntactic operation of bundling of imperfective Aspect and argument-introducing Voice categories. This hybrid category ensures agentive reading of its argument, even in the absence of another argument, as required by NBD. Unergatives hence *may* be monovalent activities in imperfective tenses with agentive external argument. In other words, agentivity of unergatives is due to Agent thematic role within the confines of verbal phrase in

⁹ A reviewer inquires about thematic status of stative verbs that shift to unaccusatives in the perfective. Consider the aorist form of the monovalent static *c'evs* 'lie', *i-c'v-a*. Although I claim that unaccusatives standardly involve an argument-selecting *v*, "unaccusativisation" of statives involves adding expletive Voice to the stative VoiceP, spelled out by RMP *i-*. As developed in § 2.4, expletive Voice heads unaccusative templates; it entails semantic initiation but lacks the capacity to introduce a referential argument. This operation ensures the necessary ingredient of eventiveness in perfective tenses, which is the expression of initiation. (cf. §2.5). Hence, the argument of static 'lie' is assigned the same Holder role in perfective and imperfective tenses, and is marked as nominative in the aorist as it is the argument of a monovalent verb. This type of shift should be dissociated from merging the stative *root* in a standard unaccusative template where *v* is argument-selecting. In the latter case, a run of a mill dynamic unaccusative *c'v-eb-a* 'lying down' is created from the root *c'v*.

completed aspects, while agentivity can be “injected” into Holders in incompleted aspects where the confines of verbal phrase and functional Viewpoint Aspect phrase are blurred. We shall see that Aspect-Voice bundling is not an ad hoc operation affecting unergatives and is generalized to all dynamic eventualities in imperfective tenses in Georgian.

2.4. Structural source of Agents and Neo-Burzio Dependency

We first need to be explicit about what it means for a predicate to have Agent argument, in structural terms.¹⁰ Adopting the tenets of Distributed morphology, I contend that verb phrases contain a verb head *v* that categorizes the root (Marantz 2007, 2013, Wood & Marantz 2017).¹¹ In eventualities, *v* also carries a temporal feature, or an event variable (in the sense of Davidson 1967), which is absent in stative *v*.¹² The categorizer *v* can have a thematic property too: it can be argument-selecting (i.e. theta-role assigning) or not. Core transitive and unaccusative predicates involve *v* that assigns the Theme role to its complement. A *vP* headed by such *v* denotes a change that the Theme undergoes in the event. Other main arguments with Agent, Holder, Experiencer, Beneficiary, Goal thematic roles are not introduced by *v* but by specialized argument introducing/theta-assigning heads, Voice and Appl, as well as by adpositions.¹³ The structure I assume for a simple transitive eventive predicate is in (26).



In unaccusative templates, Agent is not projected but the predicate entails initiation: if there is a change, which imposes the structural projection of Theme, there must be initiation. Unaccusative predicates are therefore minimally different from transitives—both contain a Voice that denotes initiation, this property is inherited via Event Identification. While Voice in transitive structure is a theta-assigner and introduces a referential argument, Voice in unaccusatives is expletive; this asymmetry is encoded by the value of Voice [D] feature (Schäfer 2008, Wood 2014, Alexiadou, Anagnostopoulou & Schäfer 2015, Kastner 2020).¹⁴ Active Voice is endowed with [+D] and a referential argument must be introduced in its specifier, whereas non-active, expletive, Voice lacks the ability to take an argument.

¹⁰ In this study, arguments that receive the agent theta-role from Voice are spelled with capital A, as Agent(s). But agentive reading of an argument can also arise in other structural environments: in *by*-phrases in passive constructions (cf. Marantz 1984), for causers in causatives of transitives (cf. Nash 2020), and for the subject of unergative verbs in imperfective tenses, as claimed in this work. Furthermore, Agent is obligatorily agentive if the root that feeds *vP* is manner-denoting. However, if the root of a transitive verb is property-denoting, Agent is more readily interpreted as a semantic causer.

¹¹ I am grateful to Alec Marantz for discussion of many aspects of the present analysis.

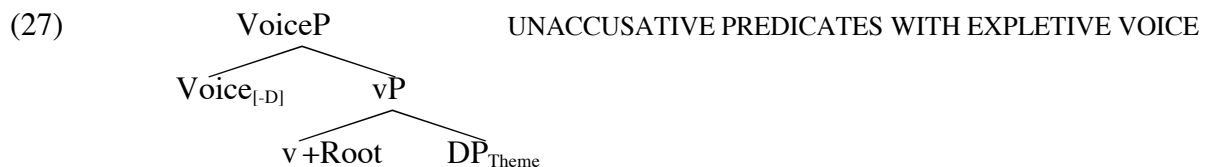
¹² Some stative verbs carry a Davidsonian event argument, as argued by Maienborn (2005), (cf. fn 6).

¹³ A reviewer inquires whether Voice can assign Experiencer role. This role is assigned by Appl(licative) to dative unintentional causers in unaccusative structures in German or Albanian (Kallulli 2006) or to dative subjects in psych-predicates (Landau 2010). In Georgian too, dative unintentional causers occur in unaccusative templates and psych-experiencers in stative templates, (i-ii). In the former, Appl introduces Experiencer above an agentless VoiceP, while in the latter Appl introduces Experiencer above a stative VoiceP.

(i) keti-s sain-i ga=u-t'q'-d-a
 Keti-DAT plate-NOM prev=VM-break-BECOME-AOR.3sg
 “Keti unintentionally broke a plate”, “Keti had a plate broken on her”

(ii) keti-s musik'a u-q'var-s
 Keti-DAT music.NOM VM-love-3sg
 “Keti loves music”

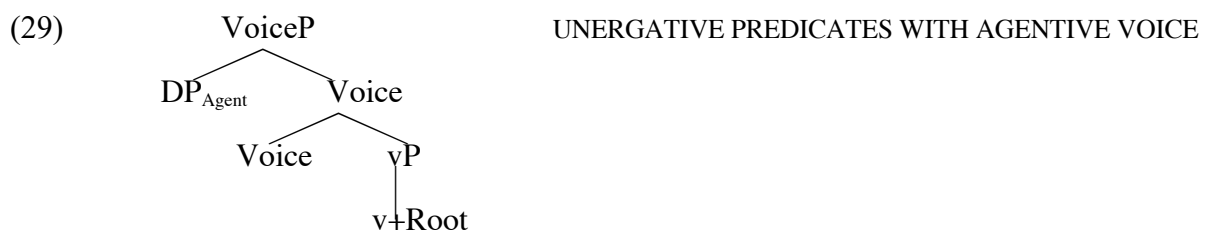
¹⁴ Expletive Voice does not have a specifier in (27). Alternatively, it can be projected and occupied by a silent expletive element, EXPL (cf. § 2.7.1).



It ensues that a referential argument introduced by Voice in eventive change of state VoiceP obligatorily c-commands (“sees”) a Theme-assigning v. This state of affairs is reminiscent of Burzio’s (1986) generalisation that establishes a correlation and a dependency between the presence of the external argument and licensing of Theme, even if the generalisation ties two properties of different syntactic nature: thematic roles and case. I contend that a Neo-Burzio Dependency holds in Georgian, which ties the thematic role of the external argument with the thematic property of the predicate: the external argument has Agent role only if the predicate also selects a lower argument.

(28) (= 6) **Neo-Burzio Dependency (NBD)**: Voice assigns Agent role to its argument if it selects an argument-selecting complement.

NBD presents a challenge for agentive intransitive constructions and predicts that a structure like (29) where v does not select an argument should be ruled out in Georgian.



Adopting Kratzer’s (1996) partition of Voice-types into eventive and stative, and combining it with NBD, I qualify Voice that selects an argumentless complement as *stative*, even if it selects a vP conveying a spatiotemporal eventuality. Being stative rather than agentive is therefore a configurationally determined property of Voice, and not a feature determined by spatiotemporal semantics of the predicate.

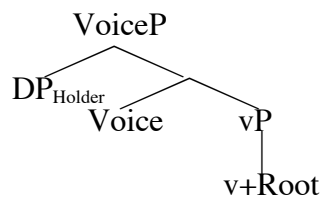
In Georgian, when a vP that lacks an internal argument is selected by an argument-introducing Voice, with [+D] feature, the external argument is assigned a Holder role, (30).¹⁵ As a result of NBD, unergative predicates are structurally akin to stative predicates with external Holder argument. The only difference between unergative and stative structures lies in the property of v; v in unergatives is endowed with temporal event feature, while v in statives is not. I leave open the question whether this feature is inherent to different types of v, or is provided by the root. The second option is theoretically preferable, but it necessitates a principled classification of roots, which is not the focus of the present work.

¹⁵ Notice that NBD is not bidirectional. If a vP has an argument, it is not necessarily selected by an agent-introducing Voice. It can also be selected by a non-active Voice of unaccusative predicates. A reviewer inquires whether an argument-selecting vP can ever be stative, i.e. selected by stative Voice that assigns a Holder role. The present system disallows the existence of such predicates, confirmed by empirical evidence. The lower argument of biargumental statives such as Georgian equivalents of *love*, *know*, *remember* (*has-memory-of*) is not assigned Theme role. Without going into much detail, complex agreement pattern of a verb such as *love* in Georgian reveals that its meaning is composed as follows: *Mary loves me=of/to Mary-I-am-love* (“I am the love of Mary”). What looks like the “object” of *love* is in fact the nominative lower subject of the predicate:

i) meri-s me v-u-q’var-var
 Mary-DAT I 1-VM-love-1.AUX.sg
 “Mary loves me”

This suggests that the lower argument of the predicate is Holder introduced by Voice. Cf. also §2.2.4. However, Georgian stative verbs do pattern as unaccusatives in perfective tenses, as acknowledged in §2.2.3. A stative VoiceP can be selected by non-active Voice, yielding an initiated eventuality without a referential initiator. Such configurations are like unaccusatives in the sense that they are non-active but also differ from unaccusatives in the sense that their sole argument does not undergo any change.

(30)



UNERGATIVE AND STATIVE
STRUCTURES IN GEORGIAN

To summarize, in order to convey initiation and introduce Agent, Voice must select a complement with an argument in Georgian.¹⁶ If external arguments of unergatives do not get Agent role underlyingly, we need to understand how they acquire agentivity, which traditionally is the defining trait of unergativity. In the next section, I explore the role of Viewpoint Aspect in the interpretation of the argument of unergative verbs. Namely, I show that it can be interpreted as agentive under the scope of the imperfective aspect.

2.5. Aktionsart of activities and Viewpoint Aspect

An important claim of our analysis is that Georgian unergatives and statives take a Holder argument underlyingly. While it is widely acknowledged that stativity implies the absence of Agent, the external argument of unergatives is precisely agentive. If unergatives and statives are built alike, the challenge is to elucidate how a predicate structured as stative acquires agentive reading. In this section I show that the imperfective aspect allows to circumvent the homogeneous property of stative predicates, and contributes to the reinterpretation of holders as agents. In perfective tenses however, agentivity of unergatives and transitives must be structurally conveyed within the predicate, by Voice.

Semantically, unergative verbs express processes, which as a Vendlerien aspectual class of activities share properties both with events and states: i) activities and events are *dynamic*, statives are not; ii) activities and states are *homogeneous*, events are not.

The two properties, dynamicity and homogeneity, seem contradictory at the first blush.

Dynamicity entails stages in the eventuality that can be cumulative and eventually may lead to a change, e.g. *run*, *eat a banana*, *build a boat*, it entails time flow. *Homogeneity* entails that the subparts of an eventuality denote identical properties as the entire eventuality, hence such eventualities are devoid of a natural end-point. However, there is a difference of granularity of homogeneity in states and activities. States are homogenous to the smallest time-measure, while activities are a sum of identical mini-events (cf. Landman 1992, Dowty 1979).¹⁷

Dynamicity is determinant in distinguishing activities from states in the perfective aspect, when eventualities are interpreted as a “whole” from the outside point of view. Unlike states in (31a), activities pattern with accomplishments in this Viewpoint aspect as both participate in advancement of time, (31b-c) (Smith 1999).¹⁸

¹⁶A reviewer inquires whether Georgian has syntactically transitive but semantically stative verbs such as *know* or *obstruct* as in: *Because of a congenital malformation, tissue obstructed the blood vessel* (Kratzer 2000). The existence of such predicates would challenge NBD. The stative verb *icis* ‘know’ is the most irregular verb in Georgian (cf. fn.4), however *abrk’olebs* ‘hinder, obstruct’ is a bona fide transitive verb denoting a change. Yet, a permanent state of obstruction that is not spatiotemporally delimited cannot be expressed in perfective tenses, (cf. § 2.2.1. on general ban of stative verbs in perfective tenses). The thorny issue remains as to how structurally distinguish eventive and stative *obstruct*. Kratzer (2000) claims that this type of verbs carries an additional state feature, along with spatiotemporal feature; this double identity does not affect argument structure of the predicate. Alternatively, and preferably, it can be argued that stative and eventive *obstruct* differ in argument structure which is determined by spatiotemporal vs. state features of v. Alexiadou (2011) claims that the internal argument in stative variants of eventive transitives is not selected by the verb but is introduced by silent P as it does not denote the object of change but the location of the state, (Hale & Keyser 2002). If so, the higher argument of stative *obstruct* with non-selecting v will not be assigned Agent role in Georgian, in conformity with NBD. (cf. Arad 1998 on the idea that stative causers are not structurally licensed as standard causers.)

¹⁷ Interestingly, two non-dynamic verbs *arsebobs* ‘exist’ and *mdebareobs* ‘be-located’ are structured like unergatives and carry TS *-ob* in imperfective tenses, which statives never do in Georgian. The verb ‘exist’ shows the full array of morphosyntactic properties of Georgian unergatives: RMP *i-* in perfective tenses and ergative subject in the aorist. However, ‘be-located’ cannot be used in perfective tenses, similarly to stative verbs such *girs* ‘cost’ or *q’ars* ‘stink’, (cf. §2.2.1). Therefore, ‘exist’ patterns with dynamic and agentive unergatives, while ‘be-located’ patterns with statives. This in turn suggests that dynamic/agentive vs. stative distinction of lexical predicates hinges on structure rather than on meaning.

¹⁸ If unergatives denote *dynamic* eventualities in completed events, like accomplishments, they differ from the latter in expressing only *atelic* eventualities. (cf. Holisky 1981):

- (31) a. me rom movedi kal-i i-c'v-a/ i-dg-a
 I that arrived woman-NOM RMP-lie-AOR.3sg/ RMP-stand-AOR.3sg
 “When I arrived the woman was lying/was standing”
 entails: the woman lied/stood BEFORE I arrived
- b. me rom movedi kal-ma i-cek'v-a/ i-xulign-a
 I that arrived, woman-ERG RMP-dance-AOR.3sg/ RMP-hooligan-AOR.3sg
 “When I arrived, the woman danced/hooliganed”
 entails: the woman danced/hooliganed AFTER I arrived
- c. me rom movedi kal-ma leks-i targmn-a/ c'er-a
 I that arrived, woman-ERG poem-NOM translate-AOR.3sg/ write-AOR.3sg
 “When I arrived, the woman translated/wrote a poem”
 entails: the woman translated/wrote a poem AFTER I arrived

Comrie (1976:49) states that dynamic situations are continually subject to a new input of energy. Smith (1999:486) also suggests that dynamicity is dependent on energy: since energy requires a source, the event ceases when the energy ceases, “... dynamism brings with it both the assumption of an initial, and the possibility of an eventual end point.” Hence, as dynamicity entails the presence of the initiator and atelicity entails the absence of the result, the structure of unergative verbs, especially in completed tenses where the eventuality is viewed as a whole, must encode this information, i.e. the unergative verb template must include Agent that brings about a dynamic eventuality until its temporal completion. Although activities and accomplishments both share the presence of initiator, only accomplishments bring about the change of state of the theme. This is why it is conceptually problematic to reduce one class to another, as Hale & Keyser (1993) propose to do in analysing agentive activities as “hidden” accomplishments, (cf. § 6.1). While dynamicity plays a key role in distinguishing events and states in perfective aspects, the property of homogeneity is what differentiates them in imperfective aspects, when an eventuality is regarded from the “inside”. The imperfective aspect describes one stage of the event (Landman 1992), which in the ideal world will hold true beyond that stage, with the flow of time. (Cf. Bennett and Partee 1972 on imperfective paradox). This entails that an eventuality under its scope is divided into identical stages, out of which one stage/mini-event is picked up. States cannot be broken into stages down to the instant because of their internal homogeneity and should therefore be incompatible with the imperfective/progressive aspect, (Rothstein 2004). But if coerced under progressive aspect, a stative predicate acquires a dynamic reading because it is interpreted as denoting a mini-event:

- (32) a. John is liking my cake (more and more)
 b. Mary is being such a nuisance

In (32a), there is a sense according to which every stage of liking a cake is a mini-event with the external argument as its initiator that advances the eventuality to the final state of liking a cake; this is why it is felicitous with the adverb *more and more*, while in (32b) every stage of Mary’s being a nuisance is a mini-act the eventual accumulation of which yields a behaviour. The progressive aspect adds the sense of cumulative stagehood, modifiable by adverbs of comparison such as *more* or *like*.

In this respect, Rothstein’s (1999) analysis of English constructions with progressive *be* is enlightening about the impact of the progressive/imperfective aspect on the meaning of *be+Pred*, which is interpreted as activity under its scope. The argument of *be* is agentive in these contexts in spite of stative nature of the predicate.

- (33) a. John is being naughty —>John is acting like a naughty person
 b. John is being a complete gentleman—>John is acting like a complete gentleman

(i) mak'a-m ori saati/ #or saat-ši i-xulign-a da c'avida
 Maka-ERG two hour/ two hour-in RMP-hooligan-AOR.3sg and left
 “Maka hooliganed for two hours/*in two hours and left”

For Rothstein, these readings of *be* are not due to the polysemy of the verb (contra Partee 1973), but arise from the semantic coercion mechanism, “repackaging”. A stative predicate is repackaged as *action/active behaviour* under the scope of progressive aspect. This signifies that Holder argument is reinterpreted as agentive, if the stative predicate is embedded under the progressive aspect. Rothstein’s mechanism allows a verb to be syntactically structured as a *state* at VP level and then be “repackaged” into an *event* at a higher AspP level. Zucchi (1998) also argues for the similar type of Aspect shift whereby the progressive operator can force a stative predicate to be reanalysed as a non-agentive process or activity. In conclusion, imperfective aspect interprets predicates under its scope as eventualities comprised of stages, i.e. (mini-)events. A predicate *does not have to be* structured as agentive under the imperfective aspect, which due to its “repackaging” capacity can turn a state with Holder argument into an agentive eventuality. On the other hand, the perfective aspect may not repackage states into events—it englobes the eventuality as a temporal block. Eventhood, entailing initiation, cannot be “imposed” onto a predicate that is not structured as dynamic. This discussion gives us necessary tools to answer the questions at the outset of the section: How can unergatives get agentive readings, if they are structured like statives? If the imperfective aspect repackages a predicate structured as stative into agentive under its scope, we understand why a predicate can simultaneously exhibit structural properties of statives and semantically behave as an agentive verb in imperfective tenses. But as repackaging of statives is not an option in perfective aspects, the only strategy to turn a stative predicate into agentive is to modify its argument structure. In § 2.7, I show that unergative predicates, underlyingly structured as statives, undergo causativisation, i.e. adding an initiator argument, in the perfective aspect. But this operation requires another argument-modifying operation: the causative predicate undergoes reflexivisation, reflected by RMP *i-*. The core Holder and the added Agent roles are carried by the same event participant.

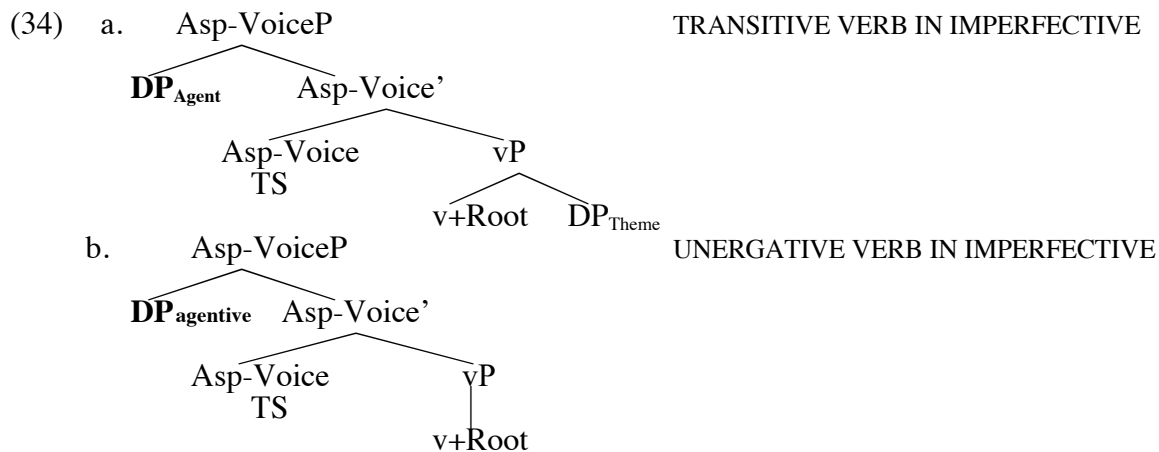
2.6. Unergative predicates in imperfective tenses

The determining property of imperfective aspect is to “slice” the eventuality under its scope into a series of identical mini-events and express the progression of one mini-event. As stative verbs express homogenous eventualities, their slicing into mini-events is impossible *à priori*: a mini-event must still express mini-change. This accounts for incompatibility of stative verbs and progressive aspect in English. However, a stative verb can be coerced to occur under the scope of imperfective progressive aspect, in which case it behaves as eventive and its subject is interpreted as agentive.

I contend that unergative verbs are agentivised in Georgian by a similar mechanism in imperfective tenses due to dynamic properties of Aspect. Analysing aspect-split in Georgian, Nash (2017) argues that the external argument of eventive verbs is introduced by different categories across tenses. In imperfective tenses, it is introduced by an aspectual category Event, morphologically realised as a Thematic Suffix. Event semantically controls *v* (equivalent to Voice in the present framework), which enables argument-sharing of the two heads. In perfective tenses Event is absent, as witnessed by absence of TS, and external arguments are introduced by *v* (=Voice, here). My proposal retains Nash’s idea that Asp is instantiated only in imperfective tenses in Georgian, but opts for feature-bundling of Asp and Voice into one syntactic category in the sense of Pykkänen (2008). Bundling circumscribes argument introduction to the verbal domain, to hybrid Asp-VoiceP. Importantly, bundling is not limited to unergative structures, any eventive verb, including transitives that obey NBD and unaccusatives that lack the external argument, is headed by Asp-VoiceP in imperfective tenses: this is witnessed by presence of TS in these verb-types. Recall that one of the defining properties of stative verbs is the absence of TS in the present tense (cf. § 2.2.3). This implies that Asp is not instantiated, and hence not fused with Voice, with this verb-type in the present tense. Statives are structured as VoiceP, rather than as Asp-VoiceP in the present tense, unlike unaccusatives, unergatives and transitive verbs.¹⁹ In sum, imperfective Aspect never appears as an independent category in Georgian, and is always bundled with Voice.

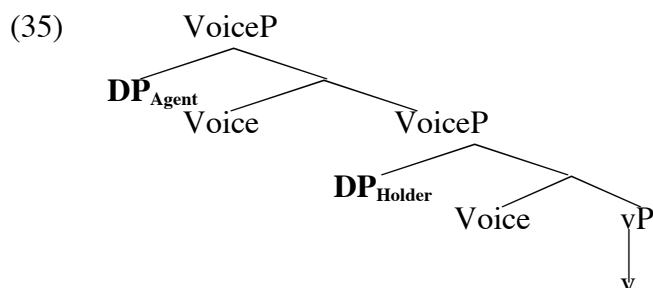
¹⁹ Incompatibility of Asp and statives in Georgian is comparable to oddness of English progressive tense with the same verb-type. It results that the main structural difference between unergatives and statives in Georgian imperfective tenses is that the former are Asp-VoiceP and the latter VoiceP.

Asp-Voice bundling does not affect the semantic role of the external argument of transitive verbs, as NBD is still respected, (34a). However, in the unergative template in (34b), inherent dynamic features of Asp are responsible for the agentive interpretation of the external Holder argument whose introduction is guaranteed by Voice features. Although DP in Spec,Asp-VoiceP is not assigned Agent role— the configuration is at odds with NBD—it is still interpreted as agentive.



2.7. Unergative predicates in perfective tenses

Under imperfective aspect unergatives with Holder are restructured into agentive processes, whereas in the perfective aspect another strategy is used in order to transform a Holder assigning VoiceP into an agentive template. Namely, another argument introducing VoiceP is added to the stative core, as illustrated in (35). This type of causativisation does not create a bieventive structure (on monoeventive *have* causatives in English cf. Ritter & Rosen 1993, 1996; Bjorkman & Cowper 2013, Myler 2016). The upper Voice assigns Agent role in (35) as it conforms to NBD: it ‘sees’ the lower Holder selecting VoiceP.



The structure in (35) is the example of direct causation, as extensively argued for Georgian by Nash (2020), (cf. also Nie 2020).²⁰ The upper Voice adds an argument that initiates/causes the

²⁰ The external argument in (36) gets Agent role. I follow Nash (2020) who argues that Georgian presents no evidence for distinct syntactic behaviour of external arguments of agentive transitive verbs and of causative verbs. In the present analysis, only two roles for external arguments are distinguished, Agent and Holder, the former encompassing semantically distinct agents and causers. While in some languages initiators can only be animate, this is not the case in Georgian where unergative (i) and transitive verbs (ii) freely licence inanimate causers, such as natural forces. See also § 4.3.1

- (i) a. zğva-m/ kar-ma i-xmaur-a
 sea-ERG wind-ERG RMP-noise-AOR.3sg
 “The sea/the wind made-noise”
 b. mart'-ma i-giž-a
 March-ERG RMP-crazy-AOR.3sg
 “March “crazed”” (the month of March behaved crazily)
- (ii) a. tovl-ma ga=a-tetr-a mindor-i
 snow-ERG prev=VM-white-AOR.3sg field-NOM
 “The snow whitened the field”

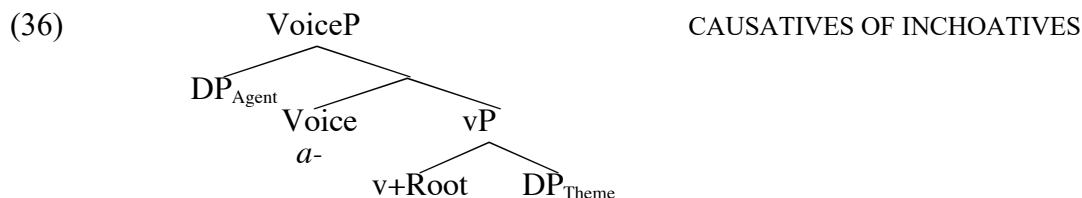
state denoted by the lower VoiceP: “*X causes [Y to hold V]*”. Importantly, the lower argument *Y* is the external holder argument of the lower predicate and not the Theme that changes its state in the eventuality initiated by *X*.

But how is an intransitive agentive unergative predicate obtained from a bivalent configuration in (35)? In the next section, I propose that the causative structure undergoes reflexivisation, expressed by RMP *i-*: unergatives in perfective tenses are structured as reflexive causatives where Agent and Holder roles are assigned to the same event participant.

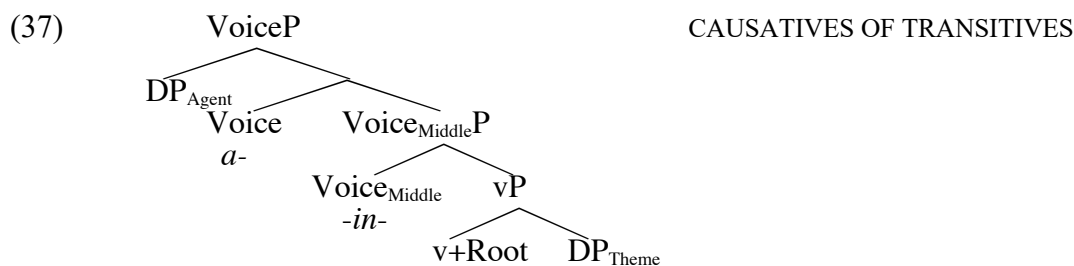
2.7.1. From causatives of unergatives to “regular” unergatives

Some words on direct morphological causatives are in order, before focusing on the structural mechanism that transforms causatives of unergatives to “regular” unergatives in perfective tenses. Causative configurations in Georgian are monoclausal structures that denote one temporal event. The causative structure involves a Voice head, morphologically expressed by voice marker *a-* (cf. § 2.2.2), added to vP for simple causative accomplishments, or to VoiceP in other cases (Nash 2020).

Causative counterparts of inchoatives are standard transitives, derived by embedding a vP that denotes a change under an argument-introducing Voice (recall that regular unaccusatives are headed by expletive Voice in (14)). The structure in (36(=13)) corresponds to the template of standard eventive transitive change of state verbs obeying NBD.²¹



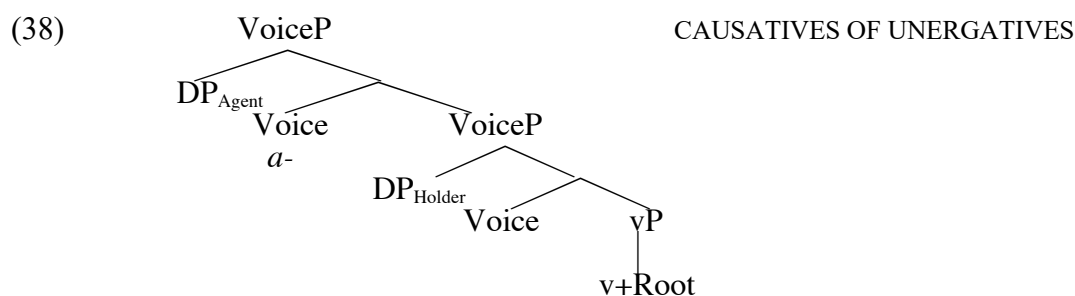
According to Nash (2020), causatives of transitives do not involve embedding of agentive VoiceP with external argument. Rather, the embedded structure represents a deagentivized transitive predicate headed by Middle Voice, spelled out as suffix *-in-*, (37). Middle Voice subsumes the presence of an implicit argument, and differs from expletive Voice that entails none. Under this perspective, causatives of transitives in Georgian are akin to *faire-par* causatives in Romance languages (Kayne 1975), or to English *have*-causatives with past participle, e.g. *Nina has the butter softened* (cf. Myler 2016).



b. siǰaribe-m ga=a-borot'-a is k'ac-i
 poverty-ERG prev=VM-evil-AOR.3sg that man-NOM
 “Poverty made that man evil”

²¹Although structure in (36) implies that all transitive eventive verbs are causative, not all of them carry VM *a-*. I hypothesize that the presence of *a-* depends on the vP. If vP expresses change without entailing the manner in which the change is caused, the verb is marked by *a-*, as is the case of all denominal and deadjectival change of state verbs. However, if vP expresses manner by which the change is brought about, the resulting verb lacks *a-*. Following Rappaport Hovav & Levin’s (2010) claim on manner and result complementarity in verb classes, Georgian transitive verbs can be divided into *manner* transitive verbs built from event denoting roots and *result* transitive verbs built from state/property denoting roots. Šanidze (1973) refers to transitives without *a-* as ‘primary verbs’ and to those with *a-* as ‘derived verbs’.

Lastly, (38(=35)) represents causatives of unergatives. Here, Voice is added to the underlying stative core of unergative with Holder introduced by the embedded Voice.²² The lower DP_{Holder} denotes a participant holding an activity that (s)he did not initiate; the initiator is introduced by upper Voice. For example, the causative configuration with the verb *apopxa* “cause-crawl” in (39) describes a situation where an army officer makes soldiers crawl for a certain period of time for military training purposes. Likewise, in a question “What makes Nino play for hours?” (“what plays Nino for hours?”) asked when one witnesses a tireless child, the present form of the causative of unergative *atamašebs* “cause-play” will be employed. Importantly, in these examples Agent is a direct semantic causer, and the answer to the question can be “Endless energy”.



(39) vano-m nino a-cek'v-a/ a-mđer-a/ a-popx-a/
 Vano-ERG Nino.NOM VM-dance-AOR.3sg/ VM-sing-AOR.3sg/ VM-crawl-AOR.3sg
 a-xulign-a/ a-tamaš-a/ a-k'rusun-a
 VM-hooligan-AOR.3sg/ VM-shiver-AOR.3sg/ VM-moan-AOR.3sg
 “Vano made Nino dance/sing/crawl/behave as hooligan/play/moan”

Direct evidence for non-Agent role of the causee comes from its failure to control agent-oriented adverbials. (40) is not ambiguous: only Vano acted on purpose, Nino did not.

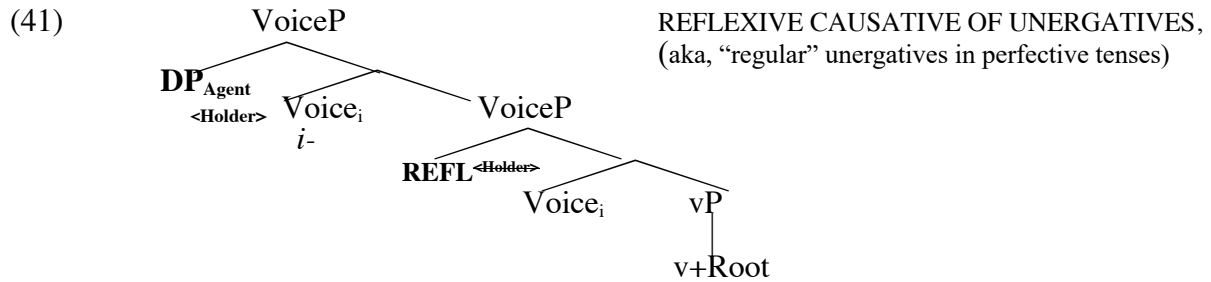
(40) vano-m nino ganzrax a-cek'v-a
 Vano-ERG Nino.NOM purposefully VM-dance-AOR.3sg
 “Vano made Nino dance on purpose”
 =Vano’s action was on purpose
 ≠ Nino’s activity was on purpose

It ensues that an external argument is interpreted as agentive in three different syntactic environments: (i) if it is introduced by a bundled Asp-Voice head in imperfective aspect, (ii) if it is assigned Agent role by Voice that selects argument-selecting vP, and (iii) if it is introduced by Voice that selects another VoiceP. Do these three syntactic environments impose semantic flavors to the interpretation of the external argument? The third context represents causativisation and Agent is interpreted as a semantic causer. The causer interpretation of Agent is also available in the second context, depending on the nature of the root that feeds the vP. Namely, the root must be property denoting (cf. fn. 25). Lastly, the first context ensures agentive interpretation of the external argument even in those cases where the complement of Asp-Voice is not argument selecting and where Voice (were it alone) assigns Holder role. Out of these three contexts, the second one is incompatible with the unergative templates in all tenses, and the first context is clearly ruled out in the perfective. We are hence left with the third context to derive a template compatible with the meaning of regular unergatives.

I claim that causativisation of the unergative core in (38) is followed by *reflexivisation*. I adopt a theory of reflexivisation put forth by Schäfer (2008) and Wood (2014) whereby a valency-reducing element REFL merges in the position of a lower argument and is c-commanded by Agent. REFL is analysed as a bound pronominal that Agrees with the agent by

²² Unlike the embedded predicate in causatives of transitives, the embedded VoiceP is stative in (38) and cannot have an implied Holder argument, as evidenced by the general ban on Middles of statives in English: **Chocolate loves easily*, **History knows easily*, vs. *Books read easily*, *Houses build easily*.

Schäfer. For Wood, it as an expletive that can't bear a semantic role; the unsaturated theta-role of the argument-introducer is transferred to the upper argument, which gets two roles as a result. Adapting these accounts, I claim that two argument-introducing Voice heads in (41) are tied by argument chain flagged by RMP *i-* in upper Voice. This entails that the argument realized in the upper VoiceP is interpreted as Agent and Holder: X_i causes [X_i to hold v], whereas the specifier of the lower Voice is filled with REFL, a dummy nominal.²³ In the next section, further scrutiny of Georgian reflexive configurations reveals that REFL may not occupy the Theme position as sister of v and must be associated with another argument higher than v and lower than the uppermost Voice.



Predicates in (42) are reflexive causatives, and minimally differ from (39): Vano initiates/causes a state/process with Vano as its holder. To come back to the two scenarios described above that involved causatives of “crawl” and “play” *apopxa* and *atamaša* where the initiator and the executor of the event were different individuals, their reflexive variants in (42) *ipopxa* and *itamaša* denote eventualities where the initiator and the holder of the process are one and the same person, i.e. the event participant that is engaged in crawling and playing is also the one that initiates these processes. These readings correspond exactly to the denotation of unergative verbs. In perfective tenses, as initiation must be structurally salient, unergatives denote not just processes but *initiated* ones.

- (42) vano-m *i-cek’v-a/* *i-mğer-a/* *i-popxa /*
Vano-ERG RMP-dance-AOR.3sg/ RMP-sing-AOR.3sg/ RMP-crawl-AOR.3sg
i-xulign-a/ *i-tamaš-a/* *i-k’rusun-a*
RMP-hooligan-AOR.3sg/ RMP-play-AOR.3sg/ RMP-moan-AOR.3sg
“Vano danced/sang/crawled/behaved as hooligan/played/moaned”

The present analysis entails that the external argument of transitive verbs and unergatives in the perfective have different thematic properties: the former is Agent while the latter is Agent and Holder. While it is difficult to semantically tease apart the two types of agents, there is structural evidence that differentiates them. Nash (2020) shows that missing causees of transitive and unergative verbs are interpreted differently. Georgian is a pro-drop language where a phonologically missing argument gets a discourse specific reading. When the causee in causatives of transitives is missing, it can be interpreted either discourse specifically or vaguely, akin to an implicit argument in passives. However, a missing causee of unergatives can only be interpreted as discourse specific.

- (43) a. vano-m c’eril-i da=a-c’er-in-a
Vano-ERG letter-NOM prev=VM-write-MV-AOR.3sg
“Vano made her write the letter”
“Vano had the letter written (by someone)”
b. vano-m a-popx-a
Vano-ERG VM-crawl-AOR.3sg
“Vano made her crawl”
≠ “Vano had crawling happen (by someone)”

²³ REFL and *i-* are separated in the present study, the latter analysed as a voice marker. Contrary to *a-* that signals addition of an event participants, RMP *i-* flags reduction thereof.

This contrast suggests that in causative configurations the embedded transitive template can be deagentivised, while the embedded unergative cannot. If deagentivisation involves neutralizing the theta-role capacity of Voice, or severing that Voice altogether, the embedded Voice heading the unergative template cannot be subject to the same operation. In other words, causees cannot bear Agent role, and if a causee is obligatory it may not be Agent.²⁴ To conclude, unergatives in perfective tenses have a complex structure where the external argument is assigned Agent role, in conformity to NBD. The stative monovalent core is first causativized to obtain a two-place predicate, with Agent and Holder. Then the resulting predicate is reflexivised, yielding a configuration compatible with the semantics of unergatives: the initiator of the process and the holder of the process are the same individual. As Georgian voice markers cannot be concatenated, only RMP *i-* is spelled out. Another analysis of unergatives marked with RMP *i-* can be entertained where sentences in (42) would be analysed as reflexives with hidden Theme. Under such an analysis, which seems derivationally simpler than reflexivisation of causatives of unergatives, unergatives would be disguised transitives, à la Hale & Keyser (1993). In the next section, I provide evidence against this view based on the behaviour of Georgian reflexive verbs.

2.7.2 Which argument is not realised in unergatives with RMP *i-*?

In Georgian, RMP *i-* signals absence of *another* argument in the clause and is hence tied to the notion of polyadicity. The issue is to convince the reader that the non-realised argument in unergatives is Holder as shown in (41). Naturally, this argument cannot be Agent, as by definition unergatives and unaccusatives differ exactly in this property: unergatives have agents and unaccusatives lack them. Indeed, a large class of Georgian non-active unaccusative and mediopassive constructions carry RMP *i-*, where this marker signals absence of Agent, (44-45). In these constructions, Voice is expletive, as argued in § 2.4, following Schäfer (2008), and the predicate is semantically understood as involving initiation (or causation). (cf. Levin & Rapoport 1995).²⁵

- (44) a. c'eril-i gada-*i*-targmn-a
 letter-NOM prev=RMP-translate-AOR.3sg
 "The letter got translated"
 b. gancxadeba da=*i*-c'er-a
 announcement.NOM prev=RMP-write-AOR.3sg

²⁴ A reviewer inquires whether there is additional evidence that Vano in (42) with dual role has different properties than Agent of standard transitive verbs. Additional evidence that arguments of unergative verbs are not "pure" Agents comes from nominalisations. In Georgian, Agents of transitive verbs cannot surface as genitive arguments of corresponding nominalisations (i). However, the argument of unergatives can occur in genitive in corresponding nominalisations, just like the argument of monadic statives; (ii-iii). This suggests that the external argument of transitives and unergatives are thematically distinct.

- (i) a. vanos cema
 Vano.GEN beat-nom.NOM
 "Vano's beating" (=beating of Vano; ≠beating by Vano)
 b. #mušis ngr-ev-a
 worker.GEN demolish-TS-nom.NOM
 "#the worker's demolition" (pragmatically odd: the demolition of a worker)
 (ii) a. vanos popx-v-a
 Vano's crawl-TS-nom.NOM
 "Vano's crawling"
 b. mezoblis xulign-ob-a
 neighbour.GEN hooligan-TS-nom.NOM
 "the neighbour's behaviour as a hooligan"
 (iii) kalis dg-oma
 woman.GEN stand-nom.NOM
 "the woman's standing"

²⁵ Predicates in (44) are traditionally identified as unaccusatives and those in (45) as mediopassives. Agent argument is structurally absent in both types, but is semantically implicit only in mediopassives. Hence, the difference between unaccusatives and mediopassives is not structural in Georgian, or other languages. Rather, the difference is due to semantic content of root-types that feed (44) and (45): property roots in the former, manner roots that entail initiation in the latter. I thank an anonymous reviewer for suggesting this line of argumentation to account for the asymmetry between the two types of non-active predicates.

- “The announcement got written”
- (45) a. gem-i ča=*i*-dzir-a
 boat-NOM prev=RMP-sink-AOR.3sg
 “The boat sank”
- b. kal-i da=*i*-ğup’-a
 table.NOM prev=RMP-clean-AOR.3sg
 “The woman perished”

Alternatively, *i*- can be analyzed as a reflexive marker signalling anaphoric Theme argument. In other words, unergatives would amount to “hidden” transitives, à la Hale & Keyser (1993). Such an analysis is plausible in light of sentences in (46a-b) but quickly turns out to be problematic once we consider (46c-f). What *i*- signals in transitive reflexive predicates is that the agent corefers with silent benefactive/possessive argument rather than with Theme.

- (46) a. kal-ma da=*i*-ban-a
 woman-ERG prev=wash-AOR.3sg
 “The woman washed (herself)”
- b. kal-ma ča=*i*-cv-a
 woman-ERG prev=RMP-dress-AOR.3sg
 “The woman dressed up (herself)”
- c. kal-ma tma da=*i*-ban-a
 woman-ERG hair.NOM prev=RMP-wash-AOR.3sg
 “The woman washed her hair”
- d. kal-ma k’aba ča=*i*-cv-a
 woman-ERG dress.NOM prev=RMP-dress.AOR.3sg
 “The woman put on/dressed in a dress”
- e. kal-ma c’eril-i gada=*i*-targmn-a
 woman-ERG letter-NOM prev=RMP-translate-AOR.3sg
 “The woman translated the letter for herself”
- f. kal-ma papa ga=*i*-cxel-a
 woman-ERG porridge.NOM prev=RMP-hot-AOR.3sg
 “The woman heated the porridge for herself”

When Theme and Agent refer to the same individual, the former *must* surface as a reflexive anaphoric expression (*tavisi*) *tavi* “self’s self” (lit. “head’s head”) and may, but does not have to, be accompanied by RMP *i*- marked verb. (cf. Amiridze 2006 on Georgian reflexives).

- (47) a. kal-ma tav-is-i tav-i mo=(*i*·)k’l-a
 woman-ERG self-GEN-NOM self-NOM prev=RMP-kill-AOR.3sg
 “The woman killed herself” (=committed suicide)
- b. kal-ma tav-is-i tav-i da=(*i*·)xat’-a
 woman-ERG self-GEN-NOM self-NOM prev=RMP-draw-AOR.3sg
 “The woman drew herself” (=made a portrait of herself)
- c. kal-ma tav-is-i tav-i ga=a-k’rit’ik’-a
 woman-ERG self-GEN-NOM self-NOM prev=caus-criticize-AOR.3sg
 “The woman criticized herself”
- d. kal-ma tav-is-i tav-i da=(*i*·)sadz-a
 woman-ERG self-GEN-NOM self-NOM prev=RMP-punish-AOR.3sg
 “The woman punished herself”
- e. nino-m tav-is-i tav-i ağ=c’er-a
 Nino-ERG self-GEN-NOM self-NOM prev=write-AOR.3sg
 “Nino described herself”

The sentence (47a) is grammatical even if the verb appears without RMP *i*-. But the change in form is accompanied by meaning modification: *mokl’a* in this context is only felicitous if the woman kills her own personage in a film or in a novel. In other words, *i*- on the verb signals that the agent is physically and directly affected in the reflexive event.

As opposed to reflexive-benefactive transitives, RMP *i-* in unergatives is never optional and can never co-occur with the anaphoric pronoun *tavisi tavi*. This suggests that transitive verbs with *i-* and unergatives with *i-* have different structural properties. The pair in (48) contains almost identical verbal forms but their structures, reflexive-benefactive transitive in (48a) and unergative in (48b), must be distinct. These sentences provide a strong argument against an analysis of RMP *i-* in terms of the silent *Theme* marker in unergative predicates.

- (48) a. nino-m (da=)*i-maxindz-a* *(*tavisi tav-i*) REFLEXIVE-BENEFACTIVE
 Nino-ERG prev=RMP-ugly-AOR.3sg self's self
 "Nino made herself hideous/ deformed herself"
 b. nino-m *i-maxindz-a* (**tavisi tav-i*) UNERGATIVE
 Nino-ERG RMP-ugly-AOR.3sg self's self
 "Nino was being hideous/behaved vilely"

Moreover, when unergatives occur with a cognate object, the verb keeps RMP *i-*. (cf. fn.50)

- (49) nino-m *i-cek'v-a* t'ango / *i-tamaš-a* nard-i
 Nino-ERG RMP-dance-AOR.3sg tango.NOM / RMP-play-AOR.3g backgammon-NOM
 "Nino danced a tango/ played backgammon"

Having shown why unergatives with RMP *i-* cannot involve a hidden Theme, I maintain that derivationally costly structuring of unergatives as reflexives of their own causative counterparts in (41) is the correct representation of this predicate type in perfective tenses. From the point of view of argument realisation, it is obviously more straightforward for economy reasons to project one argument in an intransitive configuration. But Georgian complies to NBD and fails to introduce Agent in simple configurations with a non-selecting *v*. The only type of external argument that intransitive *v* can be associated with is Holder. I showed that structuring unergatives as monovalent predicates with external Holder argument interpreted agentively is not ruled out in imperfective tenses, and hence *preferred*. In perfective tenses, however, the only option to transform states into agentive actions is achieved by causativisation, i.e. by adding VoiceP to the core unergative constituent. With Agent in the upper VoiceP, the predicate undergoes reflexivisation, flagged by RMP *i-*, in order to be formally associated with one participant.

2.8 Accounting for ergative case

Unergatives structured as reflexive causatives mark their subject with ergative case in the aorist, just like standard transitives in Georgian. However, *i*-marked unergatives surface with one DP that is both the initiator and the holder of the activity. This could suggest that only one nominal needs a case in unergative configurations, and this nominal, being an Agent, gets the inherent ergative case. However, Nash (2017) argues against inherent ergative case hypothesis whereby the category that introduces an agent is also an inherent case-assigner. Nash proposes to analyse the ergative case in Georgian as a structural dependent case (cf. Marantz 1991, Baker and Vinokurova 2010, a.o.). In the aorist, one functional category, Tense, is endowed with case-assigning property. When it c-commands a transitive VP, two arguments are case-marked according to dependent case algorithm: the lower argument is assigned nominative case by Tense, while the higher one is marked with dependent ergative. The structure in (41) does not contain two *referential expressions* that compete for one case, but two argument-introducing *heads*. Baker & Bobaljik (2017) argue that dependent case theory can be maintained in those ergative languages where the external argument of unergatives is marked with ergative case. Superficially intransitive, these configurations contain covert internal Theme argument that functions as a case-competitor. However, the core claim of present analysis is that unergatives do not have covert or overt themes and that RMP *i-* never signals a reflexive theme.

A way to reconcile the superficially monadic configuration in (41) with dependent case theory is to argue that RMP *i-* absorbs case, as commonly claimed for Romance *se* (Jaeggli 1986, Baker et al. 1989, a.o.). An alternative solution is to admit with Schäfer (2008) and Wood (2014) that REFL in the specifier of the lower Voice is a semantically void silent pronominal

that case-competes with Agent in (41). I adopt the latter solution as RMP *i-* is a voice marker rather than a pronominal element (cf. 2.2.2).

Henceforth, ergativity in Georgian is of classical type whereby the subject of transitive clauses is marked differently than the subject of intransitive clauses. The main idea of the present analysis is that Agent role is not a semantic primitive in Georgian: this role and diadicity are tightly connected structurally. Agent thematic role is configurationally construed and depends on syntactic properties of verbal constituents: the argument of VoiceP is agentive if Voice selects another argument-selecting phrase.

To summarize, I have shown that unergative verbs in Georgian are not structured uniformly across tense-aspects. Monadic unergative DP_{Agent} -Voice-*v* templates are prohibited by NBD. Agentivity is therefore obtained via independent structural mechanisms: in imperfective tenses, Aspect and Voice are bundled as one category with agentive/dynamic semantics; in perfective tenses, causativisation of the core stative structure adds an Agent argument.

2.9. Interim Conclusion

Unergative verbs in Georgian constitute a coherent semantic class that denote atelic activities initiated and controlled by the agent. They pattern with transitive predicates in the aorist: both mark their subject as ergative. Evidence for bivalent status of unergatives in perfective tenses is provided by RMP *i-* that signals argument chain between Agent and lower Holder roles. Aktionsart and valency shift triggered by Viewpoint aspect is not unique to unergatives in Georgian. Statives also display this property, e.g. the static verb *c'evs* 'lie' carries RMP *i-* only in perfective tenses. But unlike unergatives that shift to transitives, statives pattern with unaccusatives in the perfective aspect. The common factor that triggers Aktionsart shift is the structure of unergatives and statives as predicates with Holder. The external argument of predicates in perfective tenses cannot be Holder where only events/actions/initiated eventualities can occur.

3. Lexical classes of unergative verbs

Although Georgian unergatives uniformly display two key properties, RMP *i-* in perfective tenses and ergative subject in the aorist, they are lexically and syntactically heterogeneous.²⁶ Unergatives can be divided into four lexical groups, each with a different TS in imperfective tenses, (for a more fine-grained taxonomy, cf. Jorbenadze 2006, 2010, Kobaidze 2011, Holisky 1981). The lexical classes express behaviour, sound/light/movement imitation, manner of movement, manner of communication. Each class is described in this section, while the next one is devoted to the refinement of their vP structures based on combination patterns with applicative arguments. The four classes are clustered in two syntactic subgroups: one that rejects any applied argument and the other that combines with certain types. While the entire class rejects benefactive datives, *-ob* behaviour related predicates are incompatible with other types of datives as well. The other three lexical classes may occur with certain types of datives and in certain tenses. These facts call for a distinction between simplex unergatives and complex unergatives. Namely, some datives are compatible with vP headed by simplex *v* that categorises the root, and no dative is tolerated in complex unergatives where a light verb *v* composes with a nominal/adjectival predicate.

3.1. *-ob* unergatives denote behaviours

The largest and the most productive group of unergatives carries TS *-ob* in imperfective tenses. This class, traditionally labelled as similatives, expresses behaviours associated with nominal or adjectival base. In this respect, *-ob* unergatives can be called denominal or deadjectival behaviour verbs. Consider the verb *prxilobs* in (50) that expresses a cautious behaviour *X acts such that X is cautious, X is being cautious*. The base can be

²⁶ In other Kartvelian languages, only a subclass of unergatives is marked with RMP *i-*. A reviewer brings to my attention that verbs of emission in Megrelian and Laz do not have RMP *i-*. (cf. Öztürk 2020)

morphologically complex: [*šeq'var-eb-ul*]-ob-en “behave as a couple in love” contains deverbal adjective comprising of [preverb=root-TS-participial marker].²⁷

(50) muša -ob-s	act as a worker	sadil -ob-s	dine, to have dinner ²⁸
k'ac -ob-s	act/behave as a man	xulign -ob-s	act as a hooligan
mark'sist' -ob-s	behave as a Marxist	merk'el -ob-s	behave as Merkel
naz -ob-s	behave gracefully ,	prtxil -ob-s	act cautiously

Behaviour-related verbs take animate or inanimate subjects. In the latter case, their reading is slightly modified from ‘act-as’ to ‘function-as’.

3.2. -eb unergatives contain process-denoting complex stems

Most unergatives with TS *-eb* denote light emission (*brial-eb-s* “sparkle”), sound imitation or non-verbal expression (*k'isk'is-eb-s* “merrily laugh”), or manner of motion (*barbac-eb-s* “stagger”).²⁹ These activities denote mini-events of repetitive flow of energy that do not induce cumulativity. Morphologically, the class is divided into a subgroup where the stem is (i) a reduplicated onomatopoeic root in (51), or a combination of (onomatopoeic) root and a nominal affix *-in-*, *-un-*, *-(i)-al-* in (52). (Jorbenadze 2006). I consider that the two strategies, root reduplication and affixation, serve to construe a *process* of mini-events of onomatopoeia production.

(51) REDUPICATED ONOMATOPOIEA

xit-xit -eb-s	chuckle, giggle	tik'-tik' -eb-s	babble, prattle
kot-kot -eb-s	bustle	giz-giz -eb-s	blaze
k'is-k'is -eb-s	merrily laugh	rak'-rak' -eb-s	ripple
k'aš-k'aš -eb-s	glitter	pam-pal -eb-s	wobble
tax-tax -eb-s	shiver	baj-baj -eb-s	stagger

(52) ONOMATOPOIEA/ROOT+NOMINAL SUFFIX

xrot'-in -eb-s	rattle	brč'q'v-ial -eb-s	twinkle
xram-un -eb-s	crunch	br-ial -eb-s	sparkle
k'rus-un -eb-s	moan, groan	sr-ial -eb-s	slide, ski
buzg-un -eb-s	grumble	t'r-ial -eb-s	turn, rotate, spin

While *-ob* unergatives are formed from property-denoting roots, the *-eb* class is built from process-denoting stems. In this respect, it is to be noted that TS generally occurs in nominalisations/non-finite forms akin to English *-ing*. Masdars of *-ob* unergatives keep the TS, but those of *-eb* unergatives do not, (53-54). This is expected if the function of TS is to convey process semantics of the masdar. The complex stem of *-eb* unergatives is already process-denoting so the TS would be superfluous in (55b). But in masdars of *-ob* verbs the TS adds process semantics to the root ‘Putin’ in (55a).

(53) a. p'ut'in-i -> p'ut'in- ob-a	b. sadil-i -> sadil- ob-a
Putin-NOM ‘Putin-behaviour/acting’	dinner-NOM ‘dining’
(54) a. buzg-un-i -> *buzg-un- eb-a	b. gizgiz-i -> *gizgiz- eb-a ³⁰

²⁷ Verbs in this section are listed in the present tense in third person singular: ROOT/STEM-TS-3sg

²⁸ Although *sadilobs* “to dine” does not qualify as a behaviour verb, such reading is still available:

(i) es sadil-i sadil-ob-s
this dinner-NOM dinner-TS-3sg
“this dinner is a true dinner”=this dinner functions as a true dinner

²⁹ Motion verbs in this class denote the manner in which the agent moves, without directionality implied. The class corresponds in Levin’s (1993) verbs denoting body-internal motion or modes of being with motion.

³⁰ In fact, masdars like *brialeba* ‘sparkling’ or *gizgizeba* ‘blazing’, generally preceded by a perfectivizing preverb, (*da=brialeba*, *a=gizgizeba*), are attested, but function as nominalisations of change of state verbs.

(i) a. nino-m tvaleb-i (da=)a-brial-a
Nino-ERG eyes-NOM prev=VM-sparkle-AOR.3sg
“Nino sparkled the eyes”
b. tvaleb-is (da=)brial-eb-a
eyes-GEN prev=sparkle-TS-NOM

- | | | | |
|---------|---|--|-------------|
| | ranting-NOM | | blazing-NOM |
| (55) a. | ar minda p'ut'in-ob-a | | |
| | not 1.wish Putin-TS-NOM | | |
| | "I don't wish to behave like Putin/to Putinize" | | |
| b. | ar minda *buzgun-eb-a / *buzgun-i | | |
| | not I.like rant -TS-NOM /rant-NOM | | |
| | "I don't wish to rant" | | |

An additional noteworthy fact is that a number of *-eb* unergatives have a more common *-ob* variant: e.g. *xitxitebs-xitxitobs* "chuckle".

3.3. *-av* unergatives denote manner of movement

A considerably smaller group of verbs with TS *-av* express manner of motion:

- | | | | | |
|------|-------------------|--------------------|--------------------|-------|
| (56) | xox -av-s | crawl | cek' v-av-s | dance |
| | popx -av-s | crawl (for babies) | gor -av-s | roll |
| | bod -av-s | rave | cur -av-s | swim |

Some *-av* verbs have an *-ob* counterpart, accompanied by meaning shift. Consider (57), where the *-av* variant of *swim* denotes vectorial movement, whereas the *-ob* variant expresses floating or keeping the body in water, i.e. stereotypical behaviour closest to swimming.

- | | | | |
|---------|--|--------------------|---------|
| (57) a. | nino | cur- av -s | auz-ši |
| | Nino.NOM | swim-TS-3sg | pool-in |
| | "Nino is swimming in the pool, doing lengths" | | |
| b. | nino | cura- ob -s | auz-ši |
| | Nino.NOM | swim-TS-3sg | pool-in |
| | "Nino is swimming around, playing in the pool" | | |

3.4. Unergatives without TS

A number of unergative verbs that express manner of non-verbal expression or (weather-related) movement do not occur with TS in imperfective tenses. These verbs can occur with AUX-support in the present if their subject is 1st/2nd person, as shown in §2.2.4.

- | | | | | |
|---------|-----------------|------|------------------|------------------------|
| (58) a. | t'iri -s | cry | mgeri -s | sing |
| | bgavi -s | roar | c'ivi -s | scream |
| | xt'i -s | jump | da=rbi -s | run |
| b. | tov -s | snow | duğ -s | boil/bubble (at 100°C) |
| | c'vim -s | rain | kux -s | thunder |
| | q'ep -s | bark | c'ux -s | regret/be-upset |

For a subpart of this class, the base is composed of root and suffix *i-* in (58a). I take the suffix to be a vestige of a nominal suffix *-il-*, akin to *-un-* and *-ial-* in *-eb* class in (52), responsible for process semantics. Indeed, most corresponding masdars include the suffix *-il-*, paralleling the property of *-eb* verb nominalisations.

- (59) *t'ir-il-i* 'crying', *duğ-il-i* 'boiling', *si-rb-il-i* 'running'

-
- (ii) a. vano-m k'ocon-i (a=)a-gizgiz-a
 Vano-ERG fire-NOM prev=VM-blaze-AOR.3sg
 "Vano blazed the fire" (by lighting it)
- b. k'ocon-is (a=)gizgiz-eb-a
 fire-GEN prev=blaze-TS-NOM
 "Causing the fire to blaze", "the fire's sudden blazing up" (inceptive reading)

3.5. Body substance and sound elimination verbs are not unergatives

Verbs denoting body substance and sound elimination are considered unergative in many languages, as they are both agentive and intransitive: *urinate, defecate, vomit, fart, sneeze, cough, yawn*. Their subject is ‘exceptionally’ marked ergative in a number of ergative languages that do not exhibit intransitive split and generally mark subjects of unergative as nominative, e.g. Shipibo (Baker 2014) and Hindi (Mohanani 1994, Davison 1999). Although the sole argument of these verbs is marked with ergative case in Georgian too, they do not appear with the RMP *i-* in perfective tenses, which I take to be the hallmark of Georgian unergativity. I hypothesize that verbs in (60) are construed as transitive accomplishments with *v* selecting the silent/hidden Theme argument, à la Hale & Keyser (1993).

The class is divided into two subgroups: (i) causatives denoting substance/sound *expulsion*, marked with Voice Marker *a-*, and (ii) verbs of creation of body substance.

(60) a.	a- mtknar -eb-s	yawn	VM-ROOT-TS-3sg
	a- rc’q’ -ev-s	vomit	
	a- cxvink’ -eb-s	sneeze	
	a- xvel -eb-s	cough	
	a- k’u -eb-s	fart	
	b. psam -s	urinate	ROOT-3sg
	dγvam -s	defecate	

3.6. Summary

Georgian unergatives are lexically diverse in spite of their homogeneous syntactic behaviour across tenses. They denote (a) behaviour (*-ob* unergatives), (b) repetitive emission of sound/light, body movement (*-eb* unergatives), (c) manner of movement and communication (*-av* and irregular unergatives). *-ob* unergatives are the most productive: if an unergative verb shifts to a different group, it always shifts to the *-ob* class: e.g. *i-brdzv-i-s* → *brdzol-ob-s* ‘fight’. If a verb has two forms, the one with *-ob* is more colloquial: *t’ik’t’ik’-eb-s* → *t’ik’t’ik’-ob-s* ‘prattle’. In the next section, we will see that the lexical diversity has a syntactic correlate that singles out *-ob* verbs. Behaviour related unergatives reject all types of dative arguments, unlike all other unergatives.

4.1. Unergative verbs and applicatives: foreword

One of the principal tenets of the present study is that *v* does not select an argument in unergative templates. The *vP* headed by a non-selecting *v* fails to be selected by agent-introducing Voice in Georgian, according to NBD. In this section, further refinement of unergative *vP* is proposed on the basis of behaviour of this class with dative arguments. Concretely, I propose that unergative *vP* with non-selecting *v* can be either simplex, where *v* categorizes the root, or complex, comprising of two predicates, the light verb *v* and a Noun or Adjective, which categorize the root. Both simplex and complex unergatives are uniformly marked with RMP *i-* in perfective tenses, and take ergative subjects in the aorist.

(61) a.	COMPLEX UNERGATIVES: <i>-ob</i> SIMILATIVES	$[_{VP} v [_{NP/ADJP} N/Adj+Root]]$
	b. SIMPLEX UNERGATIVES: other types	$[_{VP} v+Root]$

In the previous section, four lexical groups of unergatives were introduced: the largest group of similative *-ob* verbs, sound/light/movement emission *-eb* verbs, manner of movement *-av* verbs, and verbs without TS denoting non-verbal and meteorological expression. This section studies the behaviour of four classes with dative arguments, (62). It will be shown that none occur with a bona fide dative benefactive, which is otherwise freely available with unaccusative, transitive and certain static verbs. Furthermore, *-ob* unergatives do not tolerate any dative argument. Other groups allow certain types of datives, in certain tenses: (i) in imperfective tenses, when the dative argument stands in a part-whole relation with the (body-)part subject; (ii) in imperfective and perfective tenses, when the dative is read as addressee.

(62)

UNERGATIVES WITH DATIVE ARGUMENTS

	BENEFACTIVES		PART-WHOLE DATIVES		ADDRESSEES	
IMPERFECTIVE	*-OB	* OTHER	* -OB	OK OTHER	* -OB	OK OTHER
TENSES	UNERGATIVES	UNERGATIVES	UNERGATIVES	UNERGATIVES	UNERGATIVES	UNERGATIVES
PERFECTIVE	* -OB	* OTHER	* -OB	* OTHER	* -OB	OK OTHER
TENSES	UNERGATIVES	UNERGATIVES	UNERGATIVES	UNERGATIVES	UNERGATIVES	UNERGATIVES

I argue that the asymmetry between *-ob* verbs and other unergatives stems from different vP structures. In unergatives that can combine with datives, the root is categorized by *v*. In *-ob* unergatives, *v* is a light verb that forms a complex predicate with a Noun or Adjective that categorize the root. The light verb takes an external argument and reads as ‘do/act’.³¹ Concretely, the sentence *nino mark’sist’obs* means ‘Nino does/acts as if Nino is Marxist’ (cf. Lieber 2004). As complex predicates, *-ob* unergatives involve an argument dependency—the external argument of the verb is also the argument of the lower non-verbal predicate. Moreover, *v* in *-ob* unergatives is branching and cannot compose with another constituent other than the lower predicate. We’ll see that these two structural properties of vP, branching and argument chain, are responsible for dative argument ban with *-ob* verbs. On a more general note, distribution of datives with unergative vP structures confirms a widely held line of thought that these arguments can merge in different sites of verbal projections within the same language. I show that dative arguments in Georgian unergative configurations have different sources: they can be introduced higher than VoiceP and as low as the complement of *v*. The former are interpreted as external inalienable possessors and the latter as goals/addressees. These dative arguments are introduced by the category Appl(icative) that relates an optional participant to eventuality.

4.2. Unergatives and benefactives

Considerable amount of research on argument structure is devoted to the study of structural properties and cross-linguistic variation of applied benefactive, instrumental or locative arguments, marked as datives in a number of languages (Polinsky 2013, Peterson 2007, McGinnis 2017, Pineda & Mateo 2020, a.o). Pylkkänen (2008) argues that unergatives play a decisive role in elucidating structural origin of Appl(icative). Two types of Appl are distinguished, low and high: the former composes with the direct object and is endowed with directional dynamic “coming-into-possession” semantics, the latter selects a verbal projection and relates the applicative argument to the event. As high applicative arguments do not depend on the presence of the object and are not interpreted as recipients/sources thereof, only they are expected to occur with unergative or stative predicates. In Chaga, applicative arguments co-occur with unergatives (63), contrary to English, where they cannot, (64a). Moreover, English applied arguments fail to occur with verbs that do not allow transfer of possession, e.g. verbs of consumption and static verbs (64b-c) and disallow “instead of” readings in double object constructions. In sentence (64d), Mary must be the recipient of the letter, and not a benefactor for whose sake/instead of whom the letter is written. These facts lead Pylkkänen (op.cit) to the conclusion that Appl is high in Chaga, and low in English.

- (63) N-a~i-zrìc-í-à mbùyà CHAGA, HIGH APPL
 FOC-1SG-PRES-run-APPL-FV 9.friend
 He is running for a friend. (Bresnan and Moshi 1990:149)
- (64) a.*I ran him b.*I hold Mary a bag ENGLISH, LOW APPL
 c.*I ate Mary a cake d.#I wrote Mary a letter in Japanese (as she did not the language)

Georgian only partially patterns with English: optional benefactive datives are not grammatical with unergative verbs, (65-66), in perfective and imperfective tenses.³²

³¹ There is no clear lexical distinction between *do* and *be* (and to a certain degree *have*) in Georgian. *Be* is the non-active variant of *do* in the aorist: *kna* ‘did’ – *i-kna* ‘was’ (qua passive auxiliary); *hq’o* ‘did’ (Old Georgian) – *i-q’o* ‘was’. The same holds for its future form: *i-kn-eb-a* is a bona fide non-active verb, with RMP *i-*, TS *-eb*, and nonactive agreement (cf. §2.2.3).

³² Henceforth, the term benefactive englobes malefactive or possessive readings, depending on the context.

(65) PERFECTIVE TENSES

- a. *vano-m ekim-s u-cur(av)-a
Vano-ERG doctor-DAT VM-swim-AOR.3sg
“Vano swam for the doctor”
- b. *vano-m bebiamis-s ezo-ši u-mušav-a
Vano-ERG grandma-DAT yard-in VM-work-AOR.3sg
“Vano worked in the yard for his grandma”
- c. *vano-m bebiamis-s iat'ak'-ze u-popx-a
Vano-ERG grandmother-DAT floor-on VM-crawl-AOR.3sg
“Vano crawled for Grandma on the floor”
- d. *gogona-m bebia-s u-trial-a
girl-ERG grandmother-DAT VM-swirl-AOR.3sg
“The girl swirled for Grandma”
- e. *vano-m mšobleb-s u-t'ir-a
Vano-ERG parents-DAT VM-cry-AOR.3sg
“Vano cried on his parents” (the activity negatively affected the parents”

(66) IMPERFECTIVE TENSES

- a. *vano ekim-s u-cura-ob-s
Vano.NOM doctor-DAT VM-swim-TS-3sg
“Vano is swimming for the doctor”
- b. *vano bebia-s ezo-ši u-muša-ob-s
Vano.NOM grandma-DAT yard-in VM-work-TS-3sg
“Vano is working in the yard for Grandma”
- c. *vano bebia-s iat'ak'-ze u-popx-av-s
Vano.NOM grandmother-DAT floor-on VM-crawl-TS-3sg
“Vano is crawling for Grandma on the floor”
- d. *gogona bebia-s u-t'rial-eb-s
girl.NOM grandmother-DAT VM-swirl-TS-3sg
“The girl is swirling for Grandma”
- e. *vano mšobleb- s u-t'iri-s³³
Vano.NOM parents-DAT VM-cry-3sg
“Vano is crying for/on his parents” (the activity negatively affects the parents”

However, dative benefactives freely occur with transitive accomplishments, consumption verbs, as well as with static and unaccusative verbs (67-69). The dative argument in (67a) can also be interpreted as an event-benefactor in ‘instead-of’ contexts.

Adding a dative argument is accompanied by VM *u-* on the verb; the default form is provided in square brackets.^{34,35} It is natural to assume that the marker spells out, or at least signals the presence of, Appl that introduces and licenses dative benefactives.³⁶

- (67) a. vano nino-s lobio-s u-xarš-av-s [xarš-av-s]
Vano.NOM Nino-DAT bean-ACC VM-cook-TS-3sg
“Vano cooks beans for Nino”, “Vano cooks beans instead of Nino”

³³ The sentence (66e) is licit if the parents are understood as addressees (cf. §4.4).

³⁴ When unaccusatives with RMP *i-* take a dative argument, *i-* switches to *e-* (cf. §2.2.2).

(i) vano-s ga=e-q'in-a xe [gaiq'ina]
Vano-DAT prev=VM-freeze-AOR.3sg tree.NOM
“The tree froze on Vano”, “Vano’s tree froze”

³⁵ VM *u-* is obligatory with dative subjects in the evidential mood, (cf. Harris 1981), and on psych-verbs with dative experiencers, as shown in §2.2.2. and fn. 13.

(i) vanos nino da=u-xat'i-a EVIDENTIAL DATIVE SUBJECT
Vano-DAT Nino.NOM prev=VM-draw-3sg
“Vano has apparently drawn Nino”

(ii) vano-s naq'in-i u-q'var-s DATIVE EXPERIENCER
Vano-DAT ice-cream-NOM VM-love-3sg
“Vano loves ice-cream” (lit. Vano has the love of ice-cream)

³⁶ VM *u-* occurs only with 3rd person dative arguments; it switches to *i-* with 1st/2nd person arguments and in reflexive contexts. (cf. Nash 2019 on the syntax of 1st/2nd person arguments in Georgian, and §2.2.4).

- b. vano-m *nino-s* papa še=*u-č'am-a* [še=č'am-a]
 Vano-ERG Nino-DAT porridge.NOM ptrv=VM-eat-AOR.3sg
 "Vano ate porridge on Nino" "Vano ate porridge instead of Nino"
- (68) a. *vano-s* *tevz-i* *u-k'v-d-eb-a* [k'vd-eb-a]
 Vano-DAT fish-NOM VM-die-become-TS-3sg
 "The fish is dying on Vano"
- b. vano-s *st'umar-i* *mo=u-vid-a* [mo=vida]
 Vano-DAT guest-NOM prev=VM-come-AOR.3sg
 "A guest arrived for Vano", "Vano has a guest arrived"
- (69) a. vano-s *mankana* *garet* *u-dg-as* [dg-as]
 Vano-DAT car.NOM outside VM-stand-3sg
 "Vano has his car standing outside"
- b. gund-s *is* *pexburtel-i* *5 milion-i* *u-ğir-d-a* [ğir-d-a]
 team-DAT that footballer-NOM 5 million-NOM VM-cost-PAST-3sg
 "That footballer cost 5 millions for the team"

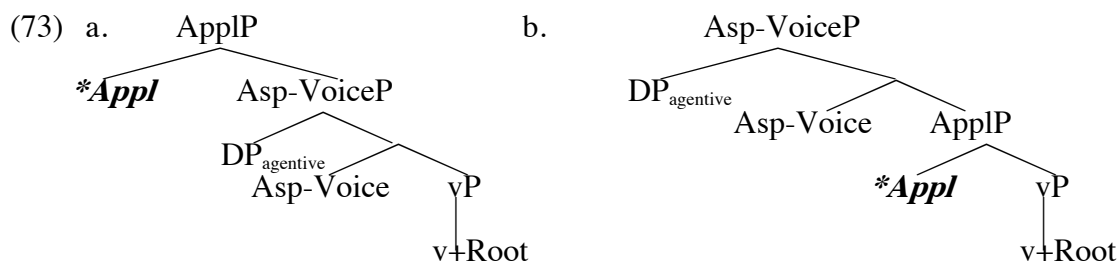
The following pattern emerges from (67-69): benefactives are licit if the verb phrase contains an argument other than agent. Transitives and unaccusatives in (67-68) contain a Theme and statives contain a Holder in (69). This suggests that an applied argument can be interpreted as benefactive if Appl attaches to an argument-selecting host. This condition is close to NBD, but establishes a dependency of benefactives on another argument that is not agentive. Appl attaches to an argument-bearing vP, in case of transitives and unaccusatives, or to a stative VoiceP with Holder, in case of static verbs.

As benefactives scope higher than anaphoric Themes (70) and Holders (71) but lower than agents (72), we conclude that Appl may not attach higher than VoiceP with agentive argument, which in our system are the argument with Agent role and the external argument introduced by Asp-Voice.³⁷

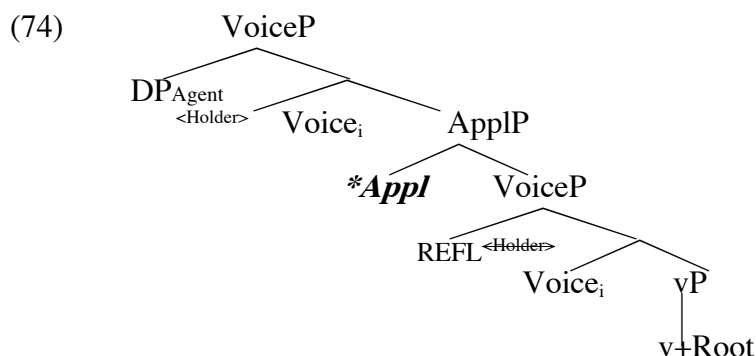
- (70) a. nino-m *kalebs* **ertmanet-i** *u-ko*
 Nino-ERG women-DAT each.other-NOM VM-praise.AOR.3sg
 b. *nino-m **kaleb-i** *ertmenets-s* *u-ko*
 Nino-ERG women-NOM each.other-DAT VM-praise.AOR.3sg
 "Nino praised the women for each other"
- (71) a. ?(sizmar-ši) *kaleb-s* **ertmaneti** *u-c'ev-t* *saavadmq'opo-ši*
 dream-in women-DAT each.other.NOM VM-lie-pl hospital-in
 b. *(sizmar-ši) **kaleb-i** *ertmanet-s* *u-c'ev-t* *saavadmq'opo-ši*
 dream-in women-NOM each.other-DAT VM-lie-pl hospital-in
 "(In their dream) the women lie in the hospital on/for each other" [maleficiary]
- (72) a. **gogoeb-ma** *ertmanet-s* *namcxar-i* *amo=u-cxv-es*
 girls-ERG each.other-DAT cake-NOM prev=VM-bake-AOR.3pl
 b. **gogoeb-s* **ertmenat-ma** *namcxvar-i* *gamo=u-cxv-es*
 girls-DAT each.other-ERG cake-NOM prev=VM-bake-AOR.3pl
 "The girls baked a cake for each other"

At this point, the ban of benefactive datives with unergative predicates can be accounted for. As unergatives are structured differently across tenses, the ban has different source in each Viewpoint aspect. In imperfective tenses, hybrid Asp-Voice allows agentive interpretation of its argument. If Appl attaches to Asp-VoiceP in (73a), the dative argument will illicitly c-command the agentive argument. At the same time, Appl cannot attach to argumentless vP in (73b).

³⁷ The antecedent linearly precedes the anaphor in (70-72), but alternative orders yield the same effects.



In perfective tenses, unergative template contains two Voice categories. While benefactive may not be introduced higher than the highest VoiceP or above the argumentless vP, as in (73), it can in principle appear between two VoicePs, (74). I claim that such a derivation is also ruled out: an argument cannot intervene between two argument-introducing heads that constitute a reflexive argument chain (§2.7.1).



To summarize, unergative predicates cannot occur with benefactive dative arguments in Georgian. This interdiction is due to two constraints on Appl: (i) Appl must attach lower than the external argument with agentive reading but higher than argument-selecting vP in Georgian (we'll see shortly that Appl can merge with v too), i.e. the benefactive role is argument-dependent; (ii) Appl cannot intervene between two coindexed argument-introducing heads that form an argument chain. In imperfective tenses, the verbal skeleton of unergatives consists of two projections, argumentless vP and Asp-VoiceP with agentive argument—Appl cannot attach to either. In perfective tenses, unergative template consists of three projections, where two ban Appl in every context: the highest VoiceP with Agent and argumentless vP. The intermediary VoiceP that introduces Holder is a possible host for Appl, but a benefactive sandwiched between two VoicePs would disrupt reflexive chain between Agent and Holder introducing heads. The next section shows that certain types of datives can occur with unergatives. In imperfective tenses, most of them combine with part-whole datives.

4.3. Part-whole datives and unergative verbs

Although incompatible with applied *benefactives*, unergatives accept *other* type of dative arguments in Georgian. Namely, in imperfective tenses, *-eb*, *-av* and irregular unergatives can occur with a dative argument that stands in a part-whole inalienable relation with the subject, (75): the dative, often animate, denotes the whole and the subject, always inanimate, its (body-)part. I will refer to these datives as part-whole datives. The verb in these cases is marked with VM *u-*, which suggests that like benefactives, part-whole datives are introduced by Appl. Importantly, these datives are incompatible with *-ob* unergatives, (76).

- (75) a. *gogona-s tvaleb-i u-cimcim-eb-s*
 girl-DAT eyes-NOM VM-blink-TS-3sg
 “The girl’s eyes are blinking”
 b. *kal-s k’bi-li u-pampal-eb-s*
 woman-DAT tooth-NOM VM-teeter-TS-3sg
 “The woman’s tooth teeters”
 c. *nino-s azr-i u-t’rial-eb-s tav-ši*

- Nino-DAT thought-NOM VM-rotate-TS-3sg head-in
 “A thought is turning in Nino’s head”
- d. mankana-s borbal-i ar u-t’rial-eb-s
 car-DAT wheel-NOM not VM-rotate-TS-3sg
 “The car’s wheel is not rotating”
- e. mama-s pex-i u-cur-av-s
 father-DAT foot-NOM VM-swim-TS-3sg
 “Father’s foot is sliding”
- f. mama-s tval-ze creml-i u-gor-av-s
 father-DAT eye-on tear-NOM VM-roll-TS-3sg
 “A tear is rolling in father’s eye”
- (76) a. *k’urdgel-s q’ur-i u-modzra-ob-s
 rabbit-DAT ear-NOM VM-move-TS-3sg
 “The rabbit’s ear is moving”
- b. *mankana-s mot’or-i aġar u-muša-ob-s
 car-DAT engine-NOM not-more VM-work-TS-3sg
 “The car’s engine does not work (function) any more”
- c. *gogona-s mteli sxeul-i u-k’ank’al-ob-d-a
 girl-DAT whole body-NOM VM-tremble-TS-past-3sg
 “The girl’s entire body was trembling”

In perfective tenses, part-whole datives are illicit with all unergatives, (77).

- (77) a. ?*gogona-s tvaleb-ma u-cimcim-a
 girl-DAT eyes-ERG VM-blink-AOR.3sg
 “The girl’s eyes blinked”
- b. *kal-s k’bil-ma u-pampal-a
 woman-DAT tooth-ERG VM-teeter-AOR.3sg
 “The woman’s tooth teetered”
- c. ?*nino-s azr-ma u-t’rial-a tav-ši
 Nino-DAT thought-ERG VM-rotate-AOR.3sg head-in
 “A thought turned in Nino’s head”
- d. ?*mankana-s borbal-ma ver u-t’rial-a
 car-DAT wheel-ERG not VM-rotate-AOR.3sg
 “The car’s wheel could not turn”
- e. *mama-s pex-ma u-cur-a
 father-DAT foot-ERG VM-swim-AOR.3sg
 “Father’s foot slid”
- f. *mama-s tval-ze creml-ma u-gor-a
 father-DAT eye-on tear-ERG VM-roll-AOR.3sg
 “A tear rolled in father’s eye”
- g. *mankana-s mot’or-ma aġar u-mušav-a
 car-DAT engine-ERG not-more VM-work-AOR.3sg
 “The car’s engine did not work (function) any more”
- h. *gogona-s mtelma sxeul-ma u-k’ank’al-a
 girl-DAT whole body-ERG VM-tremble-AOR.3sg
 “The girl’s entire body trembled”

In the absence of the part-whole dative, body-part nominals make poor subjects of unergative verbs in all tenses, (78-79). In the present tense, these sentences are acceptable in dispositional generic contexts, e.g. *The feet slide on wet surfaces. Thoughts turn in heads.*

(78) IMPERFECTIVE TENSES

- a. #tvaleb-i cimcim-eb-en
 eyes-NOM blink-TS-3sg
 “The eyes are blinking”
- b. #k’bil-i pampal-eb-s
 tooth-NOM teeter-TS-3sg

- “The tooth is teetering”
- c. #azr-i t'rial-eb-s ninos tav-ši
 thought-NOM rotate-TS-3sg Nino.GEN head-in
 “A thought is turning in Nino’s head”
- d. #pex-i cur-av-s
 foot-NOM swim-TS-3sg
 “The foot is sliding”
- e. #creml-i gor-av-s tval-ze
 tear-NOM roll-TS-3sg eye-on
 “A tear is rolling on the eye”
- (79) PERFECTIVE TENSES
- a. ?*tvaleb-ma i-cimcim-a
 eyes-ERG VM-blink-AOR.3sg
 “The eyes blinked”
- b. ??k'bil-ma i-pampal-a
 tooth-ERG VM-teeter-AOR.3sg
 “The tooth teetered”
- c. ?*azr-ma i-t'rial-a (ninos tav-ši)
 thought-ERG VM-rotate-AOR.3sg (Nino.GEN head-in
 “A thought turned in Nino’s head”
- d. *pex-ma i-cur-a
 foot-ERG VM-swim-AOR.3sg
 “The foot slid”
- e. *creml-ma i-gor-a k'acis tval-ze
 tear-ERG VM-roll-AOR.3sg man.GEN eye-on
 “A tear rolled in a man’s eye”

It ensues that body-part denoting nominals need the dative possessor to function as subjects of unergative verbs, but these are only available *in imperfective tenses*. Distribution of part-whole datives with unergatives raises a series of questions: (i) why are they available only in imperfective tenses? (ii) why are they obligatory when the subject of unergative verbs denotes a body-part? (iii) why are they banned with *-ob* unergatives even in imperfective tenses?

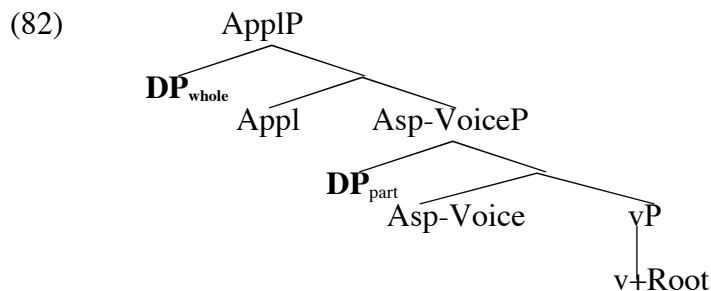
4.3.1. Why are part-whole datives only possible in imperfective tenses?

In part-whole configurations under study, animate dative possessor is added to an inanimate subject. It is tempting to ascribe various restrictions in these contexts to the fact that inanimate subjects make poor agents and are hence at best awkward with unergatives. Yet, sentences in (80-81) show that unergatives tolerate inanimate subjects across tenses.

- (80) a. borbal-i t'rial-eb-s
 wheel-NOM turn-TS-3sg
 “The wheel is turning”
- b. burt-i gor-av-s mindorši
 ball-NOM roll-TS-3sg field.in
 “The ball is rolling in the field”
- c. k'ocon-i gizgiz-eb-s
 campfire-NOM glow-TS-3sg
 “The campfire is glowing”
- d. cenzura bobokr-ob-s
 censorship.NOM rage-TS-3sg
 “The censorship is raging”
- (81) a. borbal-ma erti saati i-t'rial-a da mere gačerda
 wheel-ERG one hour RMP-turn-AOR.3sg and then stopped
 “The wheel turned for one hour and then stopped”
- b. burt-ma i-gor-a mindor-ši
 ball-ERG RMP-roll-AOR.3sg meadow-in
 “The ball rolled in the meadow”

- c. k'ocon-ma i-gizgiz-a
 campfire-ERG RMP-glow-AOR.3sg
 "The campfire glowed"
- d. cenzura-m i-bobokra tveobit
 censorship RMP-rage-AOR.3sg months.INSTR
 "Censorship raged for months"

The ability of sound/light emission verbs to freely occur with inanimate subjects has been used as evidence against their unergative nature where agentivity plays a determinant role. Perlmutter (1978) classifies these verbs as unaccusatives: they behave as unaccusatives in Dutch with respect to impersonal passivisation, and their inanimate argument lacks control. As agents need an appropriate mental state and control in events, Reinhart (2002) analyses unergatives that take inanimate subjects as *theme unergatives*: they are semantically undistinguished from unaccusatives but syntactically pattern with unergatives.³⁸ In the present analysis, subjects of all unergative verbs in imperfective tenses are not structurally bona fide Agents, as they occur in configurations that do not respect NBD. But they *can* be interpreted as agentive due to the dynamic properties of the hybrid Asp-Voice category. When the external argument is inanimate it does not make a natural agent: it lacks the mental state to initiate the event and just possesses the disposition to be engaged in the process. This is especially true of intrinsically dependent body-part denoting nominals. Hence, semantic properties of inanimate DPs, combined with the lack of Agent introducing Voice in the imperfective tenses in Georgian, allow to obviate their agentivity, in which case they are interpreted by default as Holders of process. In fact, Rothmayr (2009) treats emission verbs, which usually take inanimate subjects, as dynamic stative activities, capturing thus the property of the external argument to function as a Holder rather than as a controlling Agent. The reason why Appl can introduce a possessor *above* Asp-VoiceP in (82) is that the latter is not *in stricto sensu* an Agent: it does not semantically qualify as a natural agent, lacking animacy, nor is it assigned Agent role by Voice.

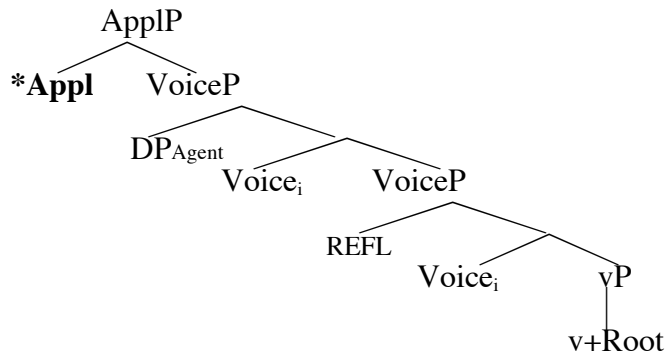


In perfective tenses, however, the external argument is a *structural* Agent that gets this role by Voice in conformity with NBD. So even if the semantics of the external argument does not go hand in hand with structural agentivity, the latter factor is decisive when it comes to adding an applied argument: arguments with Agent role cannot be c-commanded by applied arguments.³⁹

³⁸ Pross (2016) argues that emission verbs involve both active and passive disposition, which explains why they resist syntactic and semantic determination of being active or non-active. These verbs are labelled as Medium as their single argument is simultaneously agent and holder of disposition. In the sentence *The storm raged*, the storm is what rages (the argument of the process) and what causes raging (the causer of the process). Pross's analysis is close to the present account of all Georgian unergatives in perfective tenses.

³⁹ The structure in (83) can be ruled out for another reason. To anticipate the discussion in the next section, part-denoting nominals function as anaphoric expressions bound by the part-whole dative. They cannot be simultaneously engaged as the head of reflexive Agent-Holder chain and as anaphors in a disjoint part-whole dependency.

(83)

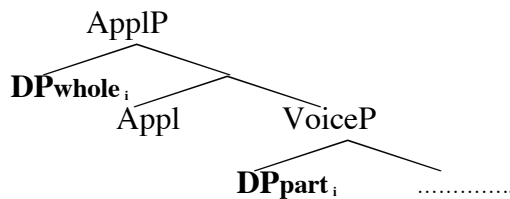


4.3.2. Why are part-whole datives obligatory in imperfective tenses?

Having clarified why part-whole dative can be added to unergatives in imperfective tenses, we need to inquire why they are obligatory in such contexts.

Body-part denoting nominals, unlike other inanimate DP, fail to surface as subjects of unergatives (78-79). I contend that it is the intrinsic relational nature of body-part nominals that is responsible for their lack of autonomy: (body-)part nominals require structural presence of the whole-denoting antecedent. I follow Guéron (1985) and Vergnaud & Zubizarreta (1992) in analyzing inalienable possession as a configuration whereby the body-part possessee functions as an anaphoric expression (for Guéron) or contains an unsaturated variable (for Vergnaud & Zubizarreta) that needs to be locally bound. The dative argument in (84) fulfils this role, and serves as an obligatory antecedent of body-part nominals.

(84)



Two nominals DP_{whole} and DP_{part} refer to one individual, the dative possessor, although semantically the subject only denotes its part. An alternative analysis focuses on the unique semantic referent of part-whole configurations and considers that their source is *one* DP from which the possessor is externalised by movement and assigned a verbal case (cf. Landau 1999, Deal 2013).

Adding a dative possessor to unergatives is a severely constrained operation: firstly, the subject is not a bona fide structural Agent and secondly, the subject may not referentially independent. This phenomenon is not unique to Georgian, part-whole datives with unergatives are attested in French and Hebrew. Examples in (85-86) challenge a well-established generalisation according to which part-whole dative possessors can only be associated with Theme arguments in unaccusative and transitive verbs. (cf. Borer & Grodzinsky 1986 on Hebrew, Baker 1988 on Chichewa)

(85) a. La peau lui luisait [French]

the skin 3sg.DAT shine.imperfait
“The skin shined on him” (his skin shined)

b. Le ventre lui gargouillait
the stomach 3sg.DAT gurgle.imperfait
“His stomach gurgled”

c. Les oreilles lui bourdonnaient
the ears 3sg.DAT buzz.imperfait
“His ears buzzed”

(86) a. ha-enaim nacecu lo [Hebrew]

the-eyes sparkle.PAST 3sg.DAT
“His eyes sparkled”

- b. ha-oznaim cifcefu lo
 the-ears buzz.PAST 3sg.DAT
 “His ears buzzed”
- c. ha-zea tiftefa lo al ha-mecax
 the-sweat drip.PAST 3sg.DAT on the-forehead
 “The sweat dripped on his forehead”

4.3.3. *-ob* unergatives and part-whole datives

The most productive class of *-ob* unergatives denoting behaviour-related activities stands out as special in banning part-whole datives in imperfective tenses, as illustrated in (76).

I propose that this ban is due to the internal structure of *-ob* verbs, rather than to the semantics of their lexical base. As mentioned in §3.2, some stems that describe emission or manner of motion and standardly feed *-eb* unergatives are also employed in *-ob* unergatives. Two such stems are *cancar* “bob up and down” and *srial* “slide”. While often used interchangeably, the *-ob* and *-eb* variants have different meanings: only the *-eb* variant denotes physical manner or disposition to move one’s body, bobbing up and down and sliding on the surface, while the *-ob* variant describes typical activity involving such movements. Hence, *cancarobs* means rushing around, or impulsive behaviour involving futile movement; *srialobs* denotes skiing and skating that involve sliding of the body with the help of material facilitating such transport. The minimal pairs in (87-88) show that it is the TS of the verb rather than its stem that determines the compatibility with part-whole dative arguments.

- (87) a. bat’k’an-s tav-i u-cancar-*eb*-s
 sheep-DAT head-NOM VM-bob-TS-3sg
 “The sheep’s head is bobbing up and down”
 b. *bat’kan-s tav-i u-cancar-*ob*-s
 sheep-DAT head-NOM VM-bob-TS-3sg
 “The sheep’s head is bobbing, rushing around”
- (88) a. vano-s pex-i u-srial-*eb*-s
 Vano-DAT foot-NOM VM-slide-TS-3sg
 “Vano’s foot is sliding”
 b. *vano-s pex-i u-srial-*ob*-s
 Vano-DAT foot-NOM VM-slide-TS-3sg
 “Vano’s foot is skating”

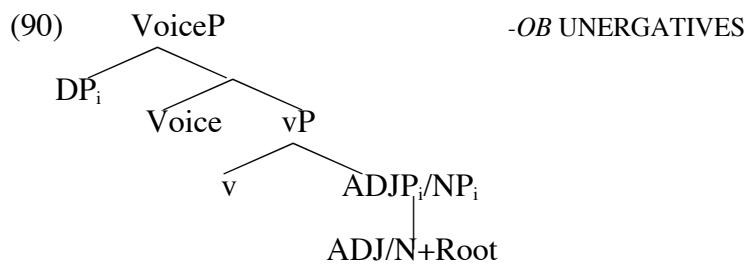
This asymmetry suggests that *-eb* and *-ob* unergatives are structured differently. I contend that their difference lies in the structure of vP: while most unergative verbs are created via the direct fusion of the categoriser v with the root/stem, *-ob* verbs are underlyingly light verb configurations where the light verb v forms a complex predicate with a nominal or adjectival category, which categorises the root. In *-ob* verbs, the lexical base starts out as a nominal or adjectival predicate semantically endowed for argument. The external Holder controls into the lower nominal/adjective, yielding a structure where the subject of the verb is the same as the subject of the lower predicate, (89a).

- (89) a. X_i acts/does [X_i Adj/N]
 b. nina mark’sist’-*ob*-s
 Nina Marxist-TM-3sg
 “Nina Marxizes” [Nina acts/does [<Nina> Marxist]]
 c. nina celk-*ob*-s
 Nina naughty-TM-3sg
 “Nina is being naughty” [Nina acts/does [<Nina> naughty]]

The structure of *-ob* unergatives is close in spirit to morphological and semantic analyses of similatives cross-linguistically. In many languages, similatives carry a causative morpheme,

which standardly appears on change of state verbs.⁴⁰ Lieber (1998, 2004) argues that a very small class of English similatives, e.g. *Marxize*, *Boswellize*, share the lexical conceptual structure of causatives with cause and result layers. Similatives differ from causatives by result layer: the lexical base “Marx”, “Boswell” functions as the nominal complement of *-ize*: *Marxise*=*Marx[-do/-make]*. For Lieber, the nominal complement is not the incorporated *argument* of the light verb, but rather a piece of the complex predicate. (Cf. also Plag 1998). Our analysis of *-ob* verbs shares the same insight: the noun and the light verb form a complex predicate. But it adds to Lieber’s account the obligatory control between the two arguments of the complex predicate.

Martin & Piñón (2020) propose a semantic account of behaviour-related verbs where the predicate is headed by v_{stereo} (act stereotypically) composed with a stereotype-denoting N/Adj. According to this analysis, the French sentence *Juliette diplomatiser* reads as ‘Juliette stereo(typically)-acts as a diplomat’, i.e. Juliette acts such that Juliette has properties of a diplomat. The important point, also determinant in the present account, is that similatives entail a nominal or adjectival *predicate* that denotes property associated with activity.⁴¹ I propose that the core template of *-ob* unergatives contain a DP that functions as the argument of Voice *and* of the non-verbal predicate. This vision of thematic role composition of complex predicates differs from Grimshaw & Mester (1988) where only the non-verbal part of the complex carries thematic information, and is closer to Folli et al. (2005) where both parts of the light verb construction contribute to its thematic grid. (Cf. Samvelian 2012). Technically, I represent the double argumenthood by index-sharing between the DP subject and the lexical predicate, but other implementations of the same mechanism are possible.⁴² It is crucial to this analysis that the complement of *v* in (90) is not its argument but a predicate that requires one.⁴³



⁴⁰ Unlike English and Greek where similatives and causatives are morphologically identical, their respective Georgian homologues are morphologically distinct. Roots that feed *-ob* unergatives are also used to construe change of state causatives. The latter are transitive, contain VM *a-* and occur with TS *-eb* (cf. §2.5.1).

(i) a. *a-naz-eb-s* make/render gracious
 b. *naz-ob-s* act/ behave as a gracious/delicate person

⁴¹ Additional indirect evidence for complex predicate structure and for obligatory control into nominal sub-predicate in behaviour-related verb comes from French where the light verb *faire* ‘act/do’ is composed with a noun or adjective denoting properties of (often pejorative) behaviour. The noun/ adjective combines with a possessive determiner anaphoric with the subject or with a definite article:

(i) Marie fait *salla belle*
 Mary does her/the beautiful “Mary acts coquettishly”
 salla maline
 her/the shrewd “Mary is being shrewd”
 salla princesse
 her/the princess “Mary is behaving as a (capricious) princess”
 son/l’ intéressante
 her/the interesting “Mary is acting as if she were an interesting person”
 son/le Trump
 her/the Trump “Mary is acting/behaving like Trump”

⁴² According to Bruening (2016), obligatory control into nominals in English light verb configurations of type *John gave a sigh* (agent of give=agent of sigh) could be accounted either syntactically whereby the logical argument of the nominal is syntactically projected, or semantically, implying that the latter is not structurally represented. I opt for semantic control/argument sharing, standardly assumed to hold in complex predicates.

⁴³ The structure proposed in (90) is reminiscent of Hale & Keyser’s (1993) representation of unergatives: in both configurations, the verbal head is composed with a nominal constituent. The difference between the two analyses concerns the role of the nominal in the structure: for Hale & Keyser, it is the argument of the abstract transitive *V do*, while in the present account it is the predicate.

At this point, it is possible to answer the question set out at the beginning of this section: why are part-whole datives illicit with *-ob* unergatives? In our analysis, each part of the complex predicate has an argument: the external argument of the light *v* must control the logical argument of the nominal/adjectival predicate. But if the subject denotes a body-part and functions as anaphoric expression bound by the dative possessor it cannot control into the lower predicate. Such a derivation attributes contradictory indexes to the DP subject.

(91) * DP-whole_k ... DP-part_{k/j} NP_i/ADJP_i

To summarize, in Georgian, as in other languages, the external argument of unergative verbs denoting a (body-)part can co-occur with the dative possessor expressing the whole in inalienable possession contexts. The dative is introduced by Appl and *c*-commands the body part subject. Generating a dative above the external argument of unergative verbs is a last-resort operation that needs to meet two conditions: the external argument may not be introduced by Agent-introducing Voice and it must be referentially dependent on the dative. The two conditions are met in imperfective tenses in Georgian, but not in perfective tenses. The only class of unergative verbs that disallows part-whole datives even in imperfective tenses is *-ob* verbs. This class, unlike all other unergative verbs, is structured as a complex predicate where a light verb composes with a nominal or adjectival predicate. The external argument functions as the argument of both parts of the predicate via the mechanism of obligatory control. The subject may not control the logical argument of the lower predicate if it must itself be bound by the *c*-commanding dative in inalienable possession contexts. This is the reason why *-ob* unergatives cannot appear with part-whole datives: the dative would bind a subject that is engaged in another binding dependency.

Part-whole datives are very “high” applicative arguments that attach to unergative verbal template above VoiceP. But Georgian unergatives also allow “low” datives introduced inside *v*P and interpreted as locatives. These are addressee datives discussed in the next section, where it is argued that their incompatibility with *-ob* class is also due to the complex predicate structure of the latter.

4.4. Addressee datives and unergatives

Different *v*P makeup of *-ob* verbs vs. other types of unergatives also accounts for asymmetric distribution of yet another type of dative arguments with locative or goal meaning. I will refer to these optional arguments as addressees, as they combine with predicates that generally denote manner of verbal or non-verbal communication, e.g. *scream at*, *shout at*, *laugh to/at*. They correspond to Pylkkänen’s (2008) recipient datives. Addressees occur with every unergative class across tense-aspects, except *-ob* verbs, (93).

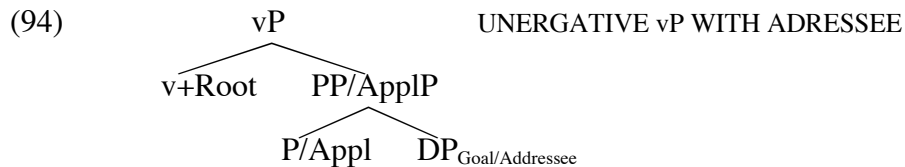
- (92) a. tagv-ma k’at’a-s (se=)u-q’vir-a
 mouse-ERG cat-DAT prev=VM-yell-AOR.3sg
 “The mouse yelled at the cat”
 b. tagv-ma k’ata’-s (ga=)u-cin-a
 mouse-ERG cat-DAT prev=VM-laugh-AOR.3sg
 “The mouse laughed(=smiled broadly) at the cat”
 c. moč’va u-k’rux-av-s, u-t’ik’t’ik’-eb-s, mara c’ic’ilebi ar amodien
 hen.NOM VM-cluck-TS-3sg VM-prattle-TS-3sg but chickens not come-up
 “The hen clucks to them, prattles to them, but the chickens do not come up”
 d. iesu xalx-s u-kadag-eb-s
 Jesus.NOM people-DAT VM-preach-TS-3sg
 “Jesus is preaching to people”
 e. mamamis “elap’arak’a” sk’aip’it, u-cin-a, u-k’isk’is-a...
 Father.DAT spoke skype-with VM-laugh-AOR.3sg VM-titter-AOR.3sg
 “She “spoke” with her father, sent him laughs, titters” (She=baby)

<https://forum.ge/?f=97&showtopic=34310715&st=78>

- (93) a. *vano mama-s u-lap’arak’-ob-s
 Vano.NOM father-DAT VM-talk-TS-3sg
 “Vano is speaking to father”

- b. *nino-m st'umar-s u-pilosop-a
 Nino-ERG guest-DAT VM-philosopher-AOR.3sg
 "Nino philosophized to the guest"
- c. *keto gogo-s u-ġlabuc-ob-s
 Keto.NOM girl-DAT VM-jest-TS-3sg
 "Keto jests with/to the girl"

Dative addressees in (92) should be treated differently from part-whole datives, in spite of the fact that both require VM *u-* on the verb. External possessor datives are introduced by high Appl and c-command another argument, whereas addressee datives are low goals within vP.



In its properties, the addressee dative corresponds to a low dative in Larson's (1988) account of English *to-PP* ditransitives, or to Russian low datives in Boneh & Nash (2017). Building on the latter analysis, Nash (2016) proposes that Georgian VM *u-* is not indicative of the exact placement of the dative argument, nor of its interpretation, which is determined by the hierarchy established between the theme and the dative argument in a transitive configuration. Namely, while a change of state transitive verb with VM *u-* unambiguously licenses a benefactive dative, datives with *u-* ditransitives, e.g. *ga=u-gzavna* 'send', *da=u-bruna* 'return', are ambiguous between goal and benefactive readings.⁴⁴

If *u-* flags both high and low datives on (di)transitive verbs, the same can hold for unergatives. I propose that addressee datives in (94) are low goals of unergatives, introduced by an adpositionlike applicative head. (Cf. Wood 2011 on two ways Appl may introduce an argument, as its complement or as its specifier).

The low position of addressees renders them licit with unergatives in the perfective tense. Unlike part-whole datives that fail to scope over the agent in perfective tenses, addressees are always c-commanded by the external argument. In this respect, consider the root *bġav* 'weep, roar', which can be construed as a sound emission verb or as a verb of transfer of non-verbal expression. As an emission verb it can occur with a part-whole dative only in imperfective tenses. As a verb of transfer of communication, it takes an addressee in both tenses in (95).

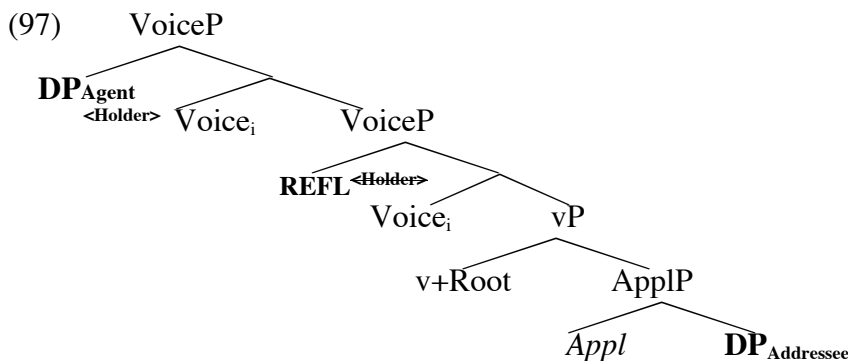
- (95) a. todzina-s saxe u-bġavi-s SOUND EMISSION
 doll-DAT face.NOM VM-roar-3sg
 "The doll's face roars, has a roaring expression"
- b. *todzina-s saxe-m u-bġavl- a
 doll-DAT face.NOM VM-roar-AOR.3sg
 "The doll's face roared"

⁴⁴ Nash (2016) considers the verb 'return' *da-u-bruna*. Its two internal arguments, Theme and the dative argument can mutually c-command each other. When the dative argument c-commands the Theme, as in (ia), it is introduced by high Appl and interpreted as benefactive/possessive. But when Theme c-commands the dative argument, the latter is introduced via the low Appl and is interpreted as goal. The interpretative nuance of the two datives becomes clearer when the dative "mice" is modified by "asleep" as in (ii), in this case, the unconscious mice do not directly benefit from the event, and are infelicitous benefactives, (iia).

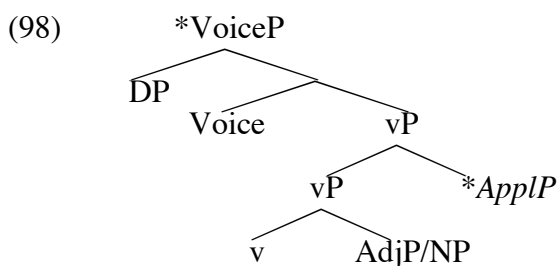
- (i) a. k'at'am tagveb-s ertmanet-i da=u-brun-a HIGH DATIVE
 cat-ERG mice-DAT each-other-NOM prev=VM-return-AOR.3sg
 "The cat returned the mice for each other's benefit"
- b. k'at'am tagveb-i ertamenet-s da=u-brun-a LOW DATIVE
 cat-ERG mice-NOM each other-DAT prev=VM-return-AOR.3sg
 "The cat returned the mice to each other"
- (ii) a. #k'at'am ċadzinebul tagveb-s ertmanet-i da=u-brun-a
 cat-ERG asleep mice-DAT each-other-NOM prev=VM-return-AOR.3sg
 "The cat returned the asleep mice for each other's benefit"
- b. k'at'am ċadzinebuli tagveb-i ertamenet-s da=u-brun-a
 cat-ERG asleep mice-NOM each other-DAT prev=VM-return-AOR.3sg
 "The cat returned the asleep mice to each other('s places)'"

- (96) a. k'at'a todžina-s u-bğavi-s
 cat.NOM doll-DAT VM-roar-3sg
 "The cat is roaring at the doll"
 b. k'at'a-m todžina-s u-bğavl- a
 cat -ERG doll -DAT VM-roar-AOR.3sg
 "The cat roared at the doll"

Note that sentences in (96) are unambiguous, the dative argument is interpreted as a goal and not as a benefactive: the cat does not roar *for* the doll, but *at* the doll. Unlike benefactives, low addressees are not dependent on the presence of another argument in vP. Their low position also makes them non-interveners in argument chains between higher arguments. In the unergative template with an addressee in perfective tense in (97), the dative argument does not interfere between two VoiceP, unlike the structure in (74) with benefactive intervener.⁴⁵



Addressee datives, like any type of dative, are banned with *-ob* unergatives. This class is analysed in the previous section as a complex predicate: v is non-branching for other unergatives, but in *-ob* verbs it combines with a non-verbal predicate. Only non-branching v can in principle be composed with low ApplP. ApplP can only adjoin to vP in (98), as v can only combine with the non-verbal predicate. This is at odds with structural requirement on low goals to merge with v.⁴⁶



4.5. Summary

In order to account for complex distribution of dative applicatives with unergatives, two vP structures are put forth: (i) headed by branching light v that combines with N or Adj predicate, for *-ob* class incompatible with any dative argument; (ii) headed by non-branching v for other unergatives compatible with some datives.

Benefactives are illicit with all unergative verbs because they are dependent on the presence of a non-agentive argument, unavailable in unergative templates. In spite of the general ban against applied arguments higher than the agent, *part-whole* datives are available with unergatives in imperfective tenses. In imperfective tenses, the subject of unergatives is not

⁴⁵ I am grateful to an anonymous reviewer for suggesting this type of explanation concerning low addressees.

⁴⁶ There is another way to rule out dative addressees with *-ob* unergatives. If we admit that the semi-functional light verb of the complex predicate is bundled with Voice (cf. Harley 2017 for Chol and Persian), adjoining an ApplP higher than v would amount to adjoining it above VoiceP. Adoption of v/Voice bundling structure for *-ob* unergatives would have no repercussions on our account of part-whole datives in §4.3.3.

introduced by agentive Voice but can be interpreted as such due to dynamic properties of imperfective aspect features bundled with Voice, while in perfective the subject is structured as Agent in accordance with NBD. Therefore, a part-whole dative can scope over the subject of unergatives in imperfective tenses but not in perfective tenses. *Addressees* on the other hand can occur with unergatives across tenses. They are low applicatives, composed with *v*. As such, aspectual specificities that directly affect the syntactic origin of the subject of unergatives bear no consequences on the addressees *in vP*.

Unergatives with TS *-ob* cannot tolerate any type of datives. This particular behaviour follows from their *vP* template, where *v* is a branching light verb composed with N or Adj predicate. The subject of *-ob* verbs controls the logical argument of the lower nominal or adjectival predicate. Being a controller, it may not denote a body-part bound by the higher part-whole dative. The presence of contradictory indices, of binder and bindee, on the subject of *-ob* unergatives rules out part-whole datives with this class. Addressee datives are illicit with *-ob* predicates as they cannot merge with *v* that combines with N/Adj predicate.

The table in (99) recapitulates the distribution of dative arguments with unergatives.

(98(=62))		UNERGATIVES WITH DATIVE ARGUMENTS					
		BENEFACTIVES		PART-WHOLE DATIVES		ADDRESSEES	
IMPERFECTIVE	*-OB	* OTHER	* -OB	OK OTHER	* -OB	OK OTHER	
TENSES	UNERGATIVES	UNERGATIVES	UNERGATIVES	UNERGATIVES	UNERGATIVES	UNERGATIVES	
PERFECTIVE	* -OB	* OTHER	* -OB	* OTHER	* -OB	OK OTHER	
TENSES	UNERGATIVES	UNERGATIVES	UNERGATIVES	UNERGATIVES	UNERGATIVES	UNERGATIVES	

5. Unergative verbs in Kartvelology

This section presents an overview of analyses of unergative verbs in traditional Kartvelology (study of Southern Caucasian languages). Morphological particularities of unergative predicates, referred to as Medial/Medioactive verbs, have received considerable attention, (cf. Holisky 1981, Jorbenadze 2010). The main debate concerns the source of RMP *i-* in perfective tenses. Moreover, case properties of unergatives pose an important challenge for typological classification of Georgian as an active language, where ergative case is tied to agentivity, or as an ergative language, where case-alignment is tied to transitivity.

5.1. RMP *i-* in unergatives: basic or derived?

Concerning the presence of RMP *i-*, Kartvelologists have tried to determine whether (a) *i-* forms are basic and forms without *i-* emerge in imperfective tenses later, or inversely, whether (b) *i-* forms are derived from more basic forms used in imperfective tenses.

a) *i-* forms are basic. According to this view, unergative verbs are inherently reflexive and denote auto-centered actions directed towards oneself. The marker *i-* spells out this semantic property (cf. Jorbenadze 2006, Melikišvili 2001). Some unergative verbs still retain *i-* in the present tense in Georgian (*i-brdzvis* ‘fight’, *i-cinis* ‘laugh’), while in other Kartvelian languages, Megrelian and Svan, unergative verbs with *i-* prevail in the present tense (cf. Melikišvili 2014:68, Öztürk 2020 on Laz). The problem with this approach is that it fails to account for the absence of *i-* in imperfective tenses in virtually all unergative verbs in Georgian. Nozadze (1974) claims that the loss of *i-* is due to phonetic reasons, but why these phonetic reasons are sensitive to the present imperfective tense but not to the morphologically close future tense with *i-* remains a mystery. Furthermore, this type of reasoning fails to explain why the reflexive anaphor (*tavisi tavi* ‘self’s self’, in combination with *i-*, is banned in imperfective tenses from unergative verbs, but is obligatory with auto-centered transitive actions, such as committing suicide, (100).

- (100) a. vano tavis tav-s i-k’l-av-s
 Vano.NOM self.GEN self-ACC RMP-kill-TS-3sg
 “Vano is killing himself/committing suicide”
 b. vano (*tavis tavs) (*i-)t’andzul-ob-s
 Vano.NOM self.GEN self-ACC RMP-suffer-TS-3sg

“Vano is suffering”

b) forms without *i-* are basic. This is the main claim of the present analysis, which echoes Čikobava’s (1950) insight that unergative verbs should be classified in Georgian as stative verbs and that the distinction *stative-dynamic* is fundamental for Georgian verb classification. Čikobava (op.cit) and Šanidze (1973) claim that stative verbs have their proper forms only in the present and “borrow” *i-* forms in perfective tenses from the reflexive-benefactive variant of their causative homologues.⁴⁷ (cf. also Deeters 1930) This type of analysis accounts for the invariable presence of TS *eb-* in the future forms of unergatives, which is the TS of causative verbs. However, Čikobava-Šanidze approach differs from ours as it predicts that the ungrammatical sentence in (101b) is a necessary stage in order to derive an *i*-form in (101c), where the anaphoric theme is elided: if the unergative is the borrowed reflexive-benefactive form of causative, it means that the mouse acts upon itself *for its own benefit* (cf. Harris 1985). In other words, the term ‘reflexive-benefactive’ entails the presence of the theme.

- (101) a. tagv-ma k’at’a a-lap’arak’-a CAUSATIVE
mouse-ERG cat.NOM VM-talk-AOR.3sg
“The mouse made the cat talk”
- b. *tagv-ma (tavis) tav-i i-lap’arak’-a BENEFACTIVE-REFLEXIVE
mouse-ERG (self’s) self-NOM RMP-talk-AOR.3sg
“The mouse made itself talk for its own benefit”
- c. tagv-ma i-lap’arak’a UNERGATIVE
mouse-ERG RMP-talk-AOR.3sg
“The mouse talked”

I explicitly argued against the benefactive source of RMP *i-* in unergatives in §2.7.2. What is reflexivized in unergatives is not a benefactive argument but rather a causee, i.e. the external argument of the embedded verb. In this sense, *i-* unergatives “borrow” from causatives of unergatives, which contain Agent and Holder, rather than from standard reflexive transitive predicates, with Agent, Beneficiary and Theme.

5.2. Ergative case as agent case

Case-marking specificities of unergatives in Georgian is discussed in Harris (1985, 1990). Similarly to Klimov (1974), Harris treats the ergative case in Georgian as a semantic agentive case: unergative verbs are structurally intransitive and case marking of their sole argument is conditioned by the semantic agentive role of the subject rather than by transitivity. Georgian should therefore be treated as *active* rather than *ergative* language, Harris concludes. The author rightly contests Šanidze’s (1973) analysis of unergatives in perfective tenses as reflexive-benefactives and argues that if *i-* forms were reflexive-benefactive transitives, the absence of reflexive pronoun *tavis* *tavi*, as in (101) would be unexpected, contrary to facts. In fact, Šanidze (1973) and Harris (1985) are both partially correct. Šanidze correctly claims that *i*-forms reflect a complex verbal template, characteristic of causative structures. However, many causatives are ambiguous in Georgian and can have two different derivations, as discussed in §2.7.2. For Šanidze, *i*-forms of unergatives are structurally identical to standard transitives, with Theme, while in the present analysis, they are related to causatives of unergatives, without Theme. Further evidence in favour of this point is provided in (102).

- (102) tagv-ma a-duy-a c’q’al-i ori-dan sam-amde
mouse-ERG VM-boil-AOR.3sg water-NOM two-from three-until
“The mouse boiled water from 2 to 3 o’clock”

This sentence can have two readings. Under the first, *a-duy-a* is interpreted as a simple transitive change of state “to boil”. Even if it does not contain a perfectivizing preverb to

⁴⁷ Jorbenadze (2006) states that *i-* is the late phenomenon in the formation of unergative predicates. It appears on verbs to signal intransitivity (i.e. the absence of direct object) and should be diachronically co-temporal with causative verb formation with VM *a-*.

convey that the action was telic, the mouse's intention is to *change* the water temperature. The DP "water" functions as Theme and the sentence denotes an accomplishment, (cf. Nash 2017). Under the second reading, *a-duy-a* is the causative of unergative verb that denotes bubbling activity and vapour emission. The mouse's intention here is to *keep* the water in this state/process. The caused activity of boiling is homogenous and holds of the water, which is constantly at 100°C for an hour, i.e. the water was already boiling at the onset of the event. In my analysis, unergative *i*-forms are related to the second scenario, where DP "water" is not the *Theme* of the caused eventuality, while in Šanidze's analysis, unergatives in perfective tenses reflect the first scenario.

Although Harris (1985) refutes the bivalent nature of *i*-forms, she is in fact right in claiming that ergative case is dependent on agenthood of the predicate. But for Harris, agenthood is a semantic primitive of certain verbs, independent of transitivity. In this work too, ergative case is the agent case, but agenthood is viewed as a configurationally construed thematic role in Georgian that depends on the presence of two arguments, in accordance with NBD.

6. Theoretical approaches to unergativity

This last section aims to expose other analyses of unergative predicates in contemporary syntactic theory and to compare them with main claims of the present account. Since Perlmutter's (1978) pioneering work on division of intransitive verbs into unaccusatives and unergatives, great deal of attention in linguistic theorising has been devoted to providing evidence for distinct syntactic structure of the two classes. A number of studies try to elucidate whether the sole argument of unergative and unaccusative verbs mirrors the behaviour of the agent of transitive verbs and the theme of transitive verbs, respectively. (Cf. for Italian Burzio 1986, Belletti & Rizzi 1988). With the advent of neo-constructivist approaches to argument structure that argue for a more fine-grained architecture of the verbal domain where notions of Agent and Theme have less straightforward structural correspondences than in traditional Principles and Parameters framework, two lines of inquiry have emerged: (i) unergative predicates are underlyingly transitive, with special "hidden" internal argument, either syntactically incorporated or morphologically fused with the verb (Hale and Keyser 1993, 2002); (ii) unaccusative verbs mirror the syntax of transitives as their decausativised homologues (cf. Levin & Rappaport Hovav 1995, Schäfer 2008, a.o.). In these approaches, unergative-unaccusative division concerns the identity of the missing argument of the underlying transitive structure: unergatives involve a non-expressed Theme, while unaccusatives involve a non-expressed Agent/Causer. But as some neo-constructionist analyses put forth more than one verbal skeleton for transitive verbs, distinguishing causative change of state predicates from agentive creation verbs (cf. Folly & Harley 2008), unergative-unaccusative distinction is further refined: unaccusatives are reduced change of state transitives, while unergatives are related to transitive creation verbs.

6.1. Hale & Keyser (1993, 2002): unergatives as underlying transitives

In their influential work on syntax of argument structure, Hale and Keyser (1993, 2002) view unergative verbs as underlyingly transitive. Unergatives are structured as verbs of creation, where the internal argument, commonly expressed by a cognate object, represents the result of the process denoted by the verb: "The semantic structure associated with the unergative V is $e \rightarrow n$. Here, an action or dynamic event e "implicates" an entity n , assuming that to be the notional type (n) associated with the noun category. This corresponds to the notion that the implicating event is completed, or perfected, by virtue of the "creation", "production", or "realisation" of the relevant entity", (1993:74).⁴⁸ The empirical confirmation that unergatives are V-N constructions is provided by Basque, where (i) the subject of unergatives is marked with ergative case, just like the subject of transitive verbs, and (ii) many unergative

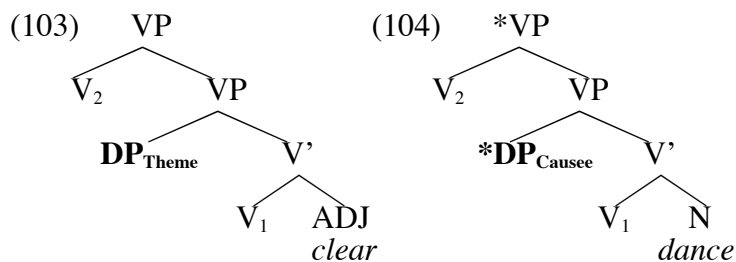
⁴⁸ Gallego (2012) (cf. Acedo-Mattelan 2014) provides a different reinterpretation of the same insight in minimalist terms: non-branching v does not exist, and must be valued by checking features against a selected DP, (i). Therefore, a nominal must be present within vP .

(i) *John did/*John made

Recall that the key point in the present study is precisely the existence of non-branching v in unergative vP .

constructions involve the light verb *do, make, perform* and an activity depicting cognate object *work, dance*, marked as absolutive. (cf. Laka 1993, Bobaljik 1993).⁴⁹

Hale & Keyser’s analysis accounts for asymmetry in causativisation of unergatives and unaccusatives in English and other languages. While unaccusatives are easy to causativize in most languages, e.g. *Tomatoes grew—John grew tomatoes*, unergatives may not undergo the similar process: *The student swam—*The teacher swam the student*. The contrast hinges on the category of the complement of V₁ in (103-104) [V₂ is a causative verb in the system], Adj in the case of unaccusatives and Noun in the case of unergatives, and more concretely on their predicative vs. argumental asymmetry. While Adj ‘clear’ in (103) counts as a predicate and requires a local subject DP_{Theme}, N ‘dance’ in (104) is argumental and may not select a subject. This explains the ill-formedness of the latter structure: DP_{Causee} illicitly occupies the internal subject position. In other words, Hale & Keyser’s system allows only the presence of the “inner” VP argument in simple causatives, and bans the causee of unergatives.



Well-formedness of Georgian causatives of unergatives, discussed in §2.7.1, counters the ban against such predicates universally. Languages as diverse as Hebrew, Finnish, Japanese (Pylkkänen 2000) allow causativisation of unergatives, where same causative morpheme is involved as in causatives of unaccusatives.

- (105) a. dani *herkid* et ha-yalda HEBREW
 Dani.NOM CAUS.dance.PAST DOM DET-girl
 “Dani made the girl dance”
 b. dani *hegdil* et ha-gina
 Dani.NOM CAUS.large.PAST DOM DET-garden
 “Dani enlarged the garden”
- (106) a. Jussi *naura-tti* Mari-a FINNISH
 Jussi.NOM laugh-CAUSE.PAST Mari-PAR
 “Jussi caused Mari to laugh”
 b. Jussi *jäädty-tti* liha-n.
 Jussi.NOM freeze-CAUSE.PAST meat-ACC
 “Jussi froze the meat”
- (107) a. Taroo-ga Hanako-o *waraw-ase-ta* JAPANESE
 Taro-NOM Hanako-ACC laugh-CAUSE-PAST
 “Taro caused Hanako to laugh”
 b. Taroo-ga niku-o *koor-ase-ta*
 Taro-NOM meat-ACC freeze-CAUSE-PAST
 “Taro froze the meat”
- [Pylkkänen 2000 ex.1-2]

This cross-linguistic evidence suggests that the complement of the causative morpheme is not structured identically in languages. In Georgian, Japanese, Hebrew, and Finnish, the complement is structurally more complex than vP in Hale & Keyser’s account, it is VoiceP. Analysing unergatives as object-selecting predicates seems problematic on semantic grounds. Marantz (2007) contests Hale and Keyser’s analysis of unergatives as verbs of “creation, production or realization”. Marantz claims that unergatives and transitive creation verbs are of different semantic type, unergatives are activities in Vendlerian sense, hence atelic, whereas

⁴⁹ Preminger (2012) presents several arguments against analyses of Basque unergatives as underlyingly transitive. I reproduce two: (i) simplex unergatives do not have corresponding nouns that could function as cognate objects; (ii) the agent is marked as ergative even with PP cognate objects in repetitive constructions.

creation verbs are accomplishments, and can be telic. Furthermore, Rimell's (2012) study of denominal unergative verbs in English reveals absence of verbs based on the nominal root that expresses a theme. English has no such verb as 'to apple' with the meaning of 'to eat apples'. In the view of these properties of denominal unergative verbs, Marantz (2013) concludes that the nominal root rather functions as a manner modifier, (cf. Haugen 2009).⁵⁰ Kiparsky (1997) also takes issue with the idea that activities select nominal objects and argues that this type of approach is incompatible with semantic decomposition of active verbs put forth by Dowty (1991). For Dowty, all active verbs decompose into an abstract predicate *do* and a process denoting VP, e.g. *John ate a banana* signifies *what John DID was [TO EAT A BANANA]*. In the same vein, Mittwoch (1998) analyses the cognate object present in unergative constructions not as an argument à la Hale & Keyser, but as a nominal that fleshes out the Davidsonian event argument, comparable to Dowty's process VP complement of *do*: *John worked* reads rather as *what John DID was working*, and not as *John produced work*. To conclude, while most analyses do not contest that unergative constructions may contain a nominal part, there is a debate whether this nominal is best viewed as the *argument* of the transitive verb *do*, or whether it represents a *predicate* that provides lexical content to the light verb *do*. If the latter hypothesis is grounded, Hale & Keyser's initial explanation for unergative vs. unaccusative asymmetry based on the non-predicate nominal core of the former vs. predicate adjectival core of the latter should be reconsidered. The present analysis rejects the underlying transitivity of unergatives: the root directly merges with *v* in unergatives, or it merges with *N* or *Adj* that combine with the light *v* in similatives.

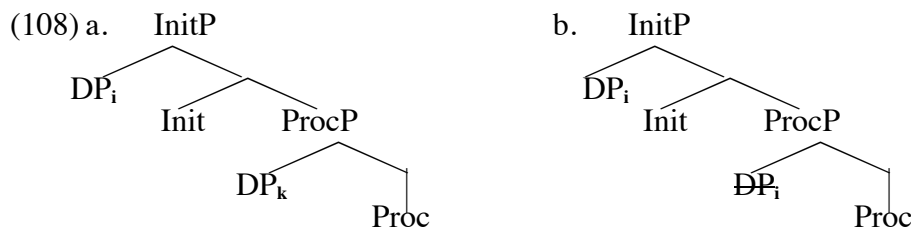
6.2. Ramchand (2008): unergatives as complex predicates

Ramchand's (2008) analysis of unergatives significantly differs from Hale & Keyser's. For Ramchand, unergatives contain two Aktionsart *predicates* rather than two *arguments*. Similar to Dowty (1991) and Mittwoch (1998), the author contends that unergative predicates involve an agent-introducing predicate Initiation that selects a process-denoting predicate, ProcessP. Ramchand claims that unergatives are not bi-argumental in spite of the fact that they involve two argument-introducing predicates. Rather, the same argument with a special composite role Initiator-Undergoer is involved in two homomorphic subeventualities. The class of Initiator-Undergoers includes Agents or Actors, which differ from Causers in designating the same participant in both initiation and process subeventualities. The idea of a hybrid thematic role is problematic for the general theory of argument structure whose principal axiom is one predicate—one argument relation. But Ramchand has to posit hybrid roles in order to account for the ban on causatives of unergatives in Hindi. In this respect, Hindi is different from Georgian or Finnish and patterns with English.

Ramchand's reasoning goes as follows: if unergative constructions involved two distinct arguments, Initiator and Undergoer, one would also naturally expect the two arguments to be referentially disjoint, as in a standard bivalent causative construction. But as Hindi does not allow the equivalent of **John worked Mary* (108a), the structure **John_i worked John_i* in (108b) should be banned too.

⁵⁰ The same claim can be made of cognate objects (CO). Two opposing views exist concerning COs: for Jones (1988), CO are adjuncts as they do not passivize and are often non-referential, while Massam (1990) defends the opposite view and treats CO as arguments. Nakajima (2006) and Pereltsvaig (1999,2002) hold that CO come in two kinds: as semantic manner modifiers (instrumental in Russian) or as true arguments (accusative in Russian). In Georgian, COs can sometimes accompany unergative verbs: *danse a polka, play backgammon, sing a song*. Although COs are case-marked as Themes, their presence does not affect the unergative verb that retains all its defining properties (RMP *i-* in the perfective, TS *-eb* in the future) (cf. ex. 49). Furthermore, verbs with COs cannot passivize, (cf. (ib), with two types of past participles). I therefore conclude that COs are semantic adjuncts in vP, not selected by *v*.

(i) a. keto-m i-cek'v-a p'olk'a
 Keto-ERG RMP-dance-AOR.3sg polka.NOM
 "Keto danced a polka"
 b. *p'olk'a i-q'-o/ i-kn-a cek'v-eb-ul-i / na-cek'v-i
 polka.NOM RMP-be-AOR.3sg dance-TS-PPRT-NOM PPRT-dance-NOM
 "Polka was/got danced"



If unergatives in ergative case-systems are indeed monovalent, they should have different case properties than standard transitives. Hindi and Georgian are both split-ergative languages, but if unergatives in each language differ in valency, Hindi should not mark their sole argument with ergative case, while Georgian is expected to. Georgian, as we already know, unexceptionally marks the subject of unergatives as ergative, but the situation in Hindi, Punjabi, and in other Indo-Aryan languages in general, is more complex. Very few unergatives *require* the ergative subject (e.g. *spit*, *scratch* in Punjabi, cf. Chandra et al 2017), and a small number of unergative verbs can optionally appear with ergative subject. When they do, the subject is volitional and the ensuing reading is of *purposefully* done action. Therefore, Hindi/Punjabi and Georgian unergatives should have different structures, and only the latter unambiguously behave as syntactically bivalent in perfective tenses.^{51,52}

6.3. Massam (2009), Tollan (2018): subjects of unergatives are not Agents

On the basis of causativisation patterns in Niuen, Massam (2009) argues that unergatives cannot be structured as concealed transitives à la Hale & Keyser (1993) and proposes that the subject of each class be generated in different sites: argument of Voice for transitives, and argument of *v* for unergatives. Tollan (2018) builds on Massam’s study, and shows that different structural sources of the subject of unergatives and transitives have a semantic correlate. Firstly, it must be noted that Massam’s and Tollan’s analyses are based on a different conception of verbal templates than the one adopted in this work. In their system, *V* selects internal Theme arguments, *v* introduces an external argument of unergatives and of certain two-place predicates, Voice introduces Agent in standard change of state transitives. Hence, their *v* is an *external argument* introducer. Unergative verbs take absolutive subjects in Niuean while transitive subjects are marked with ergative case. Tollan shows that the absolutive on the former is not due to its intransitivity; adding a cognate object does not affect the case of the subject of unergatives in (109b). The cognate object is marked with structural accusative marker *i-* and manifests the properties of a bona fide object.

- (109) a. Sā siva [le teine].
 PST dance DET girl.ABS
 “The girl danced”
- b. Sā siva [le teine] [i le siva].
 PST dance DET girl.ABS ACC DET dance
 “The girl danced a dance”

Case asymmetry between transitive and unergative subjects results from their different positions in the clause. Tollan distinguishes two types of Agents, low and high, following Dowty’s (1991) insights on different proto-Agents. High agents, with high degree of affectedness, are introduced by Voice, which marks them with inherent ergative case, while low agents, with low degree of affectedness, are generated in the specifier of *v* and get their case from T. Tollan shows that besides unergatives, many bivalent predicates, traditionally

⁵¹ Chandra et al. (2017) claim that the best way to explain the distribution of ergative case with intransitive verbs is by analyzing it as inherent case sensitive to a high degree of agentivity. There are still a small number of unergative verbs in Indo-Aryan languages denoting body emissions that must have an ergative subject; this requirement is formal and cannot be conditioned by volition considerations. The special status of body emission verbs in Georgian is discussed in §3.5, where I contend that they are not unergatives.

⁵² Baker (2014) shows that in Shipibo, many unergative verbs take nominative subjects, while those that have ergative subjects are analysed as hidden transitives.

called middles, have absolutive low agents. Interestingly, the class of middles encompasses perception, psych and stative verbs, e.g. *want, hear, love*. It ensues that unergatives and stative/perception verbs are structured alike in Niuean, just like in Georgian: these are predicates that do not have a core external Agent argument. The fact that the syntax of Georgian and Niuean unergatives turns out to be very different must be ascribed to the role of aspectual categories in each language. In perfective tenses, Georgian unergatives shift to the class of transitives, while Niuean unergatives consistently surface as predicates with Holder (low agent) as the external argument.

7. General conclusion and cross-linguistic implications

In this work, I show that unergative verbs in Georgian form a natural class: they are marked with voice marker *i-* in perfective tenses and their subject is ergative in a subgroup thereof. I claim that the key feature of this class is the absence of the internal Theme argument: unergative predicates are headed by a non-selecting *v*. This property has far-reaching consequences for argument structure of unergatives in Georgian, where realisation of Agents, i.e. arguments assigned Agent role, is conditioned by Burzio-type generalisation NBD. NBD states that the argument of Voice is assigned Agent role if the complement of Voice is argument-selecting. It follows from this generalisation that Georgian unergatives cannot be represented as simple DP_{Agent} -Voice-*v* configurations. Rather, in the configuration DP -Voice-*v*, DP may only get Holder role.

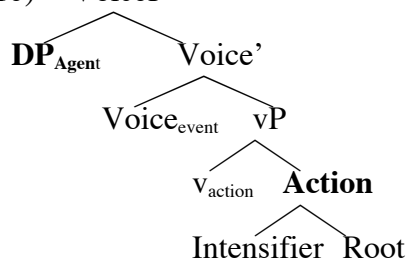
Detailed analysis of their properties reveals that unergatives are not structured uniformly in different tense-aspects, which is also characteristic of stative verbs in Georgian. In imperfective tenses, unergatives are construed as monovalent verbs with external argument. As in these tenses, Asp and Voice of eventive verbs are bundled as one category, dynamic aspect features of imperfective enable agentive interpretation of the external argument of Asp-Voice, regardless of NBD.

In perfective tenses, a predicate with Holder argument cannot acquire properties of dynamic event by the same mechanism. In order to be interpreted as agentive, argument structure of unergatives must be modified. Their stative core with Holder is causativised, and embedded under a higher argument-introducing Voice layer. As a result, the external argument of the causative predicate is Agent as Voice selects a Holder introducing predicate, in conformity with NBD. But unergatives involve one event participant, unlike causative verbs.

Reflexivisation of the dyadic predicate, spelled out as RMP *i-*, yields the correct reading whereby Agent and Holder are coindexed. The ergative case on the subject of unergatives in perfective tenses is accounted for too, as they are structured as two-place predicates. In Georgian, ergative is the Agent case, but agentivity itself is configurational. Therefore, dependent case approaches based on *transitivity* are best suited to account for it.

Configurational agentivity and unergative reflexive verbs are not unique to Georgian. Firstly, evidence from Hebrew suggests that while NBD may not be a necessary condition for agenthood cross-linguistically, specific *structural* strategies to mark a predicate as agentive may exist in a language. According to Doron (2003), Hebrew has a special functional agency head, Intensifier, that modifies verb roots by turning them into Actions. This category is the hallmark of *piel* templates that underlie agentive transitive and unergative verbs, (110). The external argument of Action is obligatorily interpreted as Agent, i.e. Agent is dependent on the presence of Intensifier. Doron notes that intransitive templates with Intensifier are unergative, since such action templates require an external agent argument.

(110) VoiceP PIEL TEMPLATE IN HEBREW



Secondly, structuring unergatives as reflexive verbs is also attested in Syrian Arabic (Al Zahre 2003) and Icelandic (Wood 2012). In these languages, reflexive unergatives denote eventualities that express behaviours named by nouns. These reflexive unergatives are parallel to Georgian *-ob* similatives with noun/adjective base.

- | | |
|--|---|
| (111) a. Mig langar svoooo að sjá þig kennara-st
me.ACC longs so to see you teacher-REFL
“I want so much to see you teaching” | ICELANDIC
[Wood 2012:270 ex.393a] |
| b. <i>staʔ-sadət</i> salma bə-difaaʕ_ʕan wəlaad-a
REFL-lion Salma in-defense for children-hers
“Salma behaved as a lion to protect her children” | SYRIAN ARABIC
[Al-Zahre 2003:216, ex.41] |

As in Georgian, building behaviour denoting unergatives in (111) involves the following stages: the root is categorized as noun/adjective that combines with stative *v*; Voice adds external Holder to this complex predicate. Agentive semantics is provided by adding an Agent via causativisation. This operation is followed by coindexation of Agent and Holder arguments, reflected by reflexive morphology. Unlike Georgian, Icelandic and Syrian Arabic similatives are reflexive causatives in all tenses. In Georgian, a more economic language-specific property to bundle Aspect and Voice categories in imperfective tenses ensures agentive reading of the external argument.

Composing *v* with a non-verbal predicate is one of the ways to build unergatives in Georgian and elsewhere. A more standard derivation involves merging the root with *v*. It can be hypothesized that the latter strategy is employed whenever the root is event-denoting, as opposed to the more marked complex-predicate strategy used with property-denoting roots. This idea is corroborated by the fact that the base of sound/light emission verbs involves complex stems composed of the root and process-denoting suffixes. Moreover, building unergatives from a property denoting root is marked even in Kartvelian, as Laz lacks similatives altogether, (Öztürk 2020).

The two ways of structuring unergatives, as a simplex *vP* or as a complex predicate, can affect their behaviour with applied arguments. Georgian similatives, construed as complex predicates, are incompatible with any type of dative argument, while simplex unergatives occur with part-whole datives in imperfective tenses, and addressee datives in all tenses. As the subject of complex unergatives controls into the lower predicate, adding a distinct dependency with a part-whole dative in case it denotes a body-part is disallowed. Low datives lose the competition with non-verbal predicate for sisterhood with *v* in complex unergatives. To conclude, the present study pleads for the existence of different structures for unergative predicates cross-linguistically and within the same language, exemplified by Georgian. These structures share a common core, non-selecting *v* and external Holder argument. The non-selecting *v* can be non-branching or composed with another non-verbal predicate. The external argument can acquire agentive interpretation if is introduced by Voice bundled with dynamic features of imperfective Aspect. Or, it can be coindexed with Agent introduced by agentive Voice in a dyadic configuration. Importantly, these structures that result from the interplay of semantic requirements and general structural constraints imposed by specific languages comply to the fundamental trait of unergativity, the absence of internal argument. The implications of this study go beyond the architecture of unergatives, and bear on the nature of ergative case and transitivity. In recent studies, ergative case is analysed either as a semantic agent case, or as a structural dependent case assigned to the higher of the two arguments in a transitive configuration. The general conclusion of this study is that only arguments with Agent role are assigned ergative in Georgian, but Agent role is structurally dependent on the presence of another argument introducing category. Hence, if Agent role is configurationally conditioned by transitivity and if transitivity entails embedding of another theta-assigning category under Voice, the ergative case can be defined as the structural Agent case. This is a promising conclusion that reconciles and unifies semantic and syntactic approaches to ergative case.

Acknowledgments:

I gratefully acknowledge stimulating discussions with Nora Boneh, Edit Doron, Daniel Harbour, Alec Marantz, Martha McGinnis, Malka Rappaport-Hovav and Elena Soare during the gestation period of this research. I would also like to thank three NLLT reviewers and the editor for thoughtful, constructive and useful suggestions that led to substantial improvements of this work. Parts of the research have been presented at colloquia at Hebrew University, University of Bucharest and OASIS workshop in Paris, where the audiences have been generous with enriching input. Support for this research was partially provided by the Lady Davis Visiting Professor Fellowship. I humbly dedicate this work to the memory of Edit Doron.

Bibliography:

- Acedo-Matellán, V. (2014). Can we dance without doing a dance? Two opposite views on the integration of roots in the syntactic structure of the vP. In Bachrach, Asaf, Isabelle Roy & Linnaea Stockall (eds.), *Structuring the Argument. Multidisciplinary research on verb argument structure*, 23-43. Amsterdam/Philadelphia: John Benjamins.
- Alexiadou, A. (2011). Statives and nominalization. *Recherches linguistiques de Vincennes* 40: 25-52.
- Alexiadou, A., Anagnostopoulou, E., & F. Schäfer. (2015). *External Arguments in Transitivity Alternations: A Layering Approach* (Vol. 55). OUP Oxford.
- Aldai, G. (2009). 'Is Basque morphologically ergative?' *Studies in Language* 33– 4:783– 831.
- Al Zahre, N. (2003). *La structure du groupe verbal en arabe: trois arguments empiriques en faveur d'une vision syntaxique de la structure argumentale*. Doctoral dissertation, Paris 8.
- Amiridze, N. (2006). *Reflexivization Strategies in Georgian*. LOT Dissertation Series 127, Utrecht Institute of Linguistics, Utrecht University, The Netherlands
- Arad, M. (1998). Psych-notes. *UCL Working Papers in Linguistics* 10.
- Baker, M. C. (1988). *Incorporation: A theory of grammatical function changing*. University of Chicago Press.
- Baker, M. C. (2014). On dependent ergative case (in Shipibo) and its derivation by phase. *Linguistic inquiry*, 45(3), 341-379.
- Baker, M., Johnson, K., & Roberts, I. (1989). Passive arguments raised. *Linguistic inquiry*, 20(2), 219-251.
- Baker, M. C., & Vinokurova, N. (2010). Two modalities of case assignment: Case in Sakha. *Natural Language & Linguistic Theory*, 28(3), 593-642.
- Baker, M. & J. Bobaljik. (2017). On inherent and dependent theories of ergative case. In Coon, J., Massam, D. & L. deMena Travis (eds.), *Oxford handbook of ergativity*, 111–134. New York, NY: Oxford University Press.
- Belletti, A., & Rizzi, L. (1988). Psych-verbs and θ -theory. *Natural Language & Linguistic Theory*, 6(3), 291-352.
- Bennett, M., & Partee, B. (1972). *Toward the logic of tense and aspect in English*. Bloomington: IULC.
- Berro, A. (2010). 'Unergative predicates in Basque varieties: Consequences for ergative case assignment,' in P. Salaburu, P. Goenaga, & I. Sarasola (eds.), *DEA research work*. University of the Basque Country.
- Boneh, N. & L. Nash (2017). The syntax and semantics of dative DPs in Russian ditransitives. *Natural Language and Linguistic Theory*, 35(4): 899-953
- Borer, H. (2005). *The Normal Course of Events*. Structuring Sense, Volume II. Oxford: Oxford University Press.
- Borer, H. & Grodzinsky, Y. (1986). Syntactic vs. Lexical Cliticization: The Case of Hebrew Dative Clitics. In *The Syntax of Pronominal Clitics*, ed. Borer, H. 175–217. San Diego, CA: Academic Press.

- Burzio, L. (1986). *Italian syntax: A government– binding approach*. Dordrecht & Lancaster: Reidel
- Bresnan, J., & Moshi, L. (1990). Object asymmetries in comparative Bantu syntax. *Linguistic inquiry*, 21(2), 147-185.
- Bruening, B. (2016). Light verbs are just regular verbs. *University of Pennsylvania Working Papers in Linguistics*, 22(1), 7.
- Butt, M. & T.H. King (2003). Case systems: Beyond structural distinctions, in Ellen Brandner & Heike Zinmeister (eds.), *New perspectives on case theory*. Stanford, CA: CSLI, 53– 87.
- Chandra, P., Kaur, G., & Udaar, U. (2017). Optional Ergativity with Unergatives in Punjabi. *Taiwan Journal of Linguistics*, 15(2), 1-35.
- Čikobava, A. (1950). *Kartuli enis zogadi daxasiateba* [A general characterization of the Georgian language]. *kartuli enis ganmart'ebiti leksik'oni* [Explanatory Dictionary of the Georgian Language], 1:018-080.
- Comrie, B. (1976). *Aspect: An introduction to the study of verbal aspect and related problems* (Vol. 2). Cambridge university press.
- Davison, A. (1999). Ergativity: Functional and Formal Issues. Discussion of the papers on ergativity. In M. Darnell, E. Moravcsik, F. Newmeyer, M. Noonan, & K. Wheatley (eds.), *Functionalism and Formalism in Linguistics* Volume I: General papers, 177-208. Amsterdam/Philadelphia: John Benjamins Publishing Company.
- Deal, A. R. (2013). Possessor Raising. *Linguistic Inquiry*, 37:391–432.
- Deeters, G. (1930) *Das khartwelische Verbum. Vergleichende Darstellung des Verbalbaus der süskaukasischen Sprachen*. Leipzig: Markert & Petters.
- Dixon, R.M.W. (1979). 'Ergativity.' *Language* 55: 59– 138.
- Doron, E. (2003). Agency and Voice: The Semantics of the Semitic Templates. *Natural Language Semantics* 11. 1-67.
- Dowty, D.R. (1979). *Word Meaning and Montague Grammar*, Reidel, Dordrecht
- Dowty, D. R. (1991). Thematic proto-roles and argument selection. *Language* 67:547–619.
- Folli, R., Harley. H. & S. Karimi. (2005). Determinants of event type in Persian complex predicates. *Lingua* 115:1365–1401.
- Gallego, Á. (2012). A note on cognate objects: cognation as doubling. *Nordlyd*, 39(1), 95-112.
- Guéron, J. (1985). Inalienable Possession, PRO-Inclusion and Lexical Chains. In *Grammatical Representation*, eds. Guéron, J., Obenauer, H.G. & Pollock, J-Y. 43–86. Dordrecht: Foris.
- Grimshaw, J. & Mester, A. (1988). Light verbs and theta-marking. *Linguistic Inquiry* 19:205–232.
- Hale, K. & Keyser, S.J. (1993) On argument structure and the lexical representation of syntactic relations. In K. Hale & J. Keyser, eds., *The View from Building 20*, pages 53-109. MIT Press, Cambridge, MA.
- Hale, K. & Keyser, S. J. (2002). *Prolegomenon to a Theory of Argument Structure*. Cambridge (Mass.): MIT Press.
- Harley, H. (2017) The "bundling" hypothesis and the disparate functions of little v. In D'Alessandro, R., Franco, I. & A. J. Gallego (eds), *The Verbal Domain*, pp. 3-28. Oxford: Oxford University Press.
- Harris, A. (1981). *Georgian syntax: A study in relational grammar*. Cambridge: Cambridge University Press
- Harris, A. (1985). *Diachronic syntax: The Kartvelian case*. Orlando: Academic Press.
- Harris, A. (1990). Georgian: A language with active case marking. *Lingua* 80: 347– 365.
- Haugen, J. D. (2009). Hyponymous objects and late insertion. *Lingua* 119. 242-262.
- Hewitt, B. G. (1987). Georgian: Ergative or active? *Lingua*, 71(1-4), 319-340.
- Holisky, D. A. (1981). *Aspect and Georgian medial verbs*. Academic Resources Corp.
- Jaeggli, O. A. (1986). Passive. *Linguistic inquiry*, 587-622.
- Johns, A. (1992). 'Deriving Ergativity,' *Linguistic Inquiry* 23: 57-87.
- Jones, Michael A. (1988). Cognate Objects and the Case-filter. *Journal of Linguistics* 24, 1: 89-110.
- Jorbenadze, N. (2006). *sašualo gvaris zmnata uylebis sist'ema tanamedrove kartuli* [The conjugational system of middle-voice verbs in Modern Georgian]. Doctoral dissertation, I. Javaxišvili Tbilisi State University.

- Jorbenadze, N. (2010). Sašualo gvaris utemisnišno zmnebis struqturul-semantikuri analizi da uglebis dziritadi sakitxebi [Aspects of structural-semantic analysis of middle-voice verbs without thematic suffix], *iberiul-k'avk'asiuri enatmecniereba*, 36: 209-215
- Kallulli, D. (2006). Unaccusatives with dative causers and experiencers: a unified account. In Hole D., Meinunger A. & W. Abraham (eds.) *Datives and Other Cases*. Studies in Language Companion Series 75 : 271-301. Amsterdam: John Benjamins.
- Kastner, I. (2020). *Voice at the Interfaces: The syntax, semantics and morphology of the Hebrew verb*. Open Generative Syntax, vol. 8. Berlin: Language Science Press.
- Kayne, R. (1975). *French syntax*. Cambridge, MA: MIT Press.
- Kiğuradze, T. (2016). *Stative Dimensional Verbs and Specific Teaching Models for them in Georgian as a Second Language*. PhD Dissertation. Ilya State University. Tbilisi.
- Kiparsky, P. (1997). Remarks on denominal verbs. In *Complex predicates*, ed. A. Alsina, J. Bresnan, and P. Sells, 473–499. Stanford: CSLI.
- Klimov, G.A. (1977). *Tipologija jazykov aktivnogo stroja*. Moscow: Nauka.
- Kratzer, A. (1996). Severing the external argument from its verb. In J. Rooryck & L. Zaring (eds.), *Phrase structure and the lexicon*, 109-137. Dordrecht: Kluwer.
- Kratzer, A. (2000). Building Statives. *Berkeley Linguistic Society* 26. 385-399.
- Landman, F. (1992). The Progressive, *Natural Language Semantics* 1, 1-32.
- Landau, I. (1999). Possessor Raising and the Structure of VP. *Lingua*, 107:1–37.
- Landau, I. (2010). *The locative syntax of experiencers*. Cambridge, MA: MIT Press.
- Laka, I. (2006). Deriving Split-ergativity in the progressive: The case of Basque, in A. Johns, D. Massam, & J. Ndayiragije (eds.), *Ergativity: Emerging issues*. Dordrecht: Springer, 173–195.
- Legate, J. A. (2008). 'Morphological and Abstract Case.' *Linguistic Inquiry* 39.1:55-101.
- Levin, B. (1993). *English verb classes and alternations: A preliminary investigation*. Chicago, IL & London: University of Chicago Press.
- Levin, B. & M. Rappaport-Hovav. (1995). *Unaccusativity: At the syntax–lexical semantics interface*. Cambridge, MA: MIT Press.
- Lieber, R. (1998). The suffix *-ize* in English: Implications for morphology. In S. G. Lapointe, D. K. Brentari & P. M. Farrell (eds.), *Morphology and its relation to phonology and syntax*, 12–34. Stanford and CA: CSLI Publications.
- Lieber R. (2004). *Morphology and Lexical Semantics*. Cambridge: Cambridge University Press.
- Maienborn, C. (2005). On the Limits of the Davidsonian Approach: The Case of Copula Sentences. *Theoretical Linguistics* 31(3):275-316.
- Maienborn, C. (2007). On Davidsonian and Kimian states. In I. Comorovski & K. von Stechow (eds.), *Existence: syntax and semantics*. Springer. 107-130.
- Marantz, A. (1989). Relations and configurations in Georgian. *Ms., University of North Carolina, Chapel Hill*.
- Marantz, A. (1991). 'Case and licensing.' In *Proceedings of the 8th Eastern States Conference on Linguistics (ESCOL 1)*, eds. G. Westphal, B. Ao & H-R. Chae, Ithaca, NY: CLC Publications, 58-68.
- Marantz, A. (2007). Phases and words. In *Phases in the theory of grammar* . (191-222). Dong-In Publishing Co.
- Marantz, A. (2013). Verbal argument structure: Events and participants. *Lingua*, 130, 152-168.
- Martin, F., & Piñón, C. (2020). Verbalizing nouns and adjectives: The case of behavior-related verbs. *Glossa: A Journal of General Linguistics*, 5(1), 29
- Massam, Diane. 1990. Cognate Objects as Thematic Objects. *Canadian Journal of Linguistics* 35, 2: 161-190.
- Massam, D. (2002). Fully internal cases: surface ergativity can be profound. In Rakowski, A., Richards, N. (eds.), *Proceedings of AFLA 8*, MITWPL, Cambridge, MA, pp. 185–196.
- Massam, D. (2009). The structure of (un)ergatives. In Chung, S., Finer D., Paul I. & E. Potsdam (eds.), *Proceedings of the Sixteenth Meeting of the Austronesian Formal Linguistics Association (AFLA 16)*, 125–135.
- McGinnis, M. (2017). Applicatives. In *The Wiley Blackwell Companion to Syntax*, Second Edition (eds. Everaert, M. & H.C. Riemsdijk).

- Melikishvili, D. (2001). *kartuli zmnis uglebis sistema*, [The conjugational system of the Georgian verb]. Tbilisi: Logos Pres
- Melikishvili, D. (2014). *kartuli zmnis sist'emuri morposin'tak'suri analizi* [Systematic morphosyntactic analysis of Georgian verbs]. Tbilisi: Logos Press.
- Mithun, M. (1991). Active/agentive case marking and its motivations. *Language*, 67(3), 510-546.
- Mittwoch, A. (1998) Cognate Objects as Reflections of Davidsonian Arguments. In *Events and Grammar*, Susan Rothstein, ed., Kluwer Academic Publishers, 309-332.
- Mohanan, T. (1994) *Argument structure in Hindi*. Stanford, CA: CSLI.
- Montaut, A. (2004). Oblique main arguments in Hindi as localizing predications. *Typological studies in language*, 61, 33-56.
- Myler, N. (2016). *Building and interpreting possession sentences*. MIT Press.
- Nakajima, H. (2006). Adverbial Cognate Objects. *Linguistic Inquiry* 37,4:674-684.
- Nash, L. (1995). *Portée argumentale et marquage casuel dans les langues SOV et dans les langues ergatives: L'exemple du géorgien*. Doctoral dissertation, Paris 8.
- Nash, L. (2016) What versionizers tell us about the structure of trivalent verbs and dative arguments, Handout of the talk given at Workshop *South Caucasion Chalk Circle*, Paris 22-24 September. <http://paris2016.mariapolinsky.com/wp-content/uploads/2015/11/SCCC-Version-LNASH-handout.pdf>
- Nash, L. (2017). The structural source of split ergativity and ergative case in Georgian. In Coon, J., Massam, D. & L. Travis, *The Oxford Handbook of Ergativity*, Oxford University Press.
- Nash, L. (2020). Causees are not agents. In Bar-Asher Siegal E. & N. Boneh, *Perspectives on Causation*, Springer.
- Nie, Y. (2020). Morphological causatives are Voice over Voice. *Word Structure* 13(1) :102-126.
- Nozadze, L. (1974). medioakt'iv zmnata c'armoebis zogi sak'itxi kartulši [Some questions on the formation of medio-active verbs in Georgian]. *iberiul-k'avk'asiuri enatmecniereba*, 19, 25-5.
- Oyharçabal, B. (1992). Inherent and structural case- marking: Ergaccusativity in Basque, in Joseba A. Lakarra & Jon Ortiz de Urbina (eds.), *Syntactic theory and Basque syntax*. Supplements of the Anuario del Seminario de Filología Vasca Julio de Urquijo 27. Donostia: Gipuzkoako Foru Aldundia, 309– 342.
- Öztürk, B. (2020). Transitive Unergatives in Pazar Laz. Ms. Boğaziçi University (to appear in *Glossa*).
- Partee, B. H. (1973). Some structural analogies between tenses and pronouns in English. *The Journal of Philosophy*, 70(18), 601-609.
- Pereltsvaig, A. (1999). Cognate objects in Russian: is the notion 'cognate' relevant for syntax? *Canadian Journal of Linguistics* 44:267-291.
- Pereltsvaig, A. (2002). Cognate objects in modern and biblical Hebrew. In *Themes and issues in Arabic and Hebrew*, ed. J. Ouhalla and U. Shlonsky, 1–31. Dordrecht: Kluwer
- Perlmutter, D. M. (1978). Impersonal passives and the Unaccusative Hypothesis" *Proceedings of the 4th Annual Meeting of the Berkeley Linguistics Society*. UC Berkeley. pp. 157–189.
- Plag, I. (1998). The polysemy of -ize derivatives: The role of semantics in word formation. In Geert Booij & Jaap van Marle (eds.), *Yearbook of morphology 1997*, 219–242. Dordrecht: Foris.
- Peterson, D. A. (2007). *Applicative constructions*. Oxford Studies in Typology and Linguistic Theory. Oxford: Oxford University Press.
- Pineda, A. & J. Mateu (eds.). (2020) *Dative constructions in Romance and beyond*. Berlin: Language Science Press.
- Polinsky, M. (2013). Applicative constructions. In Dryer, M. & M. Haspelmath (eds.), *The world atlas of language structures online*. Leipzig: Max Planck Institute for Evolutionary Anthropology.
- Preminger, O. (2012). The absence of an implicit object in unergatives: New and old evidence from Basque. *Lingua*, 122(3), 278-288.
- Pross, T. (2016). Mono-eventive verbs of emission and their bi-eventive nominalizations. In Buy, T. and Özyildiz, D.(eds.): *Proceedings of NELS 45*, pp. 257–266, Amherst, MA. GLSA,

- Pylkkänen, L. (2000). Representing causatives. *Semantics and Linguistic Theory* 10: 132-148.
- Pylkkänen, L. (2008). *Introducing arguments*. Cambridge, MA: MIT Press.
- Ramchand, G. (2008) *Verb Meaning and the Lexicon*. Cambridge University Press.
- Rappaport Hovav, M. & B. Levin. (2000). Classifying Single Argument Verbs. In P. Coopmans, M. Everaert & J. Grimshaw (eds.), *Lexical Specification and Insertion*. Amsterdam/Philadelphia: John Benjamins.
- Rappaport Hovav, M. & B. Levin. (2010). Reflections on Manner/ Result Complementarity, in E. Doron, M. Rappaport Hovav, & I. Sichel, eds., *Syntax, Lexical Semantics, and Event Structure*, Oxford University Press, Oxford, UK:21-38.
- Reinhart, T. (2002). The Theta System: An Overview. *Theoretical Linguistics* 28(3): 229-290
- Rimell, L. D. (2012). *Nominal roots as event predicates in English denominal conversion verbs*. Doctoral dissertation, New York University.
- Rothmayr, A. (2009). *The structure of stative verbs* (Vol. 143). John Benjamins Publishing.
- Rothstein, S. (1999). Fine-grained structure in the eventuality domain: the semantics of predicate adjective phrases and 'be'. *Natural Language Semantics* 7, pp 347-420.
- Rothstein, S. (2004). *Structuring Events: A Study in the Semantics of Lexical Aspect*. Blackwell: Oxford.
- Samvelian, P. (2012) *Grammaire des prédicats complexes, les constructions nom-verbe*. Hermes Science Publications.
- Šanidze, A. (1973). *Kartuli enis gramatikis sapudzvlebi* (Grammar of the Modern Georgian Language), Tbilisi.
- Sapir, E. (1917). Review of C.C. Uhlenbeck 'Het passieve karakter van het verbum transitivum of van het verbum actionis in talen van Noord-America'. *International Journal of American Linguistics* 1: 82-86.
- Schäfer, F. (2008). 'The Syntax of (Anti-)Causatives. External arguments in change-of state contexts.' Amsterdam: John Benjamins.
- Smith, C. S. (1999). Activities: states or events? *Linguistics and philosophy*, 22(5), 479-508.
- Sorace, A. (2000). Gradients in auxiliary selection with intransitive verbs. *Language* 76:859-890.
- Vergnaud, J-R. & Zubizarreta, M.L. (1992). The Definite Determiner and the Inalienable Constructions in French and in English. *Linguistic Inquiry*, 23:595-652.
- Wood, J. (2011). Icelandic *let*-causatives and case. *Working Papers in Scandinavian Syntax*, 87, 1-52.
- Wood, J. (2012) Icelandic Morphosyntax and Argument Structure. Doctoral Dissertation. NYU.lingbuzz/001506
- Wood, J. (2014). Reflexive *-st* verbs in Icelandic. *Natural Language and Linguistic Theory* 32:1387-1425.
- Wood, J., & Marantz, A. (2017). The interpretation of external arguments. *The verbal domain*, 255-278.
- Woolford, E. (2006). Lexical case, inherent case, and argument structure. *Linguistic Inquiry* 37:111-130.
- Zucchi S. (1998). Aspect Shift. In: Rothstein S. (ed.) *Events and Grammar*. Studies in Linguistics and Philosophy, vol 70. Springer, Dordrecht.