

# How Georgian is (not) like Basque: a comparative case study of split-S languages

James Baker, University of Cambridge

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## 1 Introduction

### 1.1 Split-S languages

**Split-S:**<sup>1</sup> morphosyntactic alignment where different intransitive predicates occur with different case/agreement/(word order):

(1) Central Pomo (Pomoan, California):

a. ʔa• q<sup>h</sup>adé•čʔ.

I.AGT fight

‘I fight.’

b. t<sub>ɹ</sub>o• ló•ya.

I.PAT fell

‘I fell.’

(Mithun 1991: 518–9)

In different split-S languages, the split amongst intransitive predicates is sensitive to different (predominantly semantic) factors (Mithun 1991, Donohue and Wichmann 2008, Baker in preparation, a.o.), for example:

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<sup>1</sup>Also known as ‘split intransitive’, ‘semantically aligned’, ‘active(-stative)’, ‘agentive-patientive’ etc. I here take ‘fluid-S’ as a subset of split-S (cf. Dixon 1994)—see Baker in preparation for discussion.

- [ $\pm$ volition]: Eastern Pomo, Tabassaran, ~Tsova-Tush ... ('fluid-S' languages);
- [ $\pm$ initiation]: Lakhota?, Acehnese?;
- [ $\pm$ state]: Galela, Loma, Guaraní? ('active-stative' languages<sup>2</sup>);
- more than one factor, e.g.
  - Central Pomo: [ $\pm$ volition], [ $\pm$ state], [ $\pm$ affected] ...;
  - Tibetan: [ $\pm$ volition], [ $\pm$ focus]?
  - ...

Here: focus on two relatively similar split-S languages, Basque and Georgian.

## 1.2 The Split Intransitivity Hierarchy

Starting point for analysis is Sorace's (2000 *et seq.*) *Split Intransitivity Hierarchy* (aka Auxiliary Selection Hierarchy) (SIH):<sup>3</sup>

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Change of location	<i>come, arrive, leave, fall ...</i>
Change of state	<i>become, decay, die, be born, grow ...</i>
State	<i>stay, last, survive, persist, be, sit, be useful ...</i>
Uncontrolled process	<i>tremble, catch on, skid, cough, rumble, rain ...</i>
Controlled process (motional)	<i>swim, run, walk ...</i>
Controlled process (non-motional)	<i>work, play, talk ...</i>

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Table 1: The Split Intransitivity Hierarchy (after Sorace 2000)

SIH:

- divides intransitive verbs into semantic categories.

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<sup>2</sup>But note that some authors use the 'active' or 'active-stative' labels to refer to other sorts of split-S languages too, e.g. Harris (1981), Baker and Bobaljik (2017).

<sup>3</sup>Sorace distinguishes two separate 'state' classes: 'continuation of (pre-existing) state' and 'existence of state'. I have not found this distinction to be useful for Basque or Georgian and consider both classes together here.

- Verbs in categories nearer the **top** of the hierarchy most likely to show ‘**unaccusative**’ behaviours (e.g. perfect auxiliary BE—see (2a));
- verbs in categories nearer the **bottom** of the hierarchy most likely to show ‘**unergative**’ behaviours (e.g. perfect auxiliary HAVE—see (2b));
- intermediate categories likely to show mixed behaviour / speakers give intermediate judgements of grammaticality.
- ‘Cut-off point’ between unergative and unaccusative behaviours varies between languages (/diagnostics—Baker submitted) (see table 2).

(2) French:

- a. *Lucie **est** arrivée.*  
 Lucie **is** arrived  
 ‘Lucie has arrived.’
- b. *Lucie **a** joué.*  
 Lucie **has** played  
 ‘Lucie has played.’

	English	French	Dutch	German	Italian
Change of location	(BE)/HAVE	<b>BE</b>	<b>BE</b>	<b>BE</b>	<b>BE</b>
Change of state	HAVE	BE/HAVE	BE/(HAVE)	<b>BE</b>	BE/(HAVE)
Continuation of state	HAVE	HAVE	BE/HAVE	BE/HAVE	BE/(HAVE)
Existence of state	HAVE	HAVE	(BE)/HAVE	(BE)/HAVE	BE/(HAVE)
Uncontrolled process	HAVE	HAVE	HAVE	HAVE	(BE)/HAVE
Controlled pr. (mot.)	HAVE	(BE?)/HAVE	BE/HAVE	BE/HAVE	(BE)/HAVE
Controlled pr. (non-mot.)	HAVE	HAVE	HAVE	HAVE	(BE)/HAVE

Table 2: Auxiliary selection in Western European languages (after Sorace 2000)

*Split-S case/agreement systems do not always show particular sensitivity to the SIH* (Baker 2013):

- In particular, simple splits sensitive to  $[\pm\text{volition}]$ ,  $[\pm\text{initiation}]$  or  $[\pm\text{state}]$  do not line up neatly with the hierarchy (see table 3).

	Tsova-Tush [ $\pm\text{volition}$ ]	Lakhota [ $\pm\text{initiation}$ ]	Guaraní [ $\pm\text{state}$ ]
Change of location	<i>Mixed</i>	<i>Mixed</i>	Agentive
Change of state	<b>Patientive</b>	<b>Patientive</b>	Agentive
State	<i>Mixed</i>	<i>Mixed</i>	<b>Patientive</b>
Uncontrolled process	<b>Patientive</b>	Agentive	Agentive
Controlled process	Agentive	Agentive	Agentive

Table 3: Summary of dominant case/agreement patterns in 3 split-S languages (after Baker 2013)

- *But* some systems do line up (more-or-less): Basque, Georgian, (Chol<sup>4</sup>) ...

### 1.3 Outline of rest of talk

- The semantic basis of split intransitive case in:
  - Basque (§2),
  - Georgian (§2);
- Comparison between Basque and Georgian and a theoretical analysis (§4);
- Conclusion (§5).

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<sup>4</sup>See Baker (in preparation).

## 2 Basque

Basque intransitives ordinarily exhibit a split intransitive case pattern (split intransitivity also seen in agreement and auxiliary selection):<sup>5</sup>

- (3) a. *Gizon-a-k    exte-a-∅    saldu du.*  
 man-DEF-**ERG** house-DEF-**ABS** sold has.  
 ‘The man has sold the house.’
- b. *Gizon-a-k    ikasi    du.*  
 man-DEF-**ERG** studied has.  
 ‘The man has studied.’
- c. *Gizon-a-∅    hil    da.*  
 man-DEF-**ABS** died is.  
 ‘The man has died.’

Prediction after Sorace (2000): verbs in categories towards the top of the SIH will tend to take absolutive subjects, those towards the bottom ergative ones.

Also note:

- Split-S patterns are most apparent in Western Basque, the focus here.
- Very many ‘semantically intransitive’ Basque sentences are formed with a light verb *egin* plus a noun-like constituent, e.g.:

- (4) *Gizon-a-k    lan    egin du.*  
 man-DEF-**ERG** work do has.  
 ‘The man has worked.’

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<sup>5</sup>Baker and Bobaljik (2017) claim that split-S case systems do not exist, and therefore Basque does not possess one. I am not convinced by their alternative analysis of Basque, but in any case it does not affect the descriptive analysis of which intransitive/‘intransitive’ verbs occur with which case, and it may be possible to reconcile B&B’s approach with the formal analysis to follow in section 4.

- I leave these aside here (*egin* compounds are generally ‘processes’ in Sorace’s sense, i.e. fairly prototypical ‘unergatives’) and focus on simple verb forms.

Methodology: data drawn from various books and articles (de Rijk 2008, Alberdi 2003, Etxepare 2011, Aldai 2009) and supplemented/confirmed by online surveys (see Baker in preparation).<sup>6</sup>

## 2.1 Change of location verbs

Change of location verbs<sup>7</sup> are uniformly associated with absolutive marking in Basque:

- e.g. *joan* ‘to go’, *etorri* ‘to come’, *iritsi* ‘to arrive’, *erori* ‘to fall’ ...

## 2.2 Change of state verbs

Likewise, these are nearly all associated with absolutive marking:

- e.g. *jaiio* ‘to be born’, *hil* ‘to die’, *desagertu* ‘to disappear’, *erre* ‘to burn’, *hautsi* ‘to break’ ...

Exceptions:<sup>8</sup>

- *irakin* and *irakitu* (both) ‘to boil’: generally reported as ergative-marking (though my respondents were fairly accepting of absolutive with *irakin*<sup>9</sup>);
- *aldatu* ‘to change’, *eboluzionatu* ‘to evolve’:

<sup>6</sup>This is not of course the first attempt to characterise the split intransitivity patterns in Basque; other than the references just cited, audience members are referred to Levin (1983) and Berro Urrizelki (2010), amongst many other works.

<sup>7</sup>Sorace (2000) draws a distinction, maintained here, between ‘change of location’ verbs (directed motion verbs like ‘go’, ‘come’, ‘arrive’, ‘fall’) and ‘controlled motional processes’ (manner of motion verbs like ‘walk’, ‘run’, ‘swim’). The extent to which individual languages treat these distinctly varies: they are fairly distinct in Basque, but not in Georgian, as we shall see.

<sup>8</sup>Throughout this talk, in giving exceptions to general patterns I do mean to imply that there may not be other exceptions beyond those I have included, though I have tried to include most of those of which I am aware.

<sup>9</sup>I did not test *irakitu*.

- ‘occasionally heard with [ergative] subjects in Western Basque’ (Aldai 2009: 792).
- My respondents: *aldatu* accepted strongly with absolutive, middling acceptability with ergative; opposite pattern with *eboluzionatu*.

### 2.3 State verbs

These show much more mixed behaviour. Some occur with absolutive marking, others with ergative marking:

- Absolutive: *geratu* ‘to remain’, *izan* ‘to be’, *aritu* ‘to be occupied’, *antsiatu* ‘to worry’, *soberatu* ‘to be left over, to be too much’ ...
- Ergative: *iraun* ‘to last, to stand’, *irakin* ‘to endure’, *jardun* ‘to be busy’ ...
- Either: *deskantsatu* ‘to rest’ (according to Alberdi 2003: 34; but my respondents strongly prefer the ergative with this verb).

There is no obvious overall semantic regularity behind this patterning.

### 2.4 Emission verbs

Not one of Sorace’s categories but worth specific discussion.<sup>10</sup>

Verbs of light and sound emission are exclusively associated with ergative marking in Basque (e.g. *erauntsi* ‘to rumble’, *argitu* ‘to shine’, *dirdiratu* ‘to shine’).

### 2.5 Uncontrolled processes

Variable: ergative preferred in some cases (e.g. with *dardaratu* ‘to tremble’<sup>11</sup>), absolutive in others (e.g. with *ikaratu* ‘to tremble with fear’, *irristatu* ‘to skid’).

<sup>10</sup>Not least because these verbs show interesting differences between Georgian and Basque. But their behaviour with regard to split intransitivity diagnostics is also interesting in other languages: see Levin and Rappaport-Hovav (1995) and Baker submitted in relation to English, amongst other work.

<sup>11</sup>My respondents did not however judge this verb particularly acceptable with either case; cf. fn. 12.

## 2.6 Controlled processes: motional

Some verbs reported to allow both cases to some extent:<sup>12</sup>

- *saltatu* ‘to jump’, *nabigatu* ‘to sail, navigate’, *paseatu* ‘to go for a walk or ride’ and *dantzatu* ‘to dance’ (Alberdi 2003: 34);
- *jauzi* ‘to jump’ (de Rijk 2008).

My informants however had an (often quite strong) preference for the ergative with all of these with the exception of *jauzi*, where the absolutive was very slightly preferred.

- The ergative was also preferred with *igerikatu* ‘to swim’, *korritu* ‘to run’ and *bidaiatu* ‘to travel’.
- Summary: absolutive may be possible with (some of) these verbs, but this is marginal—ergative is preferred.

However the absolutive is strongly preferred with *ibili* ‘to move about, to walk’ and *irristatu* ‘to skid’.

- *ibili* is probably best seen as a change of location verb.
- *irristatu* is an uncontrolled process (a class where absolutive marking is also found with other verbs).

## 2.7 Controlled processes: non-motional

These generally occur with ergative marking: e.g. *ikasi* ‘to study’, *bazkaldu* ‘to have lunch’ ...

Exceptions:

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<sup>12</sup>Several verbs in the controlled process class—both motional and non-motional—were not particularly well accepted by my speakers with either case; this is likely because *egin* constructions (see above) are the preferred way of expressing processes. However, it is generally still possible to discern a preference for one case or the other.



- Inherently reflexive verbs: e.g. *ezkondu* ‘to get married’, *dutxatu* ‘to shower’—take absolutive.
- *mintzatu* ‘to speak, to talk’—takes absolutive.
- *jolastu* ‘to play’, *borrokatu* ‘to fight’ and *gudukatu* ‘to wage war’:
  - variable case marking according to Etxepare (2003: 390).
  - my informants preferred ergative, but were relatively accepting of absolutive.
- *trabailatu* ‘to work’:
  - absolutive-marking according to Alberdi (2003: 41),
  - but my informants definitely prefer ergative.

Proposal (elaborated in Baker in preparation): absolutive-marking non-motional processes are grammaticalised as reflexive—note how most may have a reciprocal sense.

## 2.8 Summary

- **Absolutive** is found with all change of location verbs, all emission verbs, almost all change of state verbs and many state and uncontrolled process verbs, all inherently reflexive verbs and marginally with motional process verbs.
- **Ergative** is found with most controlled process verbs and some state and uncontrolled process verbs.

Thus the correspondence with the SIH is good:

- Categories at the top of the hierarchy (change of location, change of state)—absolutive subjects;
- Categories at the bottom of the hierarchy (controlled processes: motional and non-motional)—usually ergative subjects;

- Intermediate categories: variation between absolutive and ergative.

### 3 Georgian

Georgian has split-S case marking<sup>13</sup> with verbs in ‘Series II’ (aorist and optative):<sup>14</sup>

(5) a. *Glex-ma datesa simindi-Ø*.

farmer-**ERG** he.sowed.it corn.**NOM**

‘The farmer sowed corn.’

b. *Nino-m daamtknara*.

Nino-**ERG** she.yawned

‘Nino yawned.’

c. *Rezo-Ø gamoizarda*.

Rezo.**ABS** he.grew.up

‘Rezo grew up.’

(Harris 1981: 40, 147; Harris 1982: 293)

Same prediction as for Basque: verbs in categories towards the top of the SIH will tend to take absolutive subjects, those towards the bottom ergative ones.

Methodology:

- Main source: Rayfield et al. (2006), a comprehensive Georgian-English dictionary in two volumes, totalling 1700 pages.
- About 10% of the total dictionary sampled, at various points within.
- Several verbs of particular interest outside of that sample also checked.<sup>15</sup>

<sup>13</sup>Hewitt (1983 *et seq.*) disputes Harris’s (1981) categorisation of Georgian as ‘active’, arguing it is, in fact, ergative. Whilst it is certainly not ‘active’ in a narrow sense, it can still be classed as such in a wider sense equivalent to that for which I used the ‘split-S’ label. Compare also my comments on Baker & Bobaljik’s (2017) discussion of Basque in 5; much the same holds of Georgian.

<sup>14</sup>From here on in, all references to case assignment should be understood to be in reference to Series II only.

<sup>15</sup>Previous attempts to classify split intransitive case alignment in Georgian in semantic terms include Holisky’s (1981) analysis in terms of telicity/stativity and Cherchi’s (1997) analysis in terms of aspectual and agentive oppositions. Neither analysis seems to be fully adequate.

### 3.1 Change of location verbs

To be covered later ...

### 3.2 Change of state verbs

Almost all absolutive-marking (as in Basque):

- e.g. *audghabebs* ‘to boil’<sup>16</sup>, *davshvdeba* ‘to become childish’, *kvdeba* ‘to die’, *dalp’eba* ‘to rot, to go foul’.
- Exception: *mat’ulobs* ‘to increase, gain, grow, strengthen’.

### 3.3 State verbs

Predominantly ergative marking, but not consistently.

- Ergative found with e.g. *arleboba* ‘to exist’, *tskhovreba* ‘to exist, live, be alive’, *vaivaglakhoba* ‘to have a wretched life’, *banadrebs* ‘to reside’.
- Some verbs allow *either* ergative and absolutive:
  - One group: ergative  $\Rightarrow$  stative meaning, absolutive  $\Rightarrow$  change of state meaning.
    - \* e.g. *avgulobs*: ‘to act malicious’ with ergative, ‘to turn malicious’ with absolutive.
  - Another group: both ergative and absolutive found with stative meaning.
    - \* e.g. *baiq’ushoba*: ‘to be wretched, sullen, unsociable’ with either case.
- *darchena* ‘to stay, to remain’ occurs only with absolutive.

Summary: mixed behaviour, like Basque, but with a stronger bias toward ergative.

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<sup>16</sup>Cf. ergative on Basque *irakin* ‘to boil’.

### 3.4 Emission verbs

Verbs of sound emission occur with ergative subjects in Georgian, as in Basque.

Verbs of light emission, however, are more variable:

- Ergative marking: *kashkashebs* ‘to shine brightly’;
- Absolutive marking: *brts’q’inavs* ‘to shine, glitter’, *brch’q’vialebs* ‘to glitter, shine, sparkle’, *gap’rialebs* ‘to be burnished, sparkle’ ...

### 3.5 Uncontrolled processes

Both ergative and absolutive:

- Ergative: *bagbagebs* ‘to shiver’ (dialectal), *daamtknarebs* ‘to yawn’, *tsiris* ‘to cry’.<sup>17</sup>
- Either ergative or absolutive: *bobokrobs* ‘to rage, to storm’ (of sea) and *kamkali* ‘to shiver, to shake’.
- Absolutive: *gagrialteba* ‘to rattle, rumble along’, *tsurdeba* ‘to skid, slide, lose one’s footing’ (note motional meaning).

### 3.6 Controlled processes: non-motional

Always or almost always take ergative subjects:

- *mushaobs* ‘to work’;
- *tamashobs* ‘to play’;
- *baashobs* ‘to converse’ and other verbs of talking (cf. absolutive with Basque *mintzatu* ‘to talk’);
- *banaobs* ‘to bathe’:

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<sup>17</sup>Holisky 1981, however, classifies *tsiris* as absolutive-marking.

- note possible ‘inherent reflexive’ sense here, and cf. absolutive marking with Basque reflexives. Inherent reflexive verbs which express a change take absolutive marking in Georgian, however;
- Georgian reflexives are ordinarily formed with an overt reflexive pronoun and an ergative subject:<sup>18</sup>

(6) *Elene-m tavis-i tav-i sheako.*

Elene-ERG her.REFL-ABS self-ERG praised.

‘Elene praised herself.’

(Amiridze 2006: 162)

### 3.7 Motion verbs

Georgian does not seem to distinguish ‘change of location’ and ‘controlled motional process’ (directed motion / manner of motion) verbs in terms of their case-marking behaviour. Verbs in *both* classes occur with *both* cases. For example:

- Directed motion verbs:
  - Ergative: *aivlis* ‘to go up’;
  - Absolutive: *ts’ava* ‘to go (away, off)’, *vardeba* ‘to fall’.
- Manner of motion verbs:
  - Ergative: *tsuravs* ‘to swim’;
  - Absolutive: *gagodeba* ‘to walk with a light tripping step’.

Many motion verbs have both direction and manner components to their semantics; this subclass is also variable in terms of its case marking behaviour, for example:

- Ergative: *aabajeb*s ‘to step upwards’;

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<sup>18</sup>Basque also has a similar reflexivisation strategy, in addition to the strategy of reflexives marked only by the use of an intransitive formation with an absolutive subject, with no overt reflexive element.

- Absolutive: *aask'debs* 'to rush off up'.

Volition and directedness seem to play some role in which motion verbs take subjects in which case, but the case-marking behaviours of these verbs are not wholly predictable from these (or any other?) properties.

### 3.8 Summary

For intransitive subjects in Georgian Series II:

- **Absolutive** is found with almost all change of state verbs, many motion verbs, some emission verbs, and some others.
- **Ergative** is found with non-motional controlled process verbs and many motion verbs and emission verbs, and preferred with state verbs and non-motional uncontrolled processes.

Fairly good correspondence with the SIH (though not to the same extent as Basque):

- Change of state, near the top of the hierarchy—absolutive subjects;
- Controlled non-motional processes, at the bottom of the hierarchy—ergative subjects;
- Intermediate categories (states, uncontrolled processes, controlled motional processes)—either absolutive or ergative subjects.
- **But** the more mixed behaviour of change of location verbs is not as predicted.

## 4 Comparison

### 4.1 Similarities and differences between Basque and Georgian

	Basque	Georgian
Change of location	<b>Absolutive</b>	<i>Mixed</i>
Change of state	<b>Absolutive</b>	<b>Absolutive</b>
State	<i>Mixed</i>	<i>Mixed: ergative preferred</i>
Uncontrolled process	<i>Mixed</i>	<i>Mixed</i>
Controlled process: motional	Ergative (mostly)	<i>Mixed</i>
Controlled process: non-motional	Ergative (mostly)	Ergative

Table 4: Summary of case marking with intransitives in Basque and Georgian

Similarities between the two languages:

- change of state verbs ('die', 'break') are almost all absolutive-marking;
- non-motional controlled processes ('work', 'play') are generally ergative-marking;
- sound emission verbs ('rumble') are always ergative-marking;
- state verbs ('exist', 'stay') and uncontrolled processes ('tremble', 'skid') show mixed behaviour.

Differences:

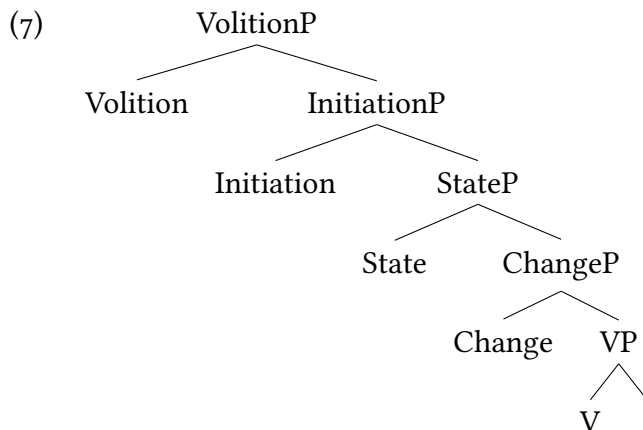
- Basque makes a fairly clear distinction between change of location verbs ('go', 'fall'; absolutive-marking) and controlled motional processes ('swim', 'run'; generally ergative marking)—whereas Georgian does not make this distinction, though some motion verbs nevertheless appear with either case;



- within the mixed categories, it is not clear that the two languages divide verbs up in the same ways;<sup>19</sup>
- inherently reflexive forms are absolutive-marking in Basque, but not necessarily in Georgian;
- light emission verbs ('shine', 'sparkle') are ergative-marking in Basque, but not always in Georgian.

## 4.2 The TFH and similarities between the languages

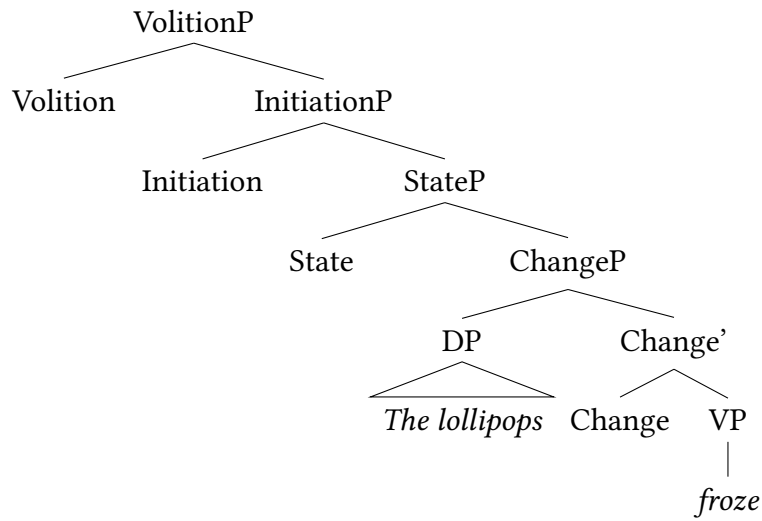
Mechanism of explanation: the Thematic Functional Hierarchy (TFH; Baker submitted, Baker in preparation; cf. Ramchand 2008):



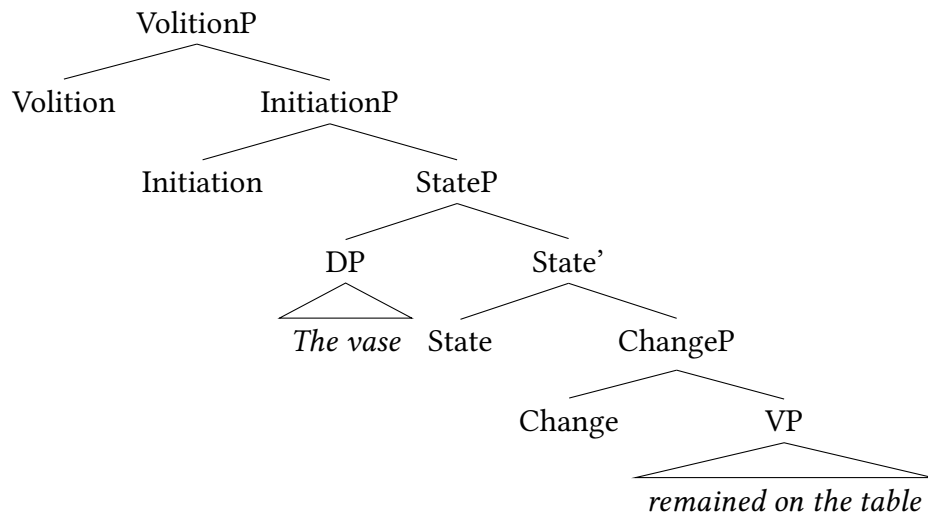
- a hierarchy of functional heads corresponding to the traditional vP;
- different arguments are merged in different positions in the hierarchy, e.g. (English examples):

<sup>19</sup>This is complicated by issues of uncertain translational equivalency, particularly when Basque speakers only use *egin* forms and there is no simple equivalent to the Georgian.

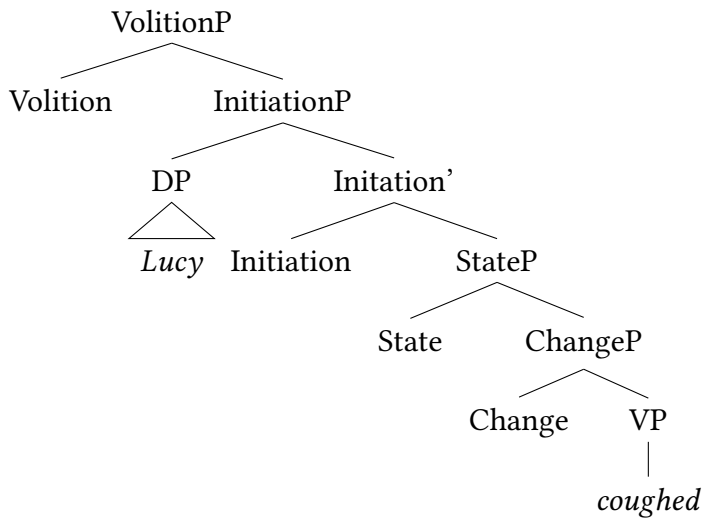
- (8) *The lollipops froze.* [-volition, -initiation, -state, +change]



- (9) *The vase remained on the table.* [-volition, -initiation, +state, -change]

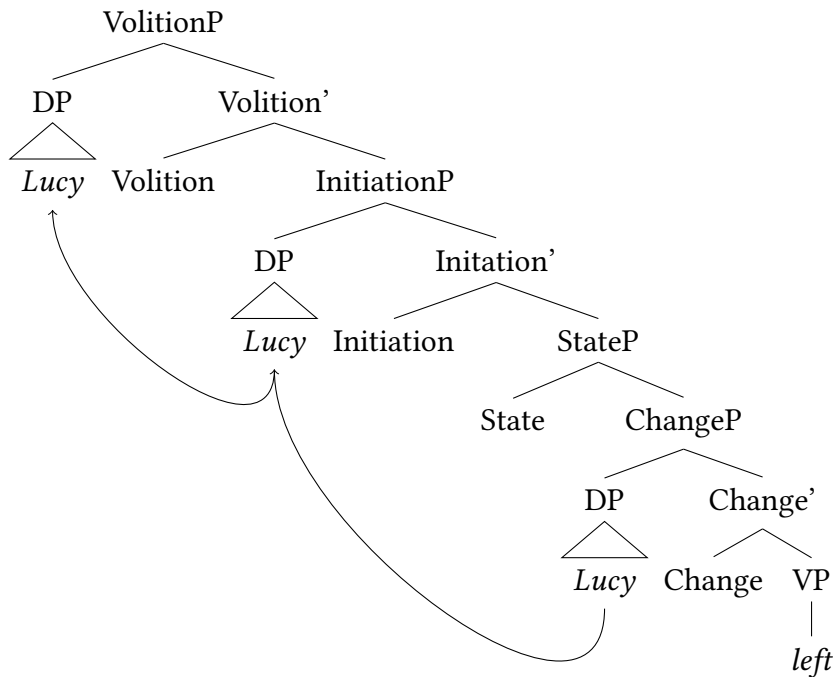


- (10) *Lucy coughed*. [-volition, +initiation, -state, -change]



Arguments can be merged in multiple positions in the hierarchy, e.g.

- (11) *Lucy left (on purpose)*. [+volition, +initiation, -state, +change]



Heads/features and their ordering correspond to Sorace's SIH (table 4.2, simplified and inverted).

	volition	initiation	state	change
Controlled process	+	+	-	
Uncontrolled process	-	+	-	
State			+	-
Change of location/state			-	+

Table 5: The SIH and the TFH

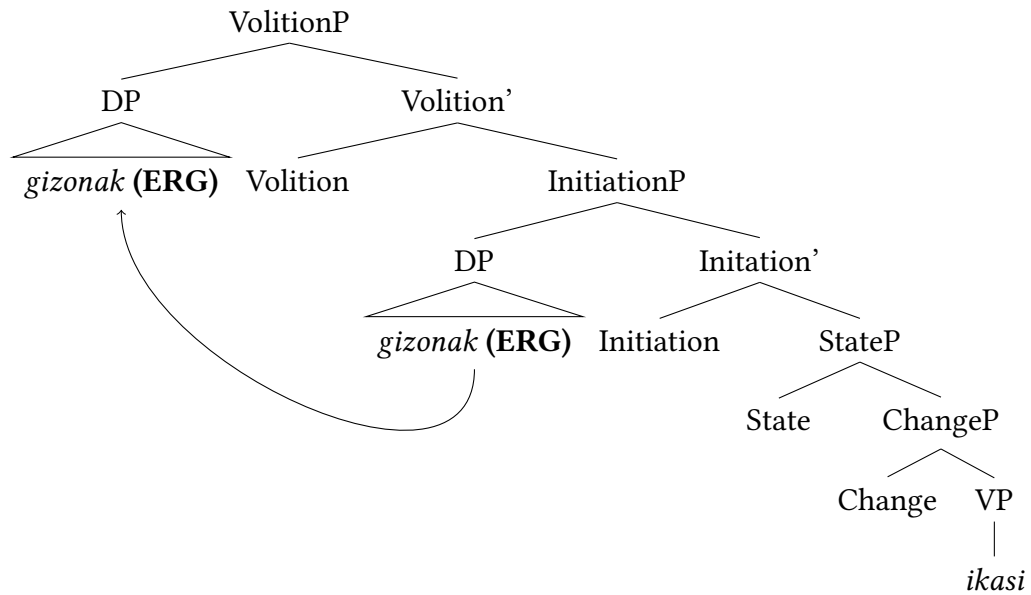
The TFH can thus be used to (partially) derive various behaviours which correspond to the SIH (see Baker submitted for discussion of English, Baker in preparation for various other languages).

Specifically in Basque/Georgian—**correspondences to the SIH arise from the levels at which cases are assigned**.<sup>20</sup>

- In certain positions a certain case is always assigned (except possibly for a very few lexical exceptions):
  - Controlled processes: arguments merged in both Spec,VolitionP and Spec, InitiationP (but no lower) receive **ergative** case;

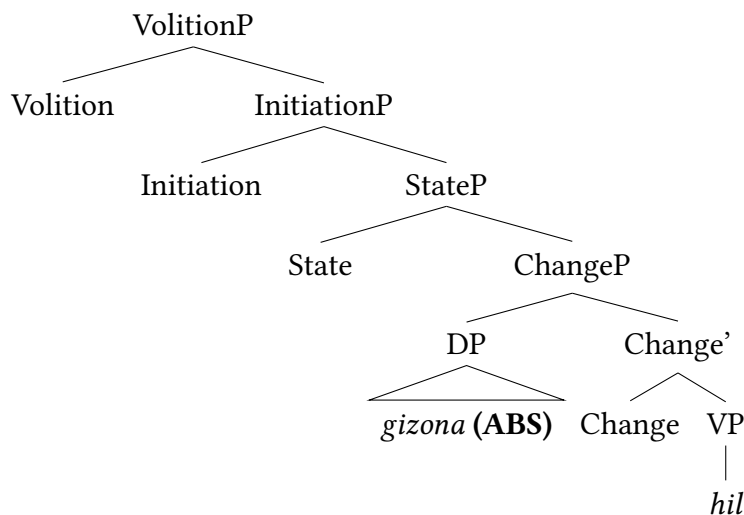
<sup>20</sup>I leave aside the precise manner of case assignment in the present discussion; see Baker in preparation for discussion. Certain recent analyses of Basque and Georgian (Baker and Bobaljik (2017), Nash (2017)) have posited covert arguments in ergative-assigning ‘intransitives’ (though cf. Preminger (2012)); this approach may not be incompatible with the TFH approach adopted here although some alterations will be required. Unlike Nash (2017), I do not attempt to account for the TAM-based alignment splits in Georgian, though this would also need to be addressed in a complete theory. Audience members may also be interested in the somewhat different analyses of Basque given in Berro (2010, 2012 and other work), which I do not attempt to engage with here.

(12) *Gizonak ikasi du.* ‘The man studied’



- Change of state: arguments merged in Spec,ChangeP receive **absolutive** case.

(13) *Gizona hil da.* ‘The man died.’

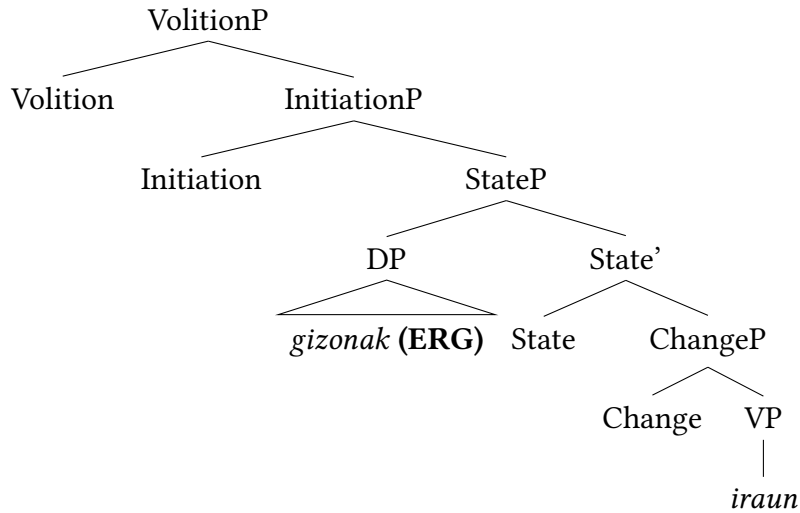


- In other positions the case assigned is **lexically determined**—ergative with some verbs, absolutive with others:

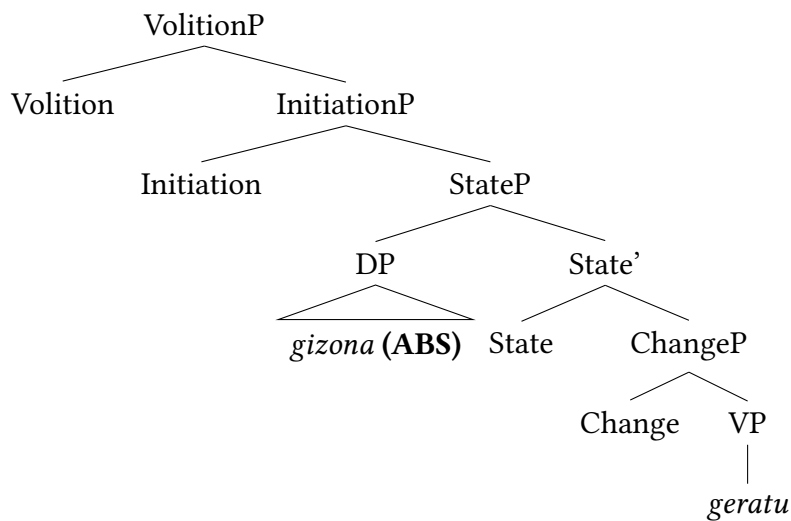
- Uncontrolled processes: arguments merged in Spec,InitiationP but *not* Spec, VolitionP, and not merged lower.

– State verbs: arguments merged in Spec,StateP.

(14) *Gizonak iraun du.* ‘The man lasted.’



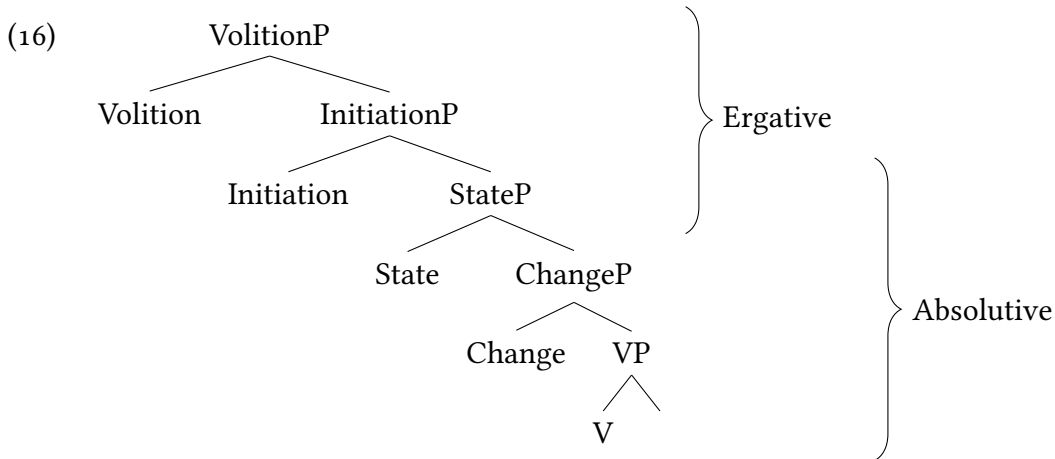
(15) *Gizona geratu da.* ‘The man remained.’



To summarise:

- arguments merged *highest* in the tree (arguments of controlled process) receive ergative case;
- arguments merged *lowest* in the tree (arguments of change verbs) receive absolutive case;

- arguments merged in intermediate positions receive either case (lexically determined).



This derives:

- most of the similarities between the two languages;
- their conformity to the SIH:
  - ergative/absolutive, like other split intransitive phenomena, are (somewhat) constrained by the structural positions encoded in the TFH;
- one of the differences between the languages, lexical differences in the uncontrolled process / state categories:
  - it is for these categories that case assignment is lexically determined in both languages, so lexical variation between the languages is expected.

### 4.3 Explanations for remaining differences

The remaining differences can be seen to come about because different languages grammaticalise certain sorts of verbs in different ways.

**(I) Basque grammaticalises inherent reflexive verbs as absolutive-marking; Georgian doesn't**

- Different languages are known to treat reflexives in different ways: e.g. French treats them as 'unaccusative' with regard to auxiliary selection (auxiliary BE) whereas German treats them as 'unergative' (auxiliary HAVE):

(17) French:

*Je me suis lavé.*

I myself am washed

'I washed.'

(18) German:

*Ich habe mich gewaschen.*

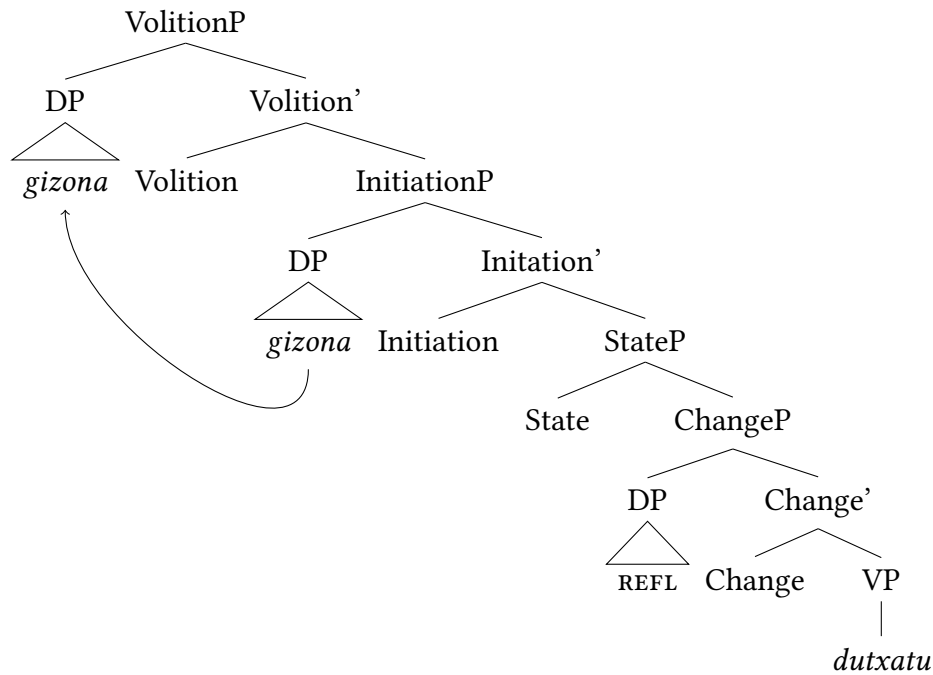
I have myself washed

'I washed.'

- Basque seems to be of the 'unaccusative reflexive' type.
  - One possible analysis: a null reflexive pronoun is merged in a low position (e.g. Spec,ChangeP) where it receives absolutive case; as it is co-indexed with the subject, that argument is also marked absolutive.



(19) *Gizona dutxatu da.* ‘The man showered.’



– Georgian handles things differently:

- \* ‘inherent reflexives’ lack any sort of syntactic reflexive element;
- \* overt reflexive pronouns (as in (6) above) receive absolutive case but this is not transferred to the subject.

**(II) Motion verbs and emission verbs are associated with different formal features in different languages**

• Motion verbs:

- The syntactic features [ $\pm$ change], [ $\pm$ state], [ $\pm$ initiation] bear a strong but inexact relation to semantics.
- [+change], for example, is almost always grammaticalised with change of state verbs, as these express prototypical changes (e.g. freezing, breaking, dying). But verbs expressing change of location and (especially) manner of motion are less prototypical changes:

(20) **Change prototypicality hierarchy:** change of state > change of location > manner of motion > others

- [+change] is progressively less likely to be grammaticalised with verbs further toward the right of this prototypicality hierarchy.
- Whether grammaticalisation of [+change] happens or not with (all or some) verbs in each of the categories varies between languages.

\* Basque:

- change of state, change of location: [+change]
- manner of motion: sometimes [+change] (hence absolutive marking with motional processes sometimes), but usually [–change]
- other verbs: [–change]

\* Georgian:

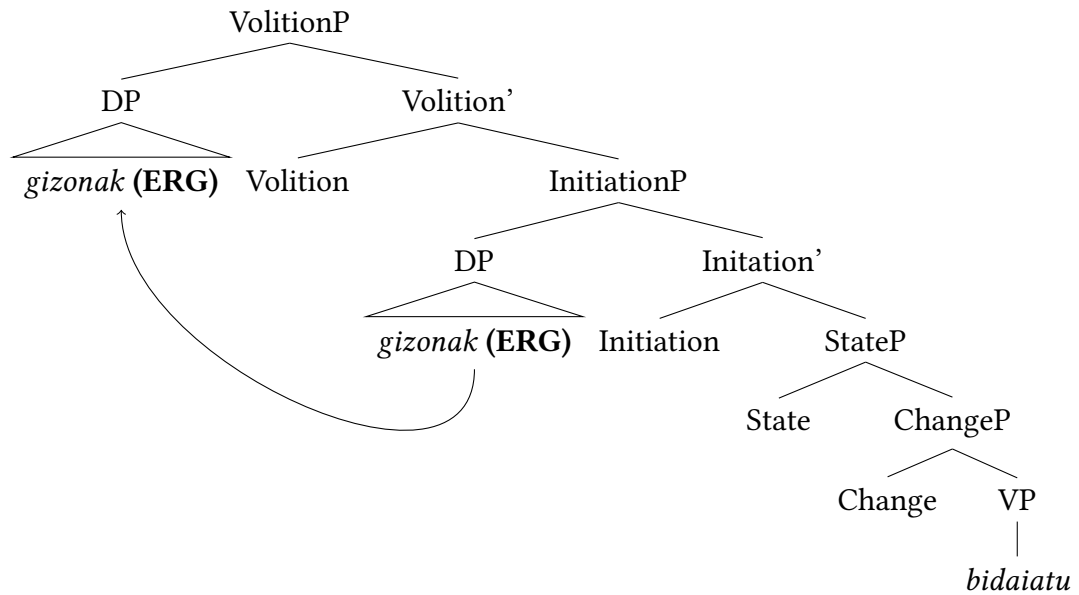
- change of state: [+change]
- change of location, manner of motion: sometimes [+change], sometimes [–change]
- other verbs: [–change]

	Basque	Georgian
Change of state	[+change]	[+change]
Change of location	[+change]	[+change] <i>or</i> [–change]
Manner of motion	[–change] (mostly)	[+change] <i>or</i> [–change]
Other verbs	[–change]	[–change]

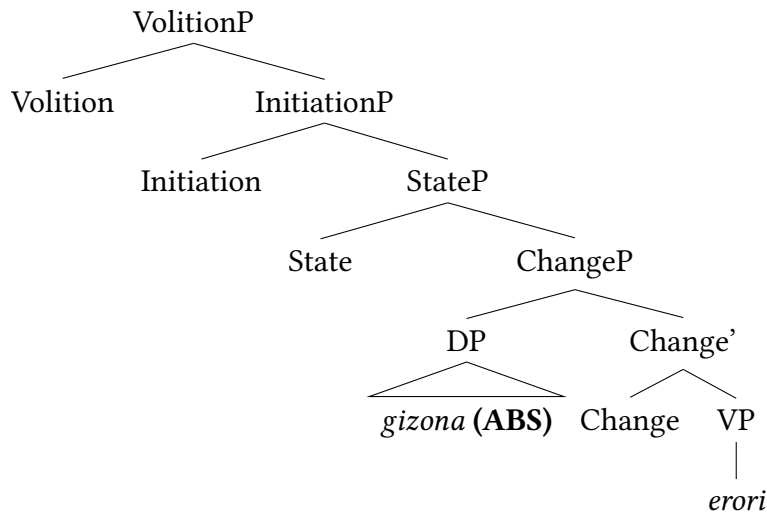
Table 6: Grammaticalisation of [ $\pm$ change] in Basque and Georgian

- \* Motion verbs grammaticalised as [+change] get absolutive arguments, but where these verbs are grammaticalised as [–change] the argument is first-merged higher (in Spec,InitiationP) and gets absolutive.

(21) *Gizonak bidaiatu du.* ‘The man travelled.’ [-change]



(22) *Gizona erori da.* ‘The man fell.’ [+change]



- Emission verbs:

(23) **Initiation prototypicality hierarchy:** external causer > internal causer > non-causer

- Externally-caused verbs (e.g. controlled processes) *are* prototypically initiated and so are almost always grammaticalised as [+initiation];

- Emission verbs are internally caused and hence less prototypically initiated; languages vary in how these are grammaticalised:
  - \* Basque: all emission verbs are [+initiation];
  - \* Georgian: sound emission verbs are [+initiation], but light emission verbs are often [–initiation].<sup>21</sup>
- Arguments of emission verbs grammaticalised as [+initiation] get ergative case; those grammaticalised as [–initiation] are merged lower and so do not.

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<sup>21</sup>Sound emission verbs are more likely to have animate subjects, which are more prototypical initiators, which may explain this discrepancy.

## 5 Conclusions

- There are both *similarities* and *differences* between Basque and Georgian in terms of their case-marking properties. Both languages show good correspondence with Sorace's (2000) Split Intransitivity Hierarchy.
- The *similarities* can largely be explained in terms of a hierarchy of argument-introducing heads encoding the features [ $\pm$ volition], [ $\pm$ initiation], [ $\pm$ state] and [ $\pm$ change], where the distribution of ergative and absolutive case is connected to different positions on the hierarchy.
- The *differences* can largely be explained in terms of differences in the ways in which languages encode particular semantic concepts.
  - In particular, verbs which deviate from the prototypes of change and initiation are less likely to be grammaticalised as [+change] or [+initiation].

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