

A unified analysis of passives, anticausatives and reflexives

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1 Introduction

It is well-known that, across languages, the anticausative alternant of an alternating pair systematically involves morphological marking that is shared by passive and/or reflexive predicates. For instance, in Albanian, similar to Latin and Modern Greek (MG), both the sentence in (1a) containing an anticausative and the sentence in (1b) containing a passive are rendered homomorphously as in (2).¹

- (1) a. The vase broke.
b. The vase was broken.
- (2) Vazoja *(u) thye.
vase.NOM NACT broke.AOR.3S
(i) 'The vase broke.'
(ii) 'The vase was broken.'² (Albanian)

While both anticausatives and passives arguably lack an external argument (Marantz 1984), only the latter, but not the former, sanction *by*-phrases identifying the so-called

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¹The following abbreviations are used in the glosses in the examples: ACC (for accusative case), ACT (for active voice), AOR (for aorist), CL (for clitic), DAT (for dative case), IMP (for imperfective), NACT (for non-active voice), NOM (for nominative case), P (for past tense), PR (for present tense), S (for singular).

²In Albanian the non-active paradigm is built by employing three distinct linguistic means with a well-defined distribution, as described in (i) (adapted from Trommer (2005)):

- (i) If the clause contains perfect tense:
express Non-active by choice of the auxiliary
Else: If the clause contains Tense (Present or Imperfect) but not Admirative:
express Non-active by an inflectional affix
Else: express Non-active by a reflexive clitic

logical subject, and can combine with purpose clauses and agent-oriented adverbs, as shown in (3) through (5).

- (3) a. The window was broken by Pat / the earthquake.
 b. *The window broke by Pat / the earthquake.
- (4) a. The boat was sunk to collect the insurance.
 b. *The boat sank to collect the insurance. (Roeper, 1987, 268)
- (5) a. The ship was sunk deliberately.
 b. *The ship sank deliberately.

Depending on the theory, these facts have been taken to show that the external argument in the passive is still expressed in the syntax, albeit in an alternative manner (Baker et al. (1989), Emonds (2000)), or that the syntactically suppressed argument of a passive verb is present in argument structure (Roeper 1987, Grimshaw 1990), that is, that passives have an implicit argument. In contrast, the fact that anticausatives cannot combine with *by*-phrases, purpose clauses, or agent-oriented adverbs (Manzini (1983), Roeper 1987) is taken as evidence that the suppression of the external cause takes place in the mapping from the lexical semantic representation to argument structure (Levin and Rappaport Hovav (1995)). In other words, in spite of differences of opinions concerning the proper treatment of passives, the consensual view has been that anticausatives are lexically reduced (see also Chierchia (1989, 2004) and Reinhart (1996)).

In this paper, I examine certain properties of passives and anticausatives that to the best of my knowledge have hitherto not been discussed systematically in the literature, and the ensuing ramifications for a universal theory of these constructions. Specifically, I challenge the view that passives and anticausatives are formed in different modules of the grammar and offer a uniform analysis for both constructions. The paper is organized as follows. Section 2 investigates the distribution of *by*-phrases and *from*-phrases across English, Albanian, Latin and MG and its significance for theories of passives and anticausatives. Based on a discussion of less well-known data, section 3 provides evidence for two primitives, namely *activity* and *cause*, which I contend underlie the passive/anticausative distinction. In section 4, I put forward a novel account for the distribution of purpose clauses and agent-oriented adverbs in passives. In section 5 I discuss the derivation of the dyadic unaccusative constructions introduced in section 3. Finally, in section 6 I extend my analysis to reflexives.

2 *By-* and *from-*phrases: The significance of the comparison

2.1 English

While anticausatives in English do not sanction *by*-phrases, as Piñón (2001) notes, they can combine with *from*-phrases identifying the (external) cause of an event. This is shown in (6a) vs. (6b).

- (6) a. *The window cracked by the pressure.

- b. The window cracked from the pressure.

However, though *from*-phrases identifying causes are generally fine with anticausatives, they are bad when the cause is not an event, as shown in (7).³

- (7) *The window cracked from John / the book.

The contrast between (6b) and (7) is also replicated with non-alternating unaccusatives, as in (8a) vs. (8b), though there also are unaccusatives that do not combine with a *from*-phrase introducing a cause, as in (8c).

- (8) a. Eva died from cancer.
 b. *Eva died from John / the book.
 c. *The refugees arrived from the invasion.⁴

The fact that not all unaccusatives license *from*-phrases suggests that not all unaccusatives have underlying causative semantics, in line with Levin and Rappaport Hovav (1995) and contrary to Chierchia (1989, 2004) and Reinhart (1996).

Finally, *from*-phrases are uniformly disallowed in passives, irrespectively of whether they introduce events, as in (9a), or non-eventive participants, as in (9b).

- (9) a. *Eva was killed from cancer.
 b. *Eva was killed from John / the book.

To generalise over the data presented in this section, it seems that in (adult) English only what Levin and Rappaport Hovav (1995) refer to as external causation verbs can combine with a *from*-phrase identifying a cause.

2.2 Albanian (and Latin and MG)

As was shown in (2), unlike in English, passives and anticausatives in Albanian, as in Latin and MG, can be formally indistinguishable. This is so for two reasons. First, these languages use two distinct conjugational paradigms, namely active versus non-active (Albanian and MG), or active versus passive (Latin), a distinction which often though not always corresponds to the transitive/unergative vs. unaccusative verb classes.⁵ Second, like Latin and MG, Albanian collapses (the distribution of) *by*-phrases introducing the logical subject in passives and *from*-phrases introducing a cause in anticausatives.⁶ As this latter fact would lead us to expect, the sanctioning of *by*-phrases,

³It follows then that animate cause(r)s are excluded from anticausatives.

⁴The sentence in (8c) is of course fine if the prepositional phrase is interpreted as a (locative) source.

⁵The correspondence of the active vs. non-active distinction to the transitive/unergative vs. unaccusative verb classes is rough by virtue of the fact that while transitives/unergatives are always active morphologically, some unaccusative verbs appear in this voice (i.e., are morphologically unmarked) too. Crucially, however, in all three languages unergatives cannot be formally (i.e., morphologically) nonactive/passive, just as passives and (lexical) reflexives cannot be formally active. For details, see Kallulli (1999a,b) on Albanian, Gianollo (2000, 2005) on Latin, and Alexiadou and Anagnostopoulou (2004) on Greek.

⁶Alternatively, the Albanian, Latin, MG counterparts of *by*-phrases are ambiguous between *by*- and *from*-phrases. While in Latin and MG the same word is used both for *by* and *from* in passives and anticausatives, Albanian has two distinct prepositions, namely *nga* and *prej*, each meaning both *by* and

which is taken to be one of the most salient properties of the passive in English and one that distinguishes passives from anticausatives, does not apply in Albanian (and in Latin and MG). To illustrate, the Albanian counterparts of the sentences in (6b) and (7) are given in (10a) and (10b), respectively. As expected then, the grammaticality contrast in the English examples in (6b) and (7) is not replicated in Albanian.

- (10) a. Dritarja u kris nga presioni.
 windowNOM NACT crack.AOR.3S from/by pressure
 ‘The window cracked from the pressure.’ (Albanian)
- b. Dritarja u kris nga Xhoni / libri.
 windowNOM NACT crack.AOR.3S from/by John / book
 ‘The window was cracked by John / by the book.’ (Albanian)

Taken together, the arguments presented in this section suggest that the significance granted to the fact that *by*-phrases are sanctioned with passives but not with anticausatives is not justified – to reiterate, firstly, the distribution of *by*- and *from*-phrases in English cannot be captured by appealing merely to the distinction between unaccusatives (whether anticausative or other) and passives, and secondly, there are languages that altogether collapse the distinction between *by*- and *from*-phrases. The existence of such languages shows that the ability to license a *by*-phrase irrespective of the ability to license a *from*-phrase cannot be granted the diagnostic status it has received in studies that focus on the English verbal passive. In other words, if the ability of a passive verb to combine with a *by*-phrase is taken as evidence for the existence of the external argument in passives (irrespective of whether this argument is syntactically expressed or implicit, depending on the theory), then so should the ability of an anticausative verb to combine with a *from*-phrase identifying the (external) cause of the event. Under this view, anticausatives cannot be lexically reduced, contrary to Chierchia (1989, 2004), Levin and Rappaport Hovav (1995) and Reinhart (1996). I suggest then that *by*-phrases and *from*-phrases are more closely related than has been assumed in discussions of the sanctioning of *by*-phrases in passives in English. Interestingly, as Clark and Carpenter (1989) note, children commonly use *from*-phrases instead of *by*-phrases in passives in English, too. I contend that *by*- and *from*-phrases do not differ as to their ability to identify arguments (either implicit or syntactically expressed, depending on the theory), but rather with respect to other features that distinguish the passive and the anticausative formations. Specifically, here I will argue that the passive/anticausative distinction hinges on the nature of the feature in *v* encoding the ontological event type of the verb.

3 Two primitives and one account of the distribution of *by*- and *from*-phrases

The central claim of this paper is that the passive/anticausative distinction boils down to an event-based (i.e., a lexical semantic) difference, namely the difference between

from. (Due to space considerations, in this article I only use *nga* throughout.) Both *nga* and *prej* phrases are always interchangeable, or have identical distribution (i.e., they entail each other). Consequently, *by*- and *from*-phrases are indistinguishable in Albanian.

an activity and a causative event, which I contend is syntactically relevant. In other words, while not attempting an exhaustive ontology of event types, I submit that *activity* and *cause* are two syntactic primitives. Let us consider the evidence for the primitive status of *activity* and *cause*. Many languages share the construction in (11), in which a dative (or in some languages, a genitive) combines with a non-active (or reflexive) core yielding among other possible interpretations a reading that in previous work (Kallulli 2006) I have referred to as ‘unintended causation’.⁷

- (11) Benit i-u thye një vazo.
BenDAT himCL-NACT break.AOR.3S a vase
‘Ben unintentionally broke a vase.’ (Albanian)

On the other hand, many languages also share the construction in (12), where a dative combines with a non-active (or reflexive) core yielding among other interpretations what in previous work I have referred to as an involuntary state reading, rendered for lack of a better alternative through ‘feel like’ in the English translation.⁸

- (12) Benit i-u hëngër një mollë.
BenDAT himCL-NACT ate.AOR.3S an apple
‘Ben felt like eating an apple.’ (Albanian)

Formally, the sentences in (11) and (12) are identical. Yet, their interpretation varies greatly. Moreover, while the unintended causation reading is missing in (12), both the involuntary state reading and the unintended causation reading may obtain with one and the same predicate, as illustrated through the Albanian examples in (13).

- (13) a. Benit i-u thye një vazo.
BenDAT himCL-NACT break.AOR.3S a vase
(i) ‘Ben unintentionally broke a vase.’
(ii) *‘Ben felt like breaking a vase.’ (Albanian)
- b. Benit i thy-hej një vazo.
BenDAT himCL break-NACT.PIMP.3S a vase
(i) ‘Ben felt like breaking a vase.’
(ii) *‘Ben unintentionally broke a vase.’ (Albanian)

The Albanian sentences in (13a) and (13b) constitute a minimal pair formally; they differ only with respect to their grammatical aspect. As is obvious from the glosses of these sentences, Albanian has two forms for the past tense, which differ in their aspectual value: Aorist, which is aspectually perfective, and Imperfective. Only the perfective sentence in (13a) but not the imperfective in (13b) can get an unintended causation reading. On the other hand, with imperfective aspect only the involuntary

⁷The other possible readings are a possessor reading (‘A vase of Ben’s broke’), and an affected (in the sense: benefactive/malefactive) reading (‘A vase broke on Ben’). I have shown in Kallulli (2006) that the unintended causation reading is not due to pragmatic factors but is really part of the semantics of the verb (root), that is, the sentence in (11) is not vague but truly ambiguous. Therefore I will not dwell on this issue here specifically.

⁸Indeed the construction has sometimes been referred to as the ‘feel-like construction’ (Dimitrova-Vulchanova (1999), Marušič and Žaucer (2004, to appear)). Marušič and Žaucer (2004, to appear) also provide an extensive survey of previous analyses of this construction across several languages.

state reading but not the unintended causation reading obtains. That is, the semantic complementarity in (13a) vs. (13b) is effected solely by the choice of the aspectual morpheme. Note, however, that the verb in (13a) and (13b) is what Levin and Rappaport Hovav (1995) refer to as an external causation verb.

Consider now the Albanian examples in (14).

- (14) a. Benit i-u hëngër një mollë.
 BenDAT himCL-NACT ate.AOR.3S an apple
 (i) 'Ben felt like eating an apple.'
 (ii)*'Ben unintentionally ate an apple.' (Albanian)
- b. Benit i ha-hej një mollë.
 BenDAT himCL eat-NACT.PIMP.3S an apple
 (i) 'Ben felt like eating an apple.'
 (ii)*'Ben unintentionally ate an apple.' (Albanian)

Formally, (14a) and (14b) differ from each other in exactly the same way that (13a) and (13b) differ, that is, with respect to their grammatical aspect only: (14a), which is a repetition of (12), is aspectually perfective, whereas (14b) is aspectually imperfective. However, in spite of this difference, only the involuntary state reading but not the unintended causation reading obtains. That is, the semantic complementarity observed in (13a) vs. (13b) does not replicate in the examples in (14), despite the fact that morphologically (14a) is identical to (13a) and (14b) is identical to (13b). The question then arises as to why the semantic complementarity in (13a) vs. (13b) does not replicate in (14a) vs. (14b). The only possible explanation must be that non-active morphology interacts differently with different (feature) primitives. That is, the (lexical, and consequently, syntactic) feature composition make-up of *eat* must be different from that of *break*. In fact, one such difference is already argued for in Levin and Rappaport Hovav (1995), who distinguish between internal and external causation as a syntactically relevant meaning component. According to Levin and Rappaport Hovav (1995), *break* but not *eat* is an external causation verb. Capitalizing on this difference, I will assume that *break*-type roots differ from *eat*-type roots in that the former project a cause feature, whereas the latter an activity feature in the syntax. In other words, the features [+cause] and [+activity] represent two syntactic primitives that reflect an ontological event-type difference.⁹

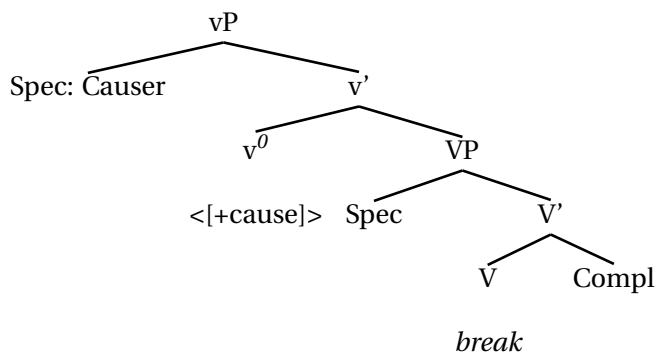
Since both (14a) and (14b) have an involuntary state reading, naturally the question arises what the difference (if any) is between them. In other words, does aspectual morphology effect a difference between (14a) and (14b)? Indeed it does. The difference between (14a) and (14b) has to do with the temporal anchoring of the event. While (14a) describes a disposition that is over at the utterance time, (14b) describes a disposition holding at reference time but not necessarily at utterance time. That is, the disposition in (14a) is under the scope of the aorist operator.

Adopting the basic structure in Chomsky's (1995) shell theory, where the "internal" arguments of a verb occupy the positions of specifier and complement of V, with the external argument occupying Spec of vP, the difference between a causative predicate and an activity predicate can be depicted structurally as in (15) vs. (16). That is, *break*-type verbs project a [+cause] feature in v, as in (15), whereas *eat*-type verbs project a

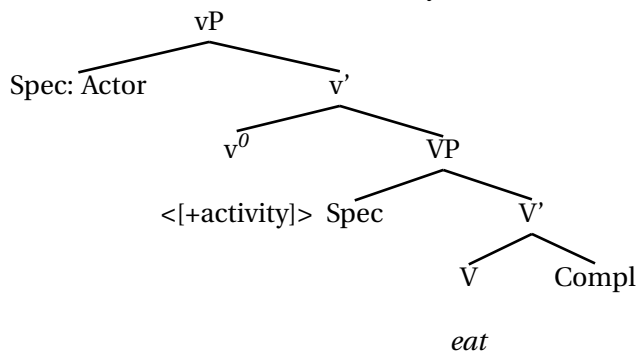
⁹See also Wunderlich (1997, 56) and Doron (2003).

[+activity] feature in *v*, as in (16).¹⁰ In other words, I contend that *v* contains at least one (lexical-semantic) feature encoding the ontological event type of the verb, and further, that it is precisely the need of this feature to be saturated, or checked off, that makes Spec of *v*P an argumental position. Therefore, (non-oblique) argument realization proceeds because of the need to check off lexical-semantic features in a predicate structure (here: *v* and/or other heads involved in predication). Consequently, when *v* contains a [+cause] feature, the argument in Spec of *v*P will be interpreted as Cause(r), whereas when *v* contains a [+activity] feature in *v*, the argument in Spec of *v*P will be interpreted as an Actor.

(15) The basic structure of a causative verb



(16) The basic structure of an activity verb



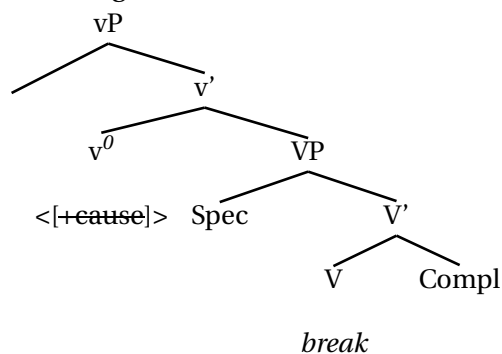
In Kallulli (2006), I define non-active (and/or reflexive) morphology as an operation that suppresses a feature in the syntactic structure of a predicate.¹¹ Building on this proposal, I claim that while the passive is derived from an activity predicate through suppression by special (e.g., non-active) morphology of a [+activity] feature in *v*, the anticausative is derived from a causative predicate through suppression of a [+cause] feature in *v*. If non-active morphology suppresses a feature in *v* that encodes the ontological event type of the verb, as I claim, when operating on the structures in (15) and (16), it will suppress the [+cause] or the [+activity] feature, respectively. If, as I suggest, (non-oblique) arguments are realized in the specifier positions of verbal projections whose heads have at least one (lexical-semantic) feature that encodes the ontological

¹⁰The tuple notation of the features in *v* in (15) and (16) is motivated in section 5.

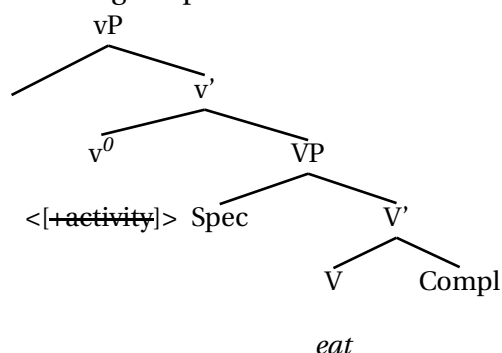
¹¹In Kallulli (2006) I argue that non-active (and/or reflexive) morphology suppresses the first feature in the structure of a predicate, but since in (15) and (16) there is only one feature in *v*, the linear order and/or hierarchical structure does not matter for my purposes here. I return to this point in section 5 though.

event type of the verb, it follows that no arguments can be realized in Spec of vP once the feature [+cause] or [+activity] in v is stricken out by non-active morphology.¹² That is, the resulting structures will be strictly monadic (that is, containing only one internal argument), as in (17).

(17) a. Deriving the anticausative



b. Deriving the passive



Assuming that accusative case is assigned in v (that is, that accusative case is checked in Spec of vP only) (Bennis 2004), when Spec of vP is inert (or absent, see note 12) the internal argument will need to have its case features checked by a higher head, namely T, which assigns nominative.¹³ Thus, the so-called Burzio's Generalization follows in a straightforward way. In spite of the effect of non-active morphology, namely the suppression of the feature [+cause] or [+activity] in v and the consequence that Spec of vP is in this way rendered inert, both the cause in anticausatives and the actor in passives can be realized obliquely, namely in a *from*-phrase and a *by*-phrase, respectively. The question however arises why languages vary with respect to whether they obscure the distinction between oblique actors and oblique causes, as is the case in Albanian, Latin, MG, English child language (Clark and Carpenter (1989) and Old English, or articulate this difference, as is the case in adult present-day English. One obvious difference between Albanian, Latin, MG on the one hand and adult present-day English on the other is precisely the fact that in English anticausatives and passives are always morphologically distinct, whereas, as already pointed out, in Albanian, Latin and MG passives and anticausatives are often identical morphologically. That is, there might exist some implicational relation between verbal morphology and the ability to distinguish between *by*- and *from*-phrases (i.e., oblique actors and oblique causes). Specifically, the generalization seems to be that languages that collapse the morphological

¹²In fact, since this is unmotivated, it might be stated that there is no Spec of vP position in the structure at all. I leave this point open, however.

distinction between passives and anticausatives also fail to differentiate between *by*- and *from*-phrases.¹³

Consider now how the claim that the distinction passive vs. anticausative boils down to an event-based difference can accommodate the fact that *break*-type (i.e., causative) verbs can passivize, as in (18).

(18) The window was broken by Pat.

Emonds (2000) suggests that due to the fact that English lacks a verbally finite synthetic passive, both verbal and adjectival passives are in a sense “more adjectival” than in languages like Albanian, Latin and MG, which have a (partially) verbal finite synthetic passive. Indeed anticausatives are more eventive than passives in English.¹⁴ This point cannot be made for Albanian, which as discussed above collapses the morphological distinction between passives and anticausatives. The idea then is that the passive in English in a sentence like (18) implies that the breaking event was more sustained, or involved an activity on Pat’s part, as compared to the breaking event in an anticausative, which happens spontaneously, or all-at-once. That is, the English passive, whether or not due to its special morphology, induces an implicature of activity, or openendedness, even for external causation verbs, which is obvious when comparing it to an anticausative like the one in (19).

(19) The window broke.

That is, passive constructions across languages can be made compatible by relegating the differences to simple combinatorial properties of verb and (types of) prepositions and their interactions with other event functors, which are in turn encoded differently morphologically across languages.¹⁵ Note that the feature [+activity] entails an actor, that is, animacy. The question then arises how to account for sentences such as (20) where a natural force, namely the earthquake combines with the preposition *by*.

(20) The window was broken by the earthquake.

¹³The general idea here is that there is complementarity of theta-checking and case-checking, at least for one and the same argument (Bennis 2004). I leave a specific implementation of this idea however open for future research.

¹⁴One argument for this view comes from *when*-clauses. Specifically, As David Adger (personal communication) has pointed out to me, only the sentence in (ii) containing a passive but not that in (i) containing an anticausative verb has a reading whereby the window-breaking event precedes the getting home event.

(i) The window broke when we got home.

(ii) The window was broken when we got home.

This interpretive difference between (i) and (ii) can be captured straightforwardly in terms of the eventiveness, or punctualness of passive in (ii).

¹⁵As Kyle Johnson (personal communication) has pointed out to me, one of the properties of the English passive is disjoint reference between the syntactic subject and the implied argument. In other words, a sentence like ‘John was burned’ cannot mean that John burned himself. However, disjoint reference is possible but not necessary in the Albanian counterpart of this sentence. One obvious source for this difference then is the fact that English uses an analytic form to build the passive, namely *be*, whereas Albanian uses a synthetic one.

I suggest that these forces are conceptualized as animate, as opposed to inanimate forces that can cause breakage such as a construction fault, which is indeed ungrammatical in a *by*-phrase. Interestingly, judgments on a sentence like (21) with a cause like pressure rising in a *by*-phrase seem to vary.

(21) (?)The window was broken by the pressure rising.

My interpretation of this fact is that a cause like the one in (21) could be seen as a very slow but nevertheless animate force, or else as a more stationary force. In the former case it would be acceptable in a *by*-phrase; in the latter it would not.

Turning to the distinction between passives/anticausatives on the one hand and middles on the other, I believe this is due to the presence of a generic operator above the vP in the latter, as has been argued for at length in Lekakou (2005).¹⁶ That is, the middle construction is derived when the verb in the structures in (17) is under the scope of a vP level generic operator.¹⁷

4 The distribution of purpose clauses and agent-oriented adverbs revisited

Let us now turn to the facts illustrated in (4) and (5), repeated again here for ease of reference, namely that passives but not anticausatives can combine with purpose clauses and agent-oriented adverbs.

- (4) a. The boat was sunk to collect the insurance.
b. *The boat sank to collect the insurance. (Roeper, 1987, 268)

¹⁶Lekakou (2005) argues that while the generic operator in middles attaches at the VP-level (which corresponds to the vP-level in the shell representation that I have assumed here), the habitual operator attaches at the CP-level.

¹⁷Following Fellbaum (1986), Dowty (2000) and others, Lekakou argues that middles are statements about (properties) of the object, and that suppression of the logical subject in middles and, consequently, promotion of the object to subject position happens in order to license the ascription of what she terms a “dispositional” property on this object. While the term “dispositional” is not a fortunate label since dispositions are properties of animate participants, Lekakou (2005) makes it clear that what she means is the existence of a generic operator that is however different from a habitual generic one, as explicated in the previous note. So, while both (i) and (ii) below have a generic operator in their semantic representation, the nature of this operator in (i) is different from that in (ii). Trivially, (i) – a middle construction – is true also in a situation in which nobody has ever read ‘this book’. In contrast, (ii) which is also a generic statement is true if and only if it is the case that Ben walks to school. In other words, “dispositionals” are one specific type of generic statements.

- (i) This book reads easily.
(ii) Ben walks to school.

The Albanian counterpart of (i) is given in (iii). As is obvious from the gloss, only non-active morphology is licit.

- (iii) Ky libër lexoh-et /*-n kollaj.
thisNOM book read-NACT.PR.3S / -ACT.PR.3S easily
‘This book reads easily.’

(Albanian)

- (5) a. The ship was sunk deliberately.
 b. *The ship sank deliberately.

Virtually all existing work on this distinction takes these facts to indicate: (i) the presence of an argument in the passive, which depending on the theory, is either syntactically expressed (Baker, Johnson and Roberts 1989, Emonds 2000) or implicit (Roepers 1987, Grimshaw 1990); and (ii) the lack of such an argument in unaccusatives (Levin and Rappaport Hovav 1995 and references therein). However, all that purpose clauses and so-called agent-oriented adverbs do is identify an intention-bearing (i.e., animate) event participant as the source or initiation of the event named by the verb. Passives, but not anticausatives, control into purpose clauses and combine with agent-oriented adverbs because purpose clauses and agent-oriented adverbs simply make reference to participants capable of intentionality (i.e., actors). And as was stated earlier, unlike [+cause], the feature [+activity] implies an actor, that is, a participant capable of wilful agency. However, this does not entail that the animate participant in passives is a non-oblique argument. One obvious alternative is that the animate participant here is not introduced by a non-oblique argument, but by a *by*-phrase, and this may in turn be either overt or implicit. If, as established in section 3.1, animate causers are disallowed with *from*-phrases in English and, anticausatives only license *from*-phrases but not *by*-phrases, then the inability of anticausatives to combine with purpose clauses and agent-oriented adverbs follows straightforwardly without further stipulations. Further evidence for the view that it is the animate participant in an overt or implicit *by*-phrase that controls into the purpose clause involves the fact that whenever a purpose clause is licit, a *by*-phrase can be inserted overtly.

Note in this context that agent-oriented adverbs are not incompatible with unaccusative syntax. The Italian examples in (22) show that the unaccusative verbs *cadere* 'fall' and *rotolare* 'roll' continue to exhibit the characteristic *essere* 'be' (vs. *avere* 'have') selection, even in the presence of an adverb like "on purpose".

- (22) a. Gianni é caduto / *ha caduto apposta. ((Folli and Harley, 2004, 47))
 John is fallen / has fallen on purpose.
 b. Gianni é rotolato / *ha rotolato giù (Italian)
 John is rolled / has rolled down
 apposta.
 on purpose.

The example in (23) shows that the same fact holds in German, as witnessed by the fact that the auxiliary *sein* 'be' and not *haben* 'have' is selected.

- (23) Peter ist / *hat absichtlich eingeschlafen.
 Peter is / has deliberately fallen asleep
 'Peter fell asleep on purpose.' (German)

To account for the facts in (22) and (23), I suggest that so-called agent-oriented adverbs do not necessarily tell anything about whether the event participants that they modify really act agentively (i.e., intentionally). These adverbs are rather interpreted at the pragmatic interface, that is, they merely provide information on the beliefs of the utterer of the sentences in which they occur.

Finally, as an anonymous reviewer of the abstract for CSSP pointed out, if my claim is correct, that the actor in passives is introduced by the *by*-phrase, which in turn controls the subject of purpose clauses, we expect that no such control is possible in languages where passive does not accept complements analogous to *by*-phrases (the so-called ‘short’ passives).

5 Deriving dyadic unaccusative constructions

5.1 Intentionality as a primitive

In section 2 and 3 I provided evidence for the primitive status of the features [+activity] and [+cause] in the theory. In this section, I argue for yet another primitive, namely intentionality (shorthand as [+intent]) that stands for true agency, and detail an account of the derivation of the dyadic unaccusative constructions discussed in section 3, its various readings, and how these readings are in fact expected to arise under my proposal that the features [+activity], [+cause], and [+intent] are relevant for syntactic computation, and the conjecture that unaccusative morphology suppresses a feature in *v*.

5.1.1 The structure of causative predications

In a series of works on issues relating to argument structure, its projection, and the role of morphological operations on argument realization and interpretation in St’át’imcets, Davis and Demirdache (1995, 2000) and Demirdache (1997) argue that agentive and causative predications are universally derived from distinct frames. The basic idea behind their analysis is that an event participant identifying the instigation (or initiation) of a causative event is an agent if and only if that participant can intentionally bring about such initiation, that is, if the causing participant has control over the event. To illustrate, Demirdache argues that Rosa in (24) is an agent iff “Rosa performs some action of melting which causes the ice to be melted. In contrast, Rosa is a causer (but not an agent) when there is no intrinsic relation between the causing event and the resulting change of state – e.g. Rosa accidentally turns off the refrigerator and the ice melts” (Demirdache, 1997, 129).¹⁸

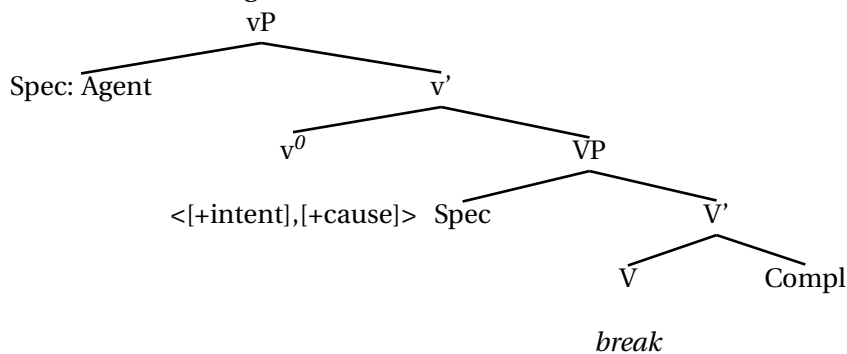
(24) Rosa melted the ice.

While Davis and Demirdache (1995, 2000) and Demirdache (1997) rely on the model of lexical meaning put forth in Pustejovsky (1991, 1995), their idea that agentive and causative predications are cross-linguistically derived from distinct structures can be equally well implemented in terms of *vP* shells motivated on independent grounds ((Larson, 1988), (Hale and Keyser, 1993, 1998), Chomsky 1995, (Kratzer, 1996), (Marantz,

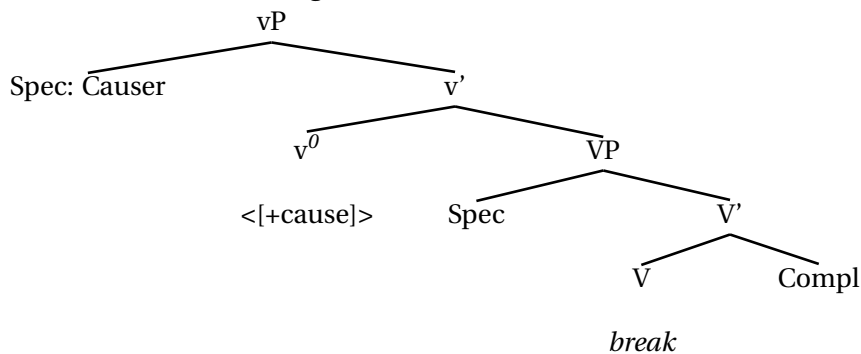
¹⁸While what is meant by “intrinsic relation” may not be equally intuitive for everyone (i.e. the fact that the instigator of an event is not necessarily an agent or an event participant capable of agency does not make its relation to the event less intrinsic), it is clear what Demirdache means: Rosa is an agent iff she volitionally or intentionally does something in order to obtain a certain result, namely have the ice melt. In this context, note also that, further scrutiny notwithstanding, these two types of causation seem to be different from Kratzer’s (2005) notions of direct vs. indirect causation.

1993, 1997, 2005) and much related work). In line with Davis and Demirdache, I maintain that there are two types of causatives, agentive and non-agentive, which differ in their lexical feature composition make-up. Specifically, I argue that while agentive causatives can be defined as containing an ordered tuple consisting of the features [+intent] and [+cause] in v, as in (25), non-agentive causatives contain an ordered tuple consisting of the feature [+cause] only in v, as in (26).¹⁹ Accordingly, when the feature [+intent] is present in v, the argument merged in Spec of vP will be interpreted as an agent, as represented in (25). In contrast, when there is no such feature in v, what the argument merged in the higher specifier position will not be an agent argument, but a causer, as shown in (26). In other words, while the tuple <[+intent],[+cause]> in v makes an agent in Spec of vP, the tuple <[+cause]> in v does not make an agent, but a causer in Spec of vP.

(25) The structure of agentive causatives



(26) The structure of non-agentive causatives



The core idea then is that theta role assignments are tuples of (theta-) features. Suppose that this is in fact a constraint, as in (27). Its relevance will become clear in section 5.3.

¹⁹As will become clear, the notion ordered tuple is central for the analysis that I put forward here. While this might seem costly, the basic underlying idea is that syntax is only interested in the order(ing) but not in the foundations of this ordering. The latter are part of our conceptual organization. As Manfred Krifka (personal communication) suggests, intention must always scope over causation. That is, there is a semantic reason for the ordering inside the tuple. (Of course I am abstracting away from the tradition that scope is exclusively representable in terms of c-command, i.e. hierarchically rather than linearly. As will be seen, the motivation for this is that a linear formalization in terms of ordered tuples buys us a lot; it is not clear whether and how the same desirable results can be achieved through hierarchical representations.)

(27) The Tuple Constraint

Theta role assignments are tuples.

Trivially, a sentence like (28) with an event nominal (i.e., an inanimate causer) will have the structure in (26), not in (25).

(28) The wind / the earthquake broke the window.

Though my account is reminiscent of Reinhart's (2002) approach in that theta-roles are the outcome of features, or feature-combinations (i.e., theta roles do not have the status of primitives in the theory, a desideratum already pointed out in Hornstein (1999), but see also Reinhart and Reuland (1993)), it differs from Reinhart (2002) in several respects. For instance, Reinhart (2002) argues that the agent role is composed of the features [+c] and [+m], which stand for cause and mental state, respectively. Note however that the feature [+intent] which I have proposed as a syntactic primitive cannot be equated with Reinhart's feature [\pm m], since as noticed independently in Rivero and Savchenko (2004), no feature or feature cluster in Reinhart's system given under (29) can capture an unintentional causer role. While the cluster [+c+m] here expresses the agent role, [+c-m] expresses an instrumental causer role (i.e. an extrinsic instigator, such as a natural or other force).

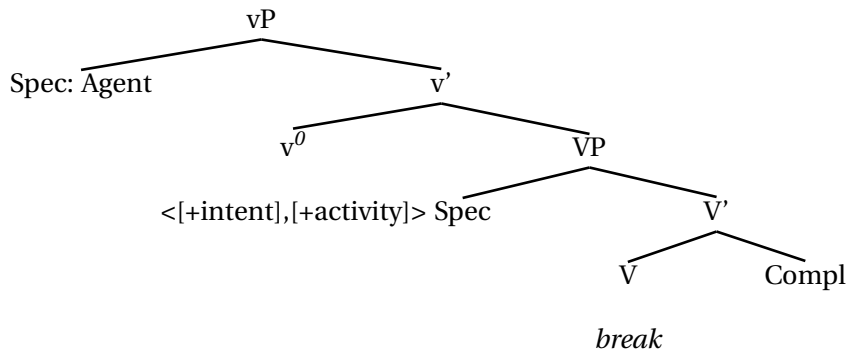
- (29)
- a. [+c+m] - agent
 - b. [+c-m] - instrument
 - c. [-c+m] - experiencer
 - d. [-c-m] - theme / patient
 - e. [+c] - cause (Unspecified for m); consistent with either (a) or (b).
 - f. [+m] - ?
 - g. [-m] - (Unspecified for c): subject matter /locative source
 - h. [-c] - (Unspecified for m): goal, benefactor typically dative (or PP).

Likewise, the feature animacy suggested in Folli and Harley (2005), while necessary, is not sufficient, because animate participants can still bring about or engage in events without intending to do so. On the other hand, intentionality entails animacy, so the validity of the insights presented in Folli and Harley is still maintained.

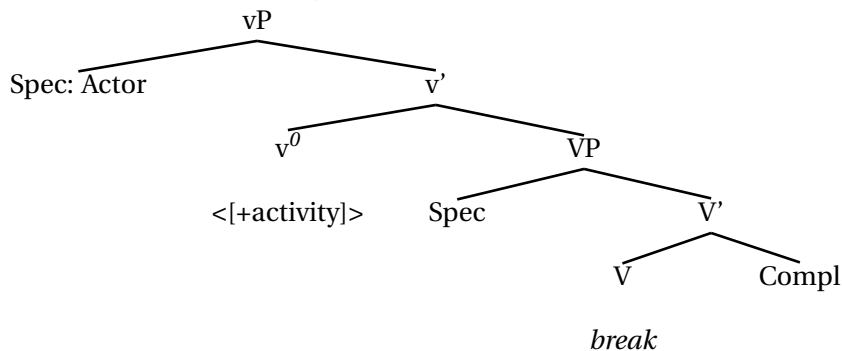
5.1.2 The structure of activity predications

I claim that, like causative predications, activity predications fall into two different types: agentive and non-agentive. Agentive activities differ from non-agentive activities in terms of their feature composition: agentive activity predicates contain an ordered tuple consisting of the features [+intent] and [+activity] in *v*, as in (30), whereas nonagentive predicates contain an ordered tuple consisting of the feature [+activity] only in *v*, as in (31). Accordingly, the tuple <[+intent],[+activity]> makes an agent in Spec of *vP*, as in (30). In contrast, the tuple <[+activity]> makes an actor, not an agent, in Spec of *vP*, as in (31).

(30) The structure of agentive activities



(31) The structure of non-agentive activities



In other words, I contend that a sentence containing an activity predicate as in (32) is ambiguous between an agentive and a non-agentive reading.

(32) Rosa screamed.

Specifically, Rosa in (32) is an agent if and only if she intends or is in control of her action (e.g. she could stop screaming if she so willed). In contrast, Rosa in (32) is an actor but not an agent if she does not intend her screaming activity (for instance, if she has taken drugs that make her scream, and potentially even unaware of what she is doing).

5.2 Defining unaccusative morphology: deriving the various readings of the dyadic unaccusative construction

Much research has maintained that certain morphological operations apply either in the lexicon or in the syntax. To wit, passivization, and/or reflexivization have commonly been treated as operations that suppress either an argument position (external or internal), a theta role in the thematic grid of the verb, or some element in the lexical-semantic structure of a predicate (depending on the theory) (Roeper 1987, Grimshaw 1990, Levin and Rappaport Hovav 1995, 1998, Reinhart and Sioni (2004), among others). Similarly, non-active and/or reflexive morphology has been treated as an operation that suppresses the external argument position in Massey (1991), or the subevent in an event structure that projects an external argument in syntax (Kallulli 1999a,b). In this spirit, here I also analyse non-active morphology, and more generally unaccusative morphology, as a suppression operation. However, unlike in the previous works just

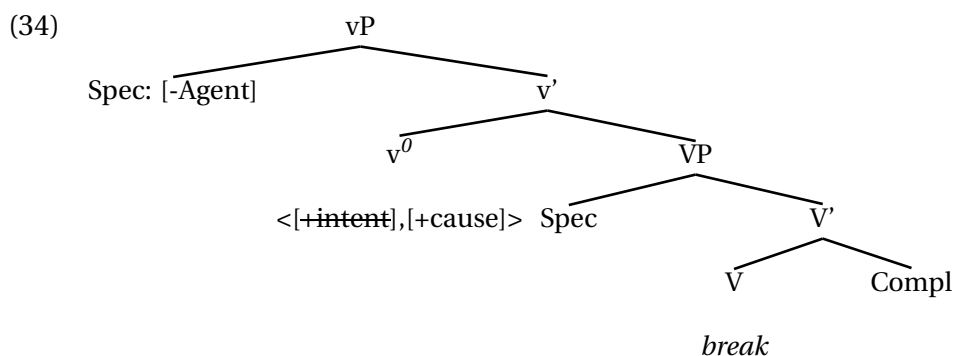
mentioned (though see Kallulli 2006), I contend that unaccusative morphology of all shapes (e.g. non-active, reflexive, passive and/or phonologically null) operates in the syntax proper. That is, unaccusative morphology does not operate in the lexicon, contrary to views expressed in Chierchia (1989, 2004), Grimshaw (1990), Levin and Rappaport Hovav (1995), Reinhart (1996), Reinhart and Siloni (2004), among others. Specifically, I define unaccusative morphology as in (33).

(33) **Definition of unaccusative morphology**

Unaccusative morphology suppresses the first feature in *v*.

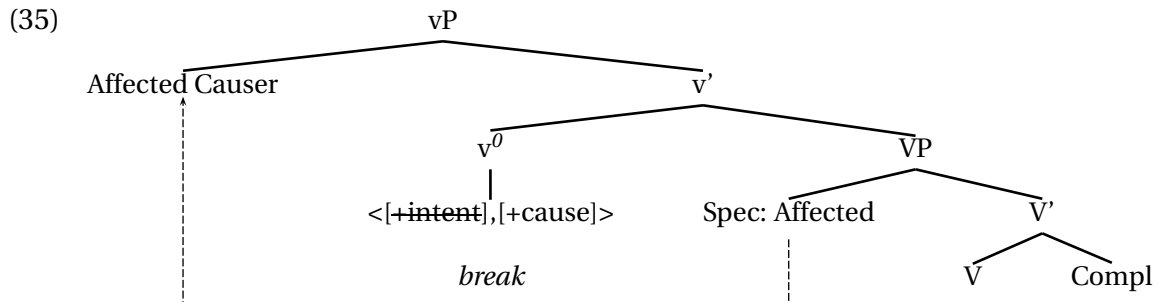
5.3 Deriving the unintended causation reading

I contend that the unintended causation reading of the dyadic unaccusative construction in (12a) is derived from (dyadic) agentive causative predications, whose structure was given in (25).²⁰ Specifically, if the definition in (33) is applied to the structure in (25), the outcome is the representation in (34), since the first feature in *v* in (25) is [+intent]. Consequently, due to the suppression of the feature [+intent], no agent argument can be realized in Spec of *vP*, since as I argued in section 5.1, an agent theta-role is a function of the tuple <[+intent],[+cause]> in *v* (for cause verbs), or of the tuple <[+intent],[+activity]> in *v* (for activity verbs).



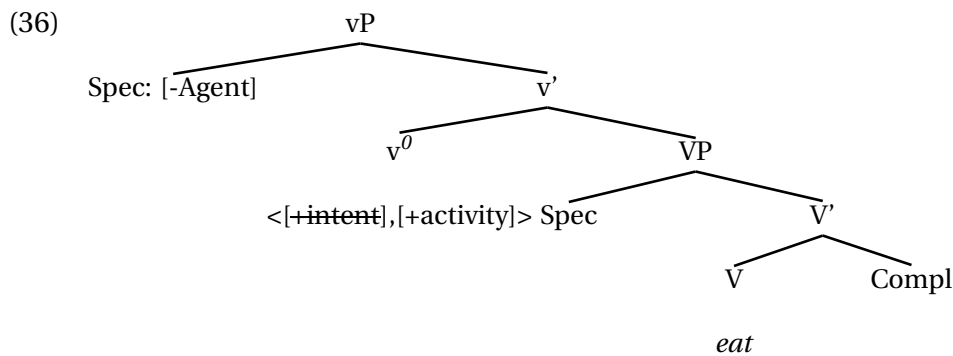
Since theta-role assignment is subject to the Tuple Constraint (which was given in (27)), once the [+intent] feature is suppressed, no theta role can be assigned to Spec of *vP* because the integrity of the tuple has been destroyed. On the other hand, for the derivation to converge the remaining feature [+cause] in the tuple in *v* has to be saturated. The only way for this feature to be licensed is by another argument moving to the specifier of *vP*. I claim that the next closest argument, that is, the dative (or in Greek, genitive) in the Spec of VP is the one that fulfills this role. Let us assume that what motivates the realization of (the dative/genitive argument in) Spec, VP is a feature such as [+affected] of the verb (in V), which is why dative (or genitive) arguments are interpreted as affected participants. When unaccusative morphology suppresses the feature [+intent], the dative (or genitive) argument moves from Spec of VP to Spec of *vP* so as to license the [+cause] feature, as diagramed in (35). Consequently, once in Spec of *vP*, the theta-role of the dative/genitive will be something like an affected causer, which is nothing more than an unintentional causer.

²⁰By "dyadic agentive [...] predications", I mean structures like (25) where all three argument positions (i.e., Spec of *vP*, Spec of VP, and Compl) are filled.

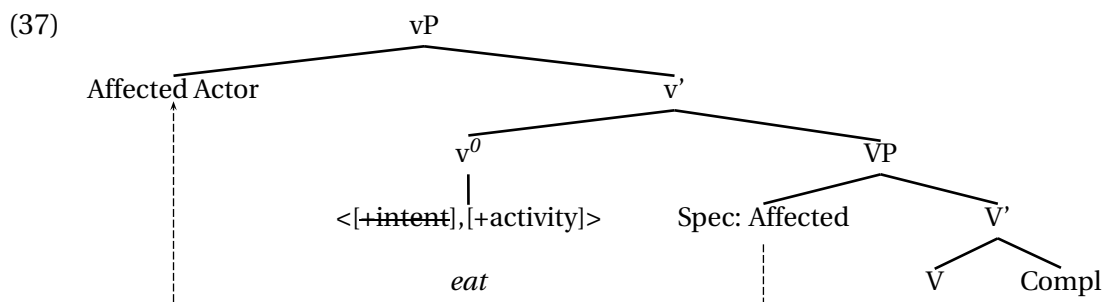


5.3.1 Deriving the involuntary state reading

In close analogy with the discussion on the derivation of the unintended causation reading from dyadic agentive causative predications, I contend that the involuntary state reading of the sentences in (14) is derived from dyadic agentive activity predications, whose structure was given in (30). If the definition in (33) is applied to the structure in (30), the outcome is the representation in (36), since the first feature in the structure in *v* in (30) is [+intent]. As in the previous case, due to the suppression of the feature [+intent] in *v*, no agent argument can be realized (specifically: merged) in Spec of *vP*.



Again, the feature [+activity] on its own is not sufficient to assign a theta-role to Spec of *vP* in (36), since suppression of [+intent] here violates the Tuple Constraint in (27). On the other hand, for the derivation to converge this remaining feature (i.e., [+activity]) in *v* has to be saturated. This can only be done by another argument moving to the specifier of *vP*. As in the previous case, I claim that this is done by the dative argument in the Spec of *VP*. When unaccusative morphology suppresses the feature [+intent], the dative argument moves from Spec of *VP* to Spec of *vP* so as to license the [+activity] feature, as shown in (37). Consequently, once in Spec of *vP*, the theta-role of the dative will be something like an affected actor.



However, obviously more than what is depicted in (37) is needed to yield the involuntary state reading of the sentences in (14). I suggest that the involuntary state reading is due to the presence of a dispositional operator (DispP) above the vP. Specifically, I claim that the head of this phrase hosts a strong activity feature, which is not surprising in view of the fact that only participants capable of performing activities (i.e., animate participants) have dispositions. That is, Disp^0 triggers movement of the ActivityP (i.e., the vP in (37) as opposed to the vP in (35)) to its specifier position, yielding (38).

(38) [DispP vP_{activity} Disp^0]

While the analysis that I have laid out here accounts for data like (14), the question arises whether and how the semantic complementarity in terms of the unintended causation vs. involuntary state reading between (13a) and (13b), repeated here for ease of reference, can be captured by this analysis.

- (13) a. Benit i-u thye një vazo.
 BenDAT himCL-NACT break.AOR.3S a vase
 (i) 'Ben unintentionally broke a vase.'
 (ii) *'Ben felt like breaking a vase.' (Albanian)
- b. Benit i thy-hej një vazo.
 BenDAT himCL break-NACT.PIMP.3S a vase
 (i) 'Ben felt like breaking a vase.'
 (ii) *'Ben unintentionally broke a vase.' (Albanian)

As discussed earlier, (13a) and (13b) differ only with regard to aspectual morphology, but crucially, they contain the same verb (root), namely *break*, which as I argued earlier projects a [+cause] feature in v. While the unintended causation reading of (13a) is straightforwardly derived as detailed in the previous section, the analysis of the derivation of the involuntary state reading developed in this section cannot readily explain how the involuntary state reading of (13b) comes about if *break* projects a [+cause] feature in v. In other words, in order to be able to derive the involuntary state reading of (13b) through the analysis put forth here, we need *break* in (13b) to project a [+activity], not a [+cause] feature in v. Though I assumed that the features [+cause] and [+activity] in v have the status of syntactic primitives, in principle, one could also be derived from the other through morphological operations that take place before the projection of these features in syntax. That is, under some version of the lexicalist hypothesis, one of these features could be the outcome of lexical (de)composition. A

concrete proposal here would be that though the verb *break* is a cause verb and will therefore project a [+cause] feature in *v*, due to a procedure such as event composition (Pustejovsky, 1991), it might project an [+activity] feature in syntax. Specifically, if imperfective morphology is an event functor that invariably shifts the event type of a lexical item into an activity, then we could explain how *break* projects the feature [+activity] and not [+cause] in syntax. So the idea is that re-iteration of a causative event (e.g. breaking) will yield an (e.g. breaking) activity.²¹ Obviously this idea cannot be maintained under a non-lexicalist view of morphosyntax such as Distributed Morphology. However, the idea that imperfective morphology has an impact on the features in *v* could in principle be made compatible with a non-lexicalist view of morphological operations. Crucial for the case at hand is the order of operations. In other words, if imperfective morphology operates prior to the merging of *v*, then it is expected that it influences the type of the features in *v*. Though beyond the scope of this article, one way of implementing this idea would be by assuming that the terminal node associated with imperfective morphology is what provides the verbal (i.e., the category defining) context for the root *break*; in other words, that the (functional head related to the) imperfective morpheme is lower than *v*.

Let us now turn to the difference between (14a) and (14b), repeated here for ease of reference.

- (14) a. Benit i-u hëngër një mollë.
 BenDAT himCL-NACT ate.AOR.3S an apple
 (i) 'Ben felt like eating an apple.'
 (ii)*'Ben unintentionally ate an apple.' (Albanian)
- b. Benit i ha-hej një mollë.
 BenDAT himCL eat-NACT.P.IMP.3S an apple
 (i) 'Ben felt like eating an apple.'
 (ii)*'Ben unintentionally ate an apple.' (Albanian)

As I pointed out earlier, the difference between (14a) and (14b) can be described in terms of a difference in the temporal anchoring of the eating disposition described by these sentences. More specifically, (14a) but not (14b) describes a past disposition relative to the utterance time. I contend that the difference between (14a) and (14b) is due to an aorist aspectual operator located above *DispP* in the structure of (14a). That is, *DispP* is in the scope of the aorist operator. Assuming that accusative case is assigned in *v* (that is, that accusative case is checked exclusively in *Spec* of *vP*) and, that the complementarity of theta-checking (here: theta-feature-checking) and case-checking (at least for one and the same argument) is a general property of the theory (Bennis (2004)), then Burzio's Generalization follows trivially: the internal argument will need to have its case features checked by *T*, which assigns nominative – hence the absence of the accusative case on the internal argument.

In concluding this section, note that the analysis that I have laid out here is very much in line with and provides further support for Hornstein's (1999) view that theta roles are not primitives and that, consequently, the theta-criterion has indeed no place

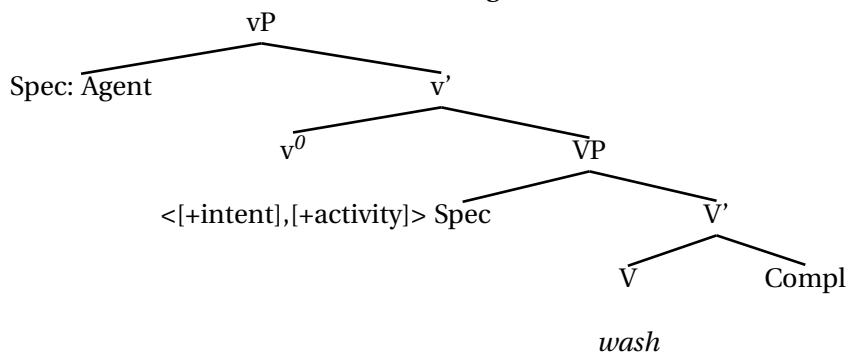
²¹Interestingly, Davis (1997) and Demirdache (2005) argue that in St'át'imcets all activity predicates are morphologically derived from causative predicates.

in the theory.²² In this vein, the Tuple Constraint that I have postulated in (27) is clearly a condition on Merge. However, as I have argued here, argument realization is not exclusively an outcome of Merge but can be effected also by Move.

6 Deriving reflexives

As was already pointed out at the beginning of this paper, reflexive verbs often exhibit identical morphological marking as passives, middles and unaccusatives. This has been one of the reasons why in many works reflexives are treated as sharing the syntactic structure of passives, unaccusatives and middles (Bouchard (1984), Marantz (1984), Grimshaw (1990), Pesetsky (1995), Sportiche (1998), Steinbach (2002, 2004)). That is, the subject of reflexives is an underlying object which has raised to subject position for Case reasons. While maintaining a version of the unaccusative analysis of reflexives, I contend that reflexives are derived from transitive agentive activities, that is, a structure only minimally different from the one given in (30), in that Spec of VP is empty, or (alternatively) not present in the structure.²³ In other words, reflexives are not derived from di-transitive agentive activities, but from mono-transitive agentive activities whose structure is given in (39).²⁴

(39) The structure of (mono-)transitive agentive activities

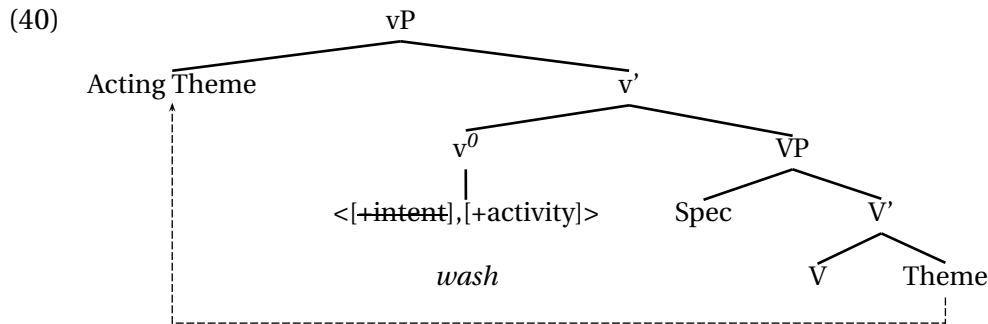


When unaccusative morphology applies to the structure in (39), it will strike out [+intent], as this is the first feature in *v*. Since the remaining feature (i.e., [+activity]) in *v* cannot assign a theta-role to Spec of *vP* as the Tuple Constraint in (27) has been violated due to suppression of a feature in the tuple, [+activity] has to be saturated by another argument moving to the specifier of *vP*. The closest (and only) argument available in the structure is the one realized in the Compl position of *V* (i.e., the internal argument). Therefore it will move to Spec of *vP* to license the feature [+activity] in *v*, as represented in (40). As a result of its feature composition, once it lands in Spec of *vP* it will be interpreted as an affected (theme) actor.

²²As pointed out in note 3, Marušič and Žaucer (2004, to appear) treat the ‘feel-like’ construction as an obligatory control structure with a lexically null matrix verb FEEL-LIKE. While there is little point in recapitulating here Marušič and Žaucer’s arguments, or Kallulli’s (2006) and Rivero’s (2005) arguments against their biclausal analysis, it is relevant to note that Hornstein (1999) explicitly argues that obligatory control structures are invariably derived from movement (not merge).

²³In section 5.2.1 I proposed that the realization of the dative object in Spec of VP depends on the feature [+affected] of the verb in V. However, if the verb in V does not contain such a feature, then no dative argument will be merged in Spec of VP.

²⁴Note again that (39) differs from (30) only in that there is no indirect object present.



Note that under my analysis, movement of the Theme argument upwards is not what it is in run-of-the-mill analyses of unaccusativity. That is, the internal argument does not move for case reasons. Movement here is motivated by the need to pick up features that assign theta-roles and, theta-roles can be picked up partly, which is what bundling is (Pylkkänen 2002, Reinhart and Siloni 2005).

7 Conclusion

A range of constructions with unaccusative morphology (to wit, the dyadic unaccusative construction and its various interpretations, anticausatives, passives, middles and reflexives) can be formally and uniformly derived by combining the idea that agentive (both causative or activity) predications and non-agentive (both causative or activity) predications are universally derived from distinct frames and that unaccusative morphology is a feature-suppression operation in syntax.

I have discussed a variety of – to my knowledge – new empirical arguments, which show that the picture depicted for the passive in English is quite idiosyncratic, and that the properties that have attained the status of identificational criteria of the passive are simply not revealing or even maintainable when looking at other languages. In particular, unlike generally assumed, neither *by-phrases* nor purpose clauses or agent oriented adverbs witness the presence of a non-oblique argument (either implicit or syntactically encoded, depending on the theory). In contrast, the analysis that I have laid out here derives the properties of the passive and anticausative both in Albanian and English uniformly. An important conclusion here is that universally anticausatives and passives differ only with respect to the (ontological event type) feature (in *v*), which can be affected by morphological operations in the syntax. The distinction between *by-* and *from-* phrases in English is a simple reflection of this feature: a *by-* phrase introduces an oblique actor upon suppression of the [+activity] feature in *v* and a *from-* phrase an oblique causer. I have shown that the English verbal passive can be made more compatible with its Albanian (and Latin and MG) cousin by relegating the differences with respect to the licensing of *by-phrases* in to simple combinatorial properties of verbs and types of prepositions.

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