OUT OF CONTROL IN ST'ÁT'IMCETS

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The goal of this paper is to examine and explain the restrictions that out of control morphology in St'át'imcets[1] (Lillooet Salish, henceforth ST') imposes on the interpretation of the predicate to which it affixes. When the out of control morpheme *ka...a* is affixed to either an unergative or a transitive verb, it suppresses the control of the agent over the action denoted by the verb, yielding either of two readings. When the verb denotes an activity, it yields an "able to" reading (e.g. *I am able to work*); when the verb has a causative meaning, it yields an accidental reading (e.g. *I accidentally hit him*). Under the scope of certain operators (such as the progressive or negation), this accidental reading is lost and the ability reading obtains (e.g. *I can't hit him*) .

Crucially, out of control morphology also applies freely to unaccusative predicates, yielding a suddenly/accidental reading (e.g. *I got hit suddenly/accidentally*). Under the scope of certain operators (such as the progressive or negation), this reading is lost and the ability/capacity reading surfaces (e.g. *I couldn't get hit*).

I argue that the range of readings that out of control yields in ST' can uniformly be derived from two proposals. First, unaccusatives and causatives share the same underlying semantic representation as argued by Chierchia (1989) and Pustejovsky (1995) among others. Second, out of control is the equivalent of a passive defined on the lexical semantic representation of a predicate.

The analysis developed here is based on the generative model of lexical representation proposed by Pustejovsky (1989, 1991, 1995). Within a model where the aspectual properties of verbs - and ultimately sentences - are configurationally and compositionally defined in terms of recursive event structures, out of control can be defined as the equivalent of a passive on the lexical meaning of a predicate.

Hovav & Levin define passive as an operation that affects the number of arguments that a predicate has without affecting its lexical meaning. Conversely, I define out of control as an operation that affects the lexical meaning of a predicate without affecting the number of arguments it has. Whereas passive suppresses an external argument position (or the agent role in the thematic grid of the verb), out of control in ST' suppresses either the initial subevent in the event structure of a predicate, or the name that is associated with this subevent. That out of control yields either an ability reading, an accidental reading or a suddenly (spontaneous occurrence) reading follows from this hypothesis.

The assumption that causatives and unaccusatives share the same underlying semantic structure will explain why a morphological operation that suppresses agent control and also productively applies to unaccusatives, ***should or could exist in the first place***. It further explains why out of control yields an accidental reading with ***both*** causatives and unaccusatives but an ability reading with unergatives. Finally, it explains the spontaneous occurrence, suddenly, all at once reading that out of control applied to an unaccusative yields. If the analysis proposed here is correct, then out of control provides very strong evidence for the claim that unaccusatives have ***underlyingly causative semantics***, as proposed in Chierchia (1989), Levin & Hovav (1995) Pustejovsky (1995) and Reinhart (1991) among others. This result is all the more surprising in a language where unaccusatives are morphologically 'primitive' - that is, in a language where all transitives and unergatives are morphologically derived - as demonstrated by Davis (to appear).

I AGENT CONTROL

In this first section, I briefly present two important aspects of the morpho-syntax of Salish languages. We will first see that transitive and unergative predications are morphologically derived in ST', as established by Davis (to appear). I then turn to a phenomenon know as Control in the Salishan literature (Thompson 1976, 1985). We will see that morphology on the predicate in ST' can mark the degree of control of the agent over the action denoted by the verb: an agent can be either in ***full*** control or ***out*** of control. The problem of control is further compounded by the fact that so called out of control morphology can be applied to an unaccusative predicate yielding basically the same range of meanings as out of control applied to a predicate with a causative meaning.

I.1 Internal Arguments

As Davis (to appear) demonstrates, ST' exhibits a fundamental asymmetry between internal and external arguments. Internal arguments are entailed by the meaning of the root, as illustrated in (1). A bare root such as √*k'ac* 'dry' or √*sec* 'hit' is invariably interpreted as an unaccusative predicate: it selects an internal argument.

(1a) √k'ác ti s-ts'wán-a
dry DET NOM-salmon-DET
'The salmon is dry' or 'The salmon dried'

(b) √sék ti sqáycw-a
hit DET man-DET
'The man was hit (with a stick or a whip)'

I.2 External Arguments

In contrast to internal arguments, external arguments are never entailed by the meaning of a root. Davis establishes that all unergative and transitive predicates are derived via morphosyntactic operations. There are two primary intransitivizers that I will discuss here: the active intransitivizer *-cal* and the middle *-Vm(')*. In (2a-c), we see that suffixation of either the active intransitivizer (ACT) or the middle (MDL) derives an unergative predicate denoting an activity. I refer to predicates suffixed with either *-cal* or *-Vm(')*, as derived unergatives.

(2a) [√k'ác - cal] ti sqáycw-a
dry ACT DET man-DET
'The man is drying (stuff)'

(b) [√sek - cál] ti sqáycw-a
hit ACT DET man-DET
'The man is hitting (people)'

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[1] St'át'imcets is a Northern Interior Salish Language spoken in southwest mainland BC, with two dialects: the Mount Currie dialect and the Upper dialect spoken near Sat' (Lillooet).
Examples are presented in van Eijk's orthography (see Appendix for key). Abbreviations used: 1 = 1st person, 3 = 3rd person, SG = singular, PL = plural, COLL = collective, POSS = possessive, SUB = subject, DET = determiner, ABS = absolutive, ERG = ergative, INC = inchoative, STA = stative, CAU = causative, DIR = directive, OOC = out of control, MDL = middle, ACT = active intransitivizer, NOM = nominalizer, PROG = progressive, NEG = negation, MOD = modal, CON = connective.

(c) [√píx - em'] ti sqáycw-a
hunt MDL DET man-DET
'The man is hunting'

(3) √álkst ti sqáycw-a
work DET man-DET
'The man is working'

There is, however, a small set of bare roots that are interpreted as unergative predicates (roughly 75 roots out of 2000), as illustrated in (3). Thus, whereas the unsuffixed root √*sek* 'hit with a stick or a whip' selects an internal argument, the unsuffixed root √*alkst* 'work' selects an external argument. Davis demonstrates that these unsuffixed unergative roots are in fact concealed middles and as such do not invalidate the generalization that bare roots in ST' are unaccusative. He then concludes that unergative predicates are uniformly derived from bare roots by suffixation of either an overt intransitivizer as is the case in (2) or a zero (null) intransitivizer as is the case in (3).

Finally, a transitive predication is constructed by combining a root (e.g. √*sek* 'be hit' or √k'ác 'be dry') in (1) with a transitivizer. There are two primary transitivizers: the causative (CAU) and the directive (DIR), as illustrated below.

(4a) [√sek-s-ás] ti sq'úm'ts-a ti twéw'wet-a
hit-CAU-3ERG DET ball-DET DET boy-DET
'The boy hit the ball'

(b) [√k'ác - s - as]
dry CAU ERG
'x dried y'

(c) [√kwís - (t)s - as]
fall - CAU - ERG
'x dropped y '

(5a) [√sek-en-ás] ti sq'úm'ts-a ti twéw'wet-a
[hit-DIR-3ERG] DET ball-DET DET boy-DET
'The boy hit the ball'

(b) [√k'ác - an' - as]
dry - DIR - ERG
'x dried y'

(c) √kwís - in' - as
fall - DIR - ERG
'x dropped y' or 'x threw y down'

1.3 Agent Control

Note that ***both*** the causative and the directive transitivizers combine with an unaccusative predicate to yield a predicate with an inherent causative meaning. In particular, applying either the CAU or the DIR to the root '(be) hit' in (1a) yields 'x caused y to be(come) hit' - that is, 'x hit y' as in either (4a) or (5a). Applying either of these transitivizers to the root '(be) dry' yields 'x caused y to be(come) dry' - that is, 'x dried y'. Finally, applying the CAU or the DIR to the root 'fall' yields 'x caused y to fall' - that is, 'x dropped y'. What then is the difference between the causative in (4) and the directive in (5)? The difference lies in the degree of "conscious (mindful) control" (Dixon 1993) of the agent over the action denoted by the predicate. The directive transitivizer is said to yield a ***control*** transitive (cf. Thompson 1985): the subject of a directive has full control over the action denoted by the verb. Thus, (5a) is not used to report that the boy inadvertently hit the ball. Likewise, the ACT and MDL intransitivizers yield control intransitives: the referents of the subjects in (2) and (3) are human participants to which we ascribe conscious (mindful) control with respect to the situation denoted by the verb. They are neither hitting, hunting nor working inadvertently.

In contrast, the causative yields a neutral control transitive: the subject of a causative either lacks control or ***need not*** have control over the action denoted by the predicate. In van Eijk's own words,

(6) In the above cases, -s- [= CAU] is used only where we do not have full control of the subject over the action. However, as we shall see in 18.8, -s- is not a 'non-control' transitivizer but rather it is indifferent (or neutral) with regard to control; N [= DIR] is definitely used to mark full control of the subject over the action. (van Eijk 1985: 134)

To summarize, the subject of a DIRective is an agent in full control over the action, whereas the subject of CAUsative is an agent that need not have control over the action: (4a) can be used to report that the boy inadvertently hit the ball; (5a) cannot. Note that this difference in degree of agent control between the causative and the directive explains the shift in lexical meaning between (4c) and (5c): applying the CAUsative to the root 'fall' yields 'drop' whereas applying the DIRective to the same root yields either 'drop' or 'throw'.

At first glance, it might seem that we could reduce agent control to volition or intentionality. This analysis however is untenable. There are at least three reasons for rejecting it. First, volition is not inherent to the meaning of agent but merely a diagnostic for agentivity. Thus, although we can impute an intention or ascribe volition to the subject of a control predicate, this by no means entails that every sentence with a control predicate describes a volitional action. That volition or intentionality are *merely* diagnostics for agentivity is emphasized by Dowty (1979) in his discussion of active vs. stative sentences. Dowty argues that in the sentence *John is being rude,* John is not inadvertently rude. Crucially, however, this sentence does not entail that "John is intentionally rude but merely that the property of being rude is under his control, is something that John could avoid doing if he chose ". Dowty (1979), for whom the notion of agent is built into the meaning of a predicate DO, then concludes that,

(7) The meaning of DO cannot be equated with the notion of intentionality or volition. ...we call this reading volitional because we impute responsibility and purpose to the subject of an active sentence ...Thus, state under the unmediated control of the agent may be the best phrase for describing DO. (Dowty 1979: 118)

Thus, as Thompson (1985: 393) himself states "The traditional notion (non)volitional covers only part of the semantic sphere represented and fails to capture the generalisation."

1.4 Out of Control

The second problem is that control cannot be reduced to a single binary opposition, as our discussion of the distinction between the full control directive and the neutral control causative should have already established. Indeed, control is a three way distinction: control vs. neutral control vs. out of control. In particular, Salish languages have what is called an out of control marker "...which emphasizes the absence of control over some state or event " (Thompson 1985: 401). As we shall see in the next section, when the out of control discontinuous clitic *ka...a* in ST' is affixed to a verb with an external argument, it suppresses agent control yielding either an ability reading or an accidental reading.

Finally, the third reason for not reducing control to an opposition between a volitional vs. non-volitional agent is that out of control applies freely to predicates which lack an external argument altogether. In particular, it applies to unaccusative predicates, yielding a suddenly/all at once, accidental reading. I will argue that the

assumption that causatives and unaccusatives share the same underlying semantic structure explains why a morphological operation that productively applies to unaccusatives - but also suppresses agent control whenever there is an agent - should or could exist in the first place. The distribution of the out of control readings in ST' is summarized in the following sections.

i.4.1 The ability reading of out of control 'ka...a'

When the discontinuous morpheme *ka...a* combines with either a bare or a derived unergative, it suppresses the agency of the agent, yielding an 'able to' reading. Once *ka...a* has been affixed to the verb, the sentence no longer describes an action or an event, but rather the ability or the capacity of the subject to perform the action denoted by the verb; compare (8a/b) with (2a/b) above.

(8) *Zero-unergatives* *-cal derived unergatives*

(a) **ka** - álkst - kan - **a**
OOC - work - 1SG.SUB - OOC
'I am able to work'

(b) **ka** - sék - cal - **a** ti twéw'wet-a
OOC - hit - ACT - OOC DET boy-DET
'The boy is able to hit (people)'

-Vm derived unergatives

(c) **ka** - áts'x - em - **a**
OOC - seen - MDL OOC
'S/he is able to see'

(d) **ka** - k'ác - cal - **a**
OOC - be dry - ACT - OOC
'to be able to dry'

(e) **ka** - píx- - em - **a**
OOC - hunt - MDL- OOC
'to be able to hunt'

(f) **ka** - túp- - cal - **a**
OOC - punch - ACT - OOC
'to be able to punch'

Note that out of control can also yield a 'managed to' reading (e.g. *I managed to work*). I will not treat this reading as a third distinct reading but merely as the past of the 'able to' reading. In other words, I analyse *I managed to work* as *I was able to work*. - cf. van Eijk (1983: 17) who gives the following entry for *ka...a* " suddenly, unexpectedly, by accident, (finally) able to do it".[2]

i.4.2 The accidental reading of out of control 'ka...a'

When *ka...a* combines with either an unaccusative or a causative, it does not yield an 'able to' reading. It yields an *accidental* reading, as illustrated in (9) and (10). In particular, note the parallel between (9a) and (10a), (9b) and (10b) or (9c) and (10c).

(9) *Unaccusatives*

(a) **ka** - kwís - **a** ti k'ét'h - a
OOC - fallen OOC DET rock DET
'The rocked dropped accidentally'

(b) **ka** - tség - **a** ta- qmút - s- - a
OOC - torn OOC DET hat - 3SG.POSS- DET
'His hat got torn by accident'

[2]Note that neutral control transitives can also give rise to a 'managed to' reading (*without* out of control morphology, cf. Thompson 1985). Clearly, much more needs to be said about the distribution of this reading since it can arise with neutral control causatives. However, since I have not as yet established its distribution, I set the issues that this reading raises aside in this paper.

(c) **ka** - múl - **a** i n - sflhts'7 - a
OOC - immersed OOC PL.DET 1SG.POSS shoe - DET
'My shoes got put in the water by accident'

(d) **ka** - gúy't - **a**
OOC - sleep - OOC
'He fell asleep by accident'

(e) **ka** - tsíq - kan - **a**
OOC - stabbed - 1SG.SUB OOC
'I got stabbed by accident'

(f) **ka** - tség - **a** n- píph - a
OOC - bent OOC 1SG.POSS paper - DET
'My paper got accidentally bent'

(g) **ka** - láw - **a** ti lop -a
OOC - hung OOC DET rope-DET
'The rope got hung up by accident'

(h) **ka** - cúk'w - **a** ti szik - a
OOC - be pulled - OOC DET log - DET
'The log got accidentally dragged' (e.g. hooked on a truck)

(10) *Causatives*

(a) **ka** - kwís - (t)s - **a**
OOC - fallen - CAU - OOC
'to drop something by accident'

(b) **ka** - tség - s - as -**a**
OOC - torn - CAU -ERG - OOC
'He tore it by accident'

(c) **ka** - múl - s - **a**
OOC - immersed - CAU - OOC
'to put in water by accident'

(d) **ka** - mát - s - kan - **a**
OOC - mixed - CAU - 1SG.SUB - OOC
'I mixed it up accidentally'

(e) **ka** - sék - s - as - **a** ti sq'úm'ts-a ti twéw'wet-a
OOC - hit - CAU ERG OOC DET ball - DET DET boy - DET
'The boy hit the ball (accidentally)' * 'The boy is able to hit the ball'

Finally, out of control morphology cannot co-occur with the directive transitivizer (recall that the **Dir** signals a full control transitive):

(11) *ka √sék - en - a ka - √kwís - in' - a *ka - √páqw7 - an - a
OOC - hit - DIR - OOC OOC -fallen - DIR - OOC OOC - scared - DIR -OOC

i.4.3 The suddenly reading of out of control 'ka...a'

Whereas a sentence with out of control applied to a causative describes an event that happened accidentally, a sentence with out of control applied to an unaccusative describes an event that happened spontaneously, all at once, suddenly, unexpectedly and/or accidentally.[3] Thus, compare (12a) with (12b), or (12c) with (12d). Note also that the root in (12g) is a bound root. As Davis (to appear) states "most roots may surface only if they have undergone one or more aspectual processes". For instance, the root *√qáxw* 'break' does not surface unsuffixed, it surfaces as either *ka-qáxw-a* 'break suddenly' or as *s-qáxw* 'broken'(with the stative prefix s-).

(12a) **ka** - páqu7 - lhkan - **a**
OOC - scared - 1SG.SUB - OOC
'I got scared suddenly'

(b) **ka** - páqu7 - s - kán - **a**
OOC - scared - CAU - 1SG.SUB - OOC
'I accidentally scared him'

[3] Interestingly, van Eijk notes that "Many cases of -s- [= causative] seem to have a momemtaneous aspect tinge..., while N [= Directive] often refers to a continuous action." (van Eijk 1985: 153).

(c) **ka** - qám't - **a**
OOC - hit- - OOC
'to be hit suddenly (accidentally)'

(d) **ka** - qám't - s- - kan- - **a**
OOC - hit - CAU - 1SG.SUB - OOC
'I accidentally hit someone'

(e) **ka** - t'al - **a**
OOC - stop OOC
'to stop accidentally, suddenly'

(f) **ka** - nem' - **a**
OOC - blind - OOC
'to go blind suddenly'

(g) **ka** - háhl' - **a**
'He appeared, he was born'

(h) **ka** - lhéxw - **a**
OOC - come up - OOC
'to appear all of sudden'

(i) **ka** - lwés - **a**
OOC - break - OOC
'to break, shatter all of sudden'

(g) **ka** - xléq' - **a**
OOC - roll down - OOC
'to roll down suddenly'

Can we make sense of the fact that out of control yields either a suddenly or an accidental reading when applied to unaccusative predicates that denote either a simple state or a change of state? I believe we can in so far as both out of control readings focus on the *inception* of the state or the change of state specified by the predicate.

Dowty (1986:50) argues that "an adverb like *suddenly* will cancel the pragmatic inference that the state obtained earlier...[yielding] an inceptive interpretation of the stative" This is precisely the effect of out of control when it applies to a root such as √páqu7 'scared' or √nem' 'blind': it focuses on the inception of the state, on its sudden, spontaneous coming into being. As for the accidental reading, it is also an inceptive reading. As Smith (1983: 489) notes, adverbs "which relate to control" such as *accidentally* occur freely in inchoatives where they are associated with the inception of a change of state by an unnamed agent. In sum, out of control signals either that a (change of) state came into being suddenly, spontaneously and/or accidentally. In Thompson's (1985:420) words: out of control in Salish suggests "the spontaneous happening or result of some unspecified agent's act".

To conclude, out of control raises three major questions. First, recall that a neutral control transitive and an out of control transitive both denote events which are *not* under the unmediated control of an agent. What then is exactly the difference between a neutral control transitive and an out of control transitive? Second, what is the generalization (if any) that explains the distribution of the ability reading and the accidental reading? Thirdly, why can the same morphological operation suppress agent control when applied to a predicate with an external argument and at the same productively apply to predicates which lack external arguments - that is, to predicates denoting actions which are never under the control of an agent in the first place. Finally, what is out of control? In particular, why does it yield precisely the readings that it yields and how do we formally and uniformly derive these readings?

II CAUSATION VS. ACCIDENTAL CAUSATION

Recall that both the out of control causative in (13a) and the neutral control causative in (13b) can be used to report a situation in which Bucky inadvertently breaks the window.

(13a) *The Out of Control Causative*

ka	- sek'w	- p	- s	- ás	- **a**	ti	nk'wan'ústen-a	s-Bucky
OOC	- broken	- INC	- CAU	- ERG	- OOC	DET	window-DET	NOM-Bucky

'Bucky broke the window (unintentionally)'

(b) *The Causative*

sek'w	- p	- s	- ás	ti	nk'wan'ústen-a	s-Bucky
broken	- INC	- CAU	- ERG	DET	window-DET	NOM-Bucky

'Bucky broke the window (unintentionally)'

What then is the difference between a simple causative and an out of control causative? As the following paradigms illustrate, these two types of causatives differ in one fundamental respect. The causer in an *out of control* causative must be a human agent: substitution of the event nominal 'the wind' or 'the storm' for 'Bucky' in (13a) yields an ungrammatical sentence, as shown in (14).

(14) *The Out of Control Causative*

(a) ***ka** - sek'w - p - s - ás - **a** ti nk'wan'ústen-a ti srap-a
OOC broken - INC - CAU - ERG - OOC DET window-DET DET tree-DET
'The wind broke the window'

(b) ***ka** - sek'w - p - s - ás - **a** ti nk'wan'ústen-a ti qel-alh-tmícw-a
OOC broken - INC - CAU - ERG - OOC DET window-DET DET bad-CON-land-DET
'The storm broke the window'

In contrast, there is no such restriction on the subject of a causative: the causer can be either a human agent such as 'Bucky' in (13b), or a non-human agent such as 'the wind' or 'the storm':

(15) *The Causative*

(a) sek'w - p - s - ás ti nk'wan'ústen-a ti k'éxem-a
broken - INC - CAU - ERG DET window-DET DET wind-DET
'The wind broke the window'

(b) sek'w - p - s - ás ti nk'wan'ústen-a ti qel-alh-tmícw-a
broken - INC - CAU - ERG DET window-DET DET bad-CON-land-DET
The storm broke the window'

In order to understand what this asymmetry signifies, I will first interpret it in terms of Jackendoff 's (1990) decomposition of the traditional notion of Agent into two independent roles: extrinsic instigation and willful agency.

(16a) One sense of Agent, "extrinsic instigator of action" is captured by the role " first argument of causer "... However, a second sense is "volitional actor". This appears in the well-known ambiguity of Bill rolled down the hill, where Bill ***may*** or ***may not*** [emphasis added] be performing the action willfully. Generally, it seems that any Actor, if animate is subject to this ambiguity..." (Jackendoff 1990:128-129)
"The possibility of willfulness arises from the fact that an event of causation can be reanalyzed as an actor performing an action. [W]illfulness or intentionality is an optional property of an *actor*..." (1983:176)

(b) *Extrinsic Instigator*
The wind rolled the ball down the hill

(c) *Willful Agency* (+/- volitional actor)
Bill rolled down the hill

The causative and the out of control causative thus differ in one crucial respect: an extrinsic instigator such as *the wind* in (16b) or the *storm* in (14) is never the subject of an out of control causative. Only a participant that is capable of willful agency can be out of control. Out of control morphology signals that the action denoted by the verb is not under the control of this human agent: Bucky in (13a) acted accidentally or unintentionally. Crucially, only participants capable of willful agency can accidentally bring about the occurrence of an event, as illustrated in (17) were we see that adverbs of control (*accidentally* or *deliberately*) are illicit in sentences with event descriptions in subject position:

(17a) *Flyod's singing accidentally/deliberately broke the window
(b) *The cold accidentally/deliberately froze the lake
(c) *A change in the molecular structure accidentally/deliberately broke the window (from Parsons 1990:113).

We can thus identify out of control causation as *accidental* causation. This generalization explains the restrictions that out of control imposes on the external argument of a predicate: (14a-b) are ungrammatical because they can only have the illicit interpretation in (18a'-b'), respectively. The *wind* and the *storm* do not **do** anything - hence, they cannot accidentally break the window.

(18a) ***ka** - sek'w - p - s - ás - **a** ti nk'wan'ústen-a ti srap-a
OOC broken - INC - CAU - ERG - OOC DET window-DET DET tree-DET
(a') *'The wind broke the window accidentally'
(b) ***ka** - sek'w - p -s - ás - **a** ti nk'wan'ústen-a ti qel-alh-tmícw-a
OOC broken - INC - CAU - ERG - OOC DET window-DET DET bad-CON-land-DET
(b') *'The storm broke the window accidentally'

We can now answer our initial question: what is the difference between a neutral control and an out of control transitive since both specify causation of a change of state which is not under the unmediated control of an agent? A neutral control causative merely specifies causation - whether the resulting event was accidentally/deliberately caused by a human agent, or non-accidentally caused by an extrinsic instigator. In contrast, an out of control causative only specifies accidental causation. The subject of an out of control causative must be a human participant because only participants capable of willful agency can accidentally bring about the occurrence of an event. As we shall see in section IX, the hypothesis that out of control is the equivalent of a passive defined on the event structure of a predicate will explain why out of control transitives can only be used to describe events that were accidentally caused.

III THE DISTRIBUTION OF THE ABILITY AND THE ACCIDENTAL READING

I now address the question of which generalisation underlies the distribution of the ability and the accidental reading of out of control *ka...a*.

III.1 Inherent Aspect

Recall first that when *ka...a* combines with either a causative or an unaccusative, it yields an accidental reading, whereas when it combines with either a zero unergative or a derived intransitive, it yields an ability reading. I give two paradigms illustrating all the relevant readings derived from the root √*sek'w-p* 'broken'. Note that √*sek'w-p* is a bound root: it does not surface unsuffixed.

(19a) sek'w - p ti nk'wan'ústen-a
broken - INC DET window-DET
'The window broke.'

(b) Adding out of control to an unaccusative
ka - sek'w - **a** ti nk'wan'ústen-a
OOC broken - OOC DET window-DET
'The window was accidentally/suddenly broken *'The window is able to/can break'

(c) Deriving a transitive from an unaccusative
sek'w - p - s - ás ti nk'wan'ústen-a 'He broke the window'
broken - INC - CAU - ERG DET window-DET 'x cause y to be broken'

(d) Adding out of control to the derived transitive
ka - sek'w - p - s - ás - **a** ti nk'wan'ústen-a ti sqáycw-a
OOC broken - INC - CAU - ERG - OOC DET window-DET DET man-DET
'The man broke the window accidentally.' *'He is able to break the window'

(e) Deriving an unergative[4]
sek'w - p - cál ti sqáycw-a
broken - INC - ACT DET man-DET
'The man is breaking (things in general)'

(f) Adding out of control to the derived unergative
ka - sek'w - cal - **a** ti sqáycw-a
OOC broken - ACT - OOC DET man-DET
'The man is able to break (things in general)'
*'The man is breaking the window accidentally'

The ability reading arises when out of control is affixed to (derived) unergative predicates as illustrated in (19f). In contrast, the accidental reading arises when out of control is affixed to either a causative verb as in (19d), or an unaccusative as in (19b). The difference between these two classes of predicates is aspectual: a (derived) unergative denotes an activity - that is, an atelic or unbounded event (an event that is ongoing, that has no culmination or natural end point). In contrast, both unaccusatives and causatives denote telic or bounded events (events that culminate when the change of state specified by the lexical meaning of the root comes about - e.g. when the *window* in (19a) or (19c) comes to be broken. The following preliminary generalisation emerges.

(20) The accidental reading obtains in sentences describing telic (bounded) events, it does not obtain in sentences which describe atelic (unbounded) events.

In the following section, I will provide crucial support for the generalization in (20) by examining the effect of VP-external operators on the distribution of out of control readings.

[4] Recall that unergatives are morphologically derived from intransitives. See footnote 6.

III.2 VP-external Operators and the Distribution of the Accidental Reading

The accidental reading arises when out of control morphology is applied to a telic verb. This reading, however, is lost when either the combination [out of control + causative] or [out of control + unaccusative] occurs under the scope of certain operators such as the progressive auxiliary. As shown by the minimal pairs in (21), only the ability reading obtains under the scope of the progressive:

(21) *The progressive auxiliary*

(a) **ka** - sek'w - p - s - ás - **a** ti nk'wan'ústen-a ti sqáycw-a
OOC broken - INC - CAU - ERG - OOC DET window-DET DET man-DET
'The man broke the window accidentally.' *'He is able to break the window'

(a') wa7 **ka** - sek'w - p - s - ás - **a** ti nk'wan'ústen-a ti sqáycw-a
PROG OCC -broken - INC - CAU - ERG - OOC DET window-DET DET man-DET
'The man is able to break the window.' *'The man is breaking the window accidentally.'

(b) **ka**-sék-s-as-**a** ti sq'úm'ts-a ti twéw'wet-a
OOC-hit-CAU-ERG-OOC DET ball-DET DET boy-DET
'The boy hit the ball (accidentally)' * 'The boy is able to hit the ball'

(b') wa7 **ka** -sék -s - as - **a** ti sq'úm'ts-a ti twéw'wet-a
PROG OOC -hit - CAU -ERG -OOC DET ball-DET DET boy-DET
'The boy is able to hit the ball' *'The boy is hitting the ball accidentally'

(c) **ka** - kwís - **a** ti k'ét'h'-a (c') wa7 **ka** - kwís - **a** ti k'ét'h'- a
OOC - fall - OOC DET rock-DET **PROG** OOC - fall - OOC DET rock-DET
'The rock accidentally fell' 'The rock can fall'

The distribution of the out of control readings in (21) follows from the generalization in (20) given the well-known similarities between progressive event sentences and statives. The accidental reading is lost when the out of control-transitive occurs under the progressive marker *wa7* because a sentence with the progressive no longer describes a telic event: it focuses on an interval in the temporal structure of the verb that leads up to but does not include its culmination point. Thus, when out of control is applied to a causative under the scope of the progressive, the ability reading obtains because the sentence describes an open ended event (a process).

The accidental reading is also lost when either an out of control unaccusative or an out of control causative occurs under negation as in (22b-c) or under the adverb 'always' as in (22d-e).

(22) *Negation and adverbial quantification*

(a) **ka**-sék-s-as-**a** ti sq'úm'ts-a ti twéw'wet-a
OOC-hit-CAU-ERG-OOC DET ball-DET DET boy-DET
'The boy hit the ball (accidentally)'

(b) **cw7aoz** kw-en-s **ka**-sék-s-as-**a** ti sq'um'ts-a ti twéw'wet-a
NEG DET-NOM OOC-hit-CAU-ERG-OOC DET ball-DET DET boy-DET
'The boy is not able to hit the ball' *'The boy is accidentally not hitting the ball'

(c) **cw7aoz** kw-en-s **ka** - kwís - **a** ti k'ét'h'-a
NEG DET-NOM OOC - fall - OOC DET rock-DET
'The rock can't fall' ('There 's no way that rock can fall')

(d) **papt** sék-s-as ti sq'úm'ts-a ti twéw'wet-a
always hit-CAU-ERG DET ball-DET DET boy-DET
'The boy always hits the ball'

(e) **papt** **ka**-sék-s-as-**a** ti sq'úm'ts-a ti twéw'wet-a
always OOC-hit-CAU-ERG-OOC DET ball-DET DET boy-DET
'The boy is always able to hit the ball' *'The boy is accidentally always hitting the ball'

(f) **papt** kw-s **ka**-gúy't-**a** ti sk'úk'wm'it-a
always DET-NOM OOC-sleep-OOC DET child-DET
'The child always goes to sleep/ is always able to sleep'

Once again, the distribution of the out of control readings in (22) follows from the generalization in (20). The accidental reading is lost in (22b-c) because it can arise only in sentences which describe (telic) events and negated sentences do not describe events: (22b) (with or without *ka...a*) asserts that no hitting event occurred at some contextually salient time. Indeed, it has often been suggested that negation has the effect of converting a sentence describing an event into a state description (e.g. Max didn't die entails that Max is alive). (20), thus, correctly predicts the unavailability of the accidental reading under negation. Likewise, the loss of the accidental reading in (22e-f) where the verb is under the scope of the adverbial quantifier *papt* 'always' is not surprising if,

(23) [Q]uantificational sentences behave very much like sentences which describe states (In fact, this is one of the reasons why quantificational sentences are sometimes classified as state describing). (Kamp & Reyle 1993: 638).

In the case at hand, I will assume that when the universal adverb of quantification *papt* applies to a stage (or event) denoting predicate, it yields an individual level predicate. Thus, (22e-f) do not describe the occurrence of an event but a generic or characteristic property of the subject. An accidental reading is, thus, unavailable in (22e-f) because these sentences are aspectually stative. Finally, the accidental reading is lost when an out of control causative occurs under the scope of a modal operator (e.g. *kelh* 'will, might' or *k'a* 'apparently').

(24) *Modality*

(a) ka-sek-s-as-á kelh ti sq'úm'ts-a ti twéw'wet-a
OOC-hit-CAU-ERG-OOC MOD DET ball-DET DET boy-DET
'The boy will/might be able to hit the ball'
*'The boy will/might be hitting the ball accidentally'

(b) **ka** - kwís - **a** kelh ti k'ét'h'- a
OOC - fall - OOC MOD DET rock-DET
'The rock will/might drop' *'The rock will/might drop accidentally'

This time, the unavailability of the accidental reading does not follow from (20): (24) does not describe an atelic event (that is, either a process or a state). It describes an irrealis event, an event that will either necessarily or possibly culminate at some future time. Accordingly, the generalization in (20) must be revised as in (25).

(25) The accidental reading obtains in sentences which describe telic events that have culminated at some past time t.

Let's recapitulate. We first established that the accidental reading can only be defined for those predicates whose inherent temporal structure includes a culmination point - that is, for verbs denoting either a change of state or causation of a change of state but not for verbs denoting activities (e.g. unergatives). We then established that the distribution of the two out of control readings is not *solely* determined by the inherent temporal structure of the predicate to which *ka...a* is affixed: it is determined by the temporal contour of the sentence as a whole. Aktionsarten - in particular, whether the lexical meaning of the verb itself makes available a culmination point - determines to a large extent the semantics of out of control morphology *merely* because it determines to a large extent the aspectual structure of the sentence. In sum, the distribution of the accidental reading is also determined by VP-external operators because aspect is not solely a property of verbs or verb phrases but a property of the entire sentence, determined compositionally by the aspectual structure of the predicate in combination with predicate-external operators (cf. Dowty 1986 or Smith 1983).

Before closing this section, I would like to emphasize that the distribution of the accidental reading in ST' is not surprising, as the following English paradigm is intended to illustrate. The contrast between (26a) and (26a') illustrates that the adverb *accidentally* cannot occur - or yields a very strained interpretation - in sentences describing states, activities or characteristic properties but occurs freely in sentences describing telic events. (26b-e) show that the accidental reading is lost (or strained) under the scope of the progressive, negation or the future.

(26a)	* Max hates asparagus accidentally	vs.	(a')	Rosa hit Max accidentally
	* Max walks accidentally			Rosa fell accidentally
	* Max accidentally walked			Max accidentally walked to the store
(b)	* Rosa is breaking her leg accidentally	vs.	(b')	Rosa broke her leg accidentally
	*The vase is falling accidentally			The vase fell accidentally
(c)	√ Max didn't accidentally punch Gerald	=	(c')	Max punched Gerald deliberately
	√ Max didn't accidentally fall	=		Max fell deliberately
(d)	* Max accidentally didn't punch Gerald	vs.	(d')	Max accidentally punched Gerald
	* Max accidentally didn't fall			Max accidentally fell
(e)	*/√ Max will accidentally punch Gerald		(e')	OK only if speaker is clairvoyant
	*/√ Max will accidentally fall			OK only if speaker is clairvoyant

In sum, only events which are asserted to have *happened* can (easily) be presented or viewed as accidental - be it in ST' or in English. Finally, support for the generalizations presented in this section comes from Soh (1994). Soh analyses the meanings associated with the verbal prefix *ter* in Malay. This prefix yields either an adjectival passive reading, an accidental reading or an abilitative reading. Soh states that the accidental reading occurs in transitive sentences with perfective aspect and is incompatible with negation; in contrast the ability reading is imperfective and common in negative statements. The distribution of out of control in ST', thus, subsumes the distribution of *ter-* in Malay.[5]

[5] Soh (1994a) derives the three readings of *ter-* from a novel model of argument structure with two tiers - a thematic tier and an aspectual tier (see also Soh 1994b, Grimshaw 1990 and Ritter & Rosen 1993) - and a linking/delinking mechanism. The adjectival passive reading is derived by delinking both the aspectual role and the thematic role associated with an external argument; the accidental reading is derived by delinking solely the aspectual role of the external argument; and the abilitative reading is derived by delinking the aspectual roles of both the external and the internal arguments.

IV WHAT IS OUT OF CONTROL?

I now turn to the core question that out of control raises: what is it? In particular, why can the same morphological operation suppress agent control with verbs that have an external argument and at the same productively apply to predicates which denote actions which are never under the control of an agent in the first place - since they lack an external argument altogether? Why does it yield precisely the readings that it yields and how do we formally derive these readings?

Hovav & Levin (1995) distinguish between morphological operations which operate on the lexical representation of verb meanings (in their framework, derive new Lexical Conceptual Structures) and morphological operations which solely affect the argument structure of predicates. They define passive and reflexivization as morphological operations which only affect argument structure. For instance, reflexivization in French derives an intransitive verb from a transitive verb. As such it affects the number of arguments that a predicate projects (the verb is syntactically monadic) but it does not affect the aspectual classification of a predicate: *Gerald hit Max* and *Gerald hit himself* in French describe the same type of event. In contrast, morphological operations which affect lexical meanings alter either the aspectual template associated with a predicate or the pairing of a name with an aspectual template.

I propose that the range of readings that out of control yields in ST' can be uniformly derived from the hypothesis that *out of control is a passive defined on the lexical meaning* of a predicate. More precisely, I will define out of control as a morphological operation which alters either the aspectual template associated with a predicate or the pairing of a name with an aspectual template, as proposed in Hovav & Levin.

IV.1 The Syntax of Events (Pustejovsky 1988, 1991)

The analysis developed here is based on the model of lexical meaning proposed in Pustejovsky (1989, 1991, 1995) and van Hout (1994, to appear). In Pustejovsky, the aspectual properties of verbs - and then sentences - are configurationally and compositionally defined in terms of recursive event structures. In particular, he proposes that events are not atomic entities: they are decomposed into recursive subeventual structures. There are three primitive event types whose terminal elements are atomic events. I restrict the term *eventuality* to ***atomic*** events. A state (S) is defined as in (27a): it is a single eventuality that is viewed or evaluated relative to no other eventuality. A process (P) is defined as in (27b): it is a sequence of identical eventualities. Finally, a transition (T) is defined in (27c): it is as a single event evaluated relative to another single event. Note that E in (27c) is an event meta-variable which stands for any of the three basic event types in (27), allowing recursion of event structure.

(27) ***Event types***

(a) S --> [e]

(b) P --> [e_1 ... e_n]

(c) T --> [E_1 E_2] E = { S, P, T }

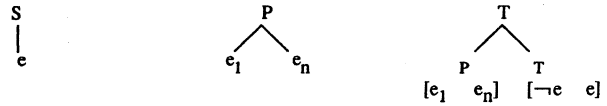
In both Pustejovsky and van Hout, every verb in the lexicon is associated with an event type. For instance, a stative verb is lexically specified with the event type of a state whereas an activity verb is associated with the event type of a process, as illustrated in (28a-b) respectively. Transitions can be recursive or non-recursive. In particular, a causative predicate is a recursive transition consisting of two subevents: the causing process (E1) and the

resulting change of state (**E2**). **E2** is itself analysed as a (non-recursive) transition: as an eventuality evaluated relative to its opposition (¬p becomes p), as illustrated in (28c).

(28) **Atelic event type** **Telic event type**

Stative verbs *Activity verbs* *Recursive transition*

(a) e.g. know, love (b) e.g. walk, run, sleep (c) e.g. break, melt



IV.2 Event Composition (Pustejovsky 1988, 1991, van Hout 1994, to appear)

The event structure of a predicate specifies its default aspectual class. Recall however that the event type of a sentence need not match the event type of the main verb. As was discussed in section III.2, VP-external operators such as adverbials, the progressive or negation shift the aspectual class of the verb. In Pustejovsky (1991), aspectual shifts which derive from the syntactic combination of a verb with either a PP or a resultative phrase are derived via event composition. Event composition is a generative procedure which constructs complex events from the three primitive event types defined in (27). The output of event composition must conform to (27).

In van Hout (1994, to appear), event composition derives shifts in the aspectual properties of verbs triggered by morpho-syntactic operations on the base form of the verb. In particular, she proposes that all predicates - that is, verbs, prefixes, particles and prepositions - are lexically associated with an event type. The event-type of a morphologically complex verb is compositionally derived by combining the event structure of the base verb with the event structure of the particle (or prefix). For instance, Dutch *eten* 'eat' by itself denotes an atelic event (the activity of eating) whereas *eten op* 'eat up' denotes a telic event: the particle *op* adds a resulting state to the meaning of the base verb (the state of being eaten up). This event type shift (from atelic to telic) is derived by combining the basic event type of the verb with the event type of the preposition, as in (29).

(29) **Atelic-telic event type shifting** (van Hout to appear: 56)

(a) *eten* 'eat' (b) *op* 'up' *opeten* 'eat up'

In sum, aspectual classes - be it of morphologically complex verbs, verb phrases or sentences - are compositionally derived by assuming a level of event structure and a generative procedure for composing events. Having thus set the stage, I will now turn to the question of how to formally define out of control.

IV.3 Out of Control and Event Decomposition

Following van Hout and Pustejovsky, I assume that certain morpho-syntactic processes operate on event structures. In particular, aspectual affixes (including (in)transitivizers) in ST' will be analysed as the equivalent of the event-type shifting particles or prepositions discussed by these authors - that is, they are event functors, applying to a given event type to derive a different event type - see Davis & Demirdache (1995).

Note that the event functors discussed by van Hout and Pustejovsky apply to a given event type to yield a *higher* event type: they apply to the primitive event types defined in (27) to yield complex (recursive) event types.

For instance, the particle *op* in (29) applies to a process to yield a transition between a process and a resulting state. I will also assume that *ka...a* is a type-shifting functor. However, unlike the functors discussed above, it does not apply to a given event type to yield a *higher* event type but applies to a given event type to yield a *lower* event type. More precisely, I make the following preliminary hypothesis,

(30) When *ka...a* is affixed to a predicate, it shifts the event-type associated with this predicate into a lower event-type by suppressing the initial subevent in its event structure.

We will now see how the hypothesis in (30) derives the ability reading of out of control *ka...a*.

V DERIVING THE ABILITY READING

Recall that the ability reading obtains whenever out of control is affixed to a bare or derived unergative, as was illustrated in section 1.4.1 above. Any analysis of out of control must thus provide answers to the following two questions.

(31a) Why does a sentence with an activity verb no longer assert the occurrence of an event once the verb is affixed with out of control morphology?

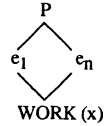
(b) Why does a sentence with an activity verb affixed with out of control assert the ***ability*** of the external argument to perform an action?

Note that (31a) and (31b) are correlated but independent questions: prima facie, it is not clear why suppressing the event reading of a verb should yield an ability reading - as opposed to say a generic habitual reading or an irrealis event reading, as I will argue shortly.

V.1 Type-Shifting a Activity Verb into a Stative Verb

(Derived) unergatives denote activities and as such have the event structure of a process:

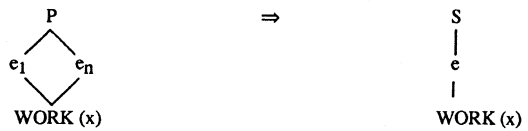
(32) ***Event type of (derived) unergatives***



The out of control morpheme *ka...a* was defined as an event type-shifting functor that applies to a given event type to yield a *lower* event type by suppressing its initial subevent. Thus, when *ka...a* applies to a process, it will suppress the temporal interval that defines the beginning of the event (**e1** in (32)), yielding the derivation in (33).

(33) ***Event Decomposition***

(a) *álkst* 'to work' (b) *ka-álkst-a* 'to be able to work'



As shown in (33b), when the event functor *ka...a* applies to a verb denoting an activity, it yields a verb with the event structure of a stative-verb such as 'know' or 'love'. Recall that the event structure associated with a stative

verb is a state (a single eventuality evaluated relative to no other eventuality, as in (28a) above). We now have a very simple answer to (31a). Activity verbs like 'work' are similar to stative verbs like 'know' in that they describe episodes that lack a culmination point. However, the temporal schema of an activity verb differs from that of a stative verb in one crucial respect: whereas an activity verb describes an event that starts at an initial boundary, a stative verb does not describe any kind of change and thus has no natural boundaries. A sentence with an activity verb affixed with out of control morphology no longer asserts the occurrence of an event because out of control suppresses the temporal edge that defines the beginning of the event.

The notion of agent is associated with the participant that identifies the initial subevent of an event structure since the agent is the causer or the instigator of an event (cf. Grimshaw 1990, Pustejovsky 1989, 1991, Ritter & Rosen 1993 and van Hout 1994, to appear). A passive suppresses an external argument position or the agent role in the thematic grid of the verb (depending on the theory). In contrast, out of control does not suppresses the agent. It suppresses the agentivity of the agent by suppressing the subevent in an event structure that is associated with the notion of agent.

v.2 Stative Verbs have an Inherent Ability Reading (Vendler 1967)

I now turn to the question of why out of control yields precisely an ability/capacity reading. Note that generic/habitual sentences are aspectually stative and further can express capability or ability, as illustrated in (34) by the fact that the sentences in (a/a') can be paraphrased as in (b/b').

(34a) 'John runs 50 miles without ever stopping' (Chierchia & McConnel-Ginet 1992: 234)
(a') 'John can run 50 mile without ever stopping'
(b) 'The program parses complicated questions'
(b') 'The program can parse complicated questions'

So why does type-shifting an activity verb into a stative verb yield a sentence which asserts that Bucky has the ability or the capacity to perform the activity of working as in (35a), but not a sentence that asserts that working is a characteristic or generic property of Bucky; that Bucky frequently or habitually works, as in (35b) ?

(35) ka - álkst - a s - Bucky
OOC work OOC NOM Bucky
(a) 'Bucky is able to work' or 'Bucky can work'
(b) * 'Bucky works' (i.e. Bucky habitually/regularly/frequently works)

That suppressing the event reading of an activity verb in ST' (with out of control morphology) yields a reading with the modal force of *can* is not surprising since suppressing the event reading of activity verbs in English (with present tense) yields a range of readings which includes a deontic modal reading, as illustrated in (36a) from Zagona (1990: 390). What is surprising is that suppressing the event reading of an activity verb in ST' yields only a reading with the modal force of *can* but not a generic (habitual activity) reading or a reading with a future-oriented modal force (e.g. Bucky might/will work).

(36a)

	Deontic modal reading	*Habitual activity reading*	*Future reading*
What can she do?	She sings	Mary (always) sings	Mary sings tomorrow
	She walks already	The chimney smokes	We eat at 7:00
	She writes poetry	She eats very little	We watch TV tonight

The answer to these questions is provided by Vendler (1967: 104-5) who argues that stative verbs have an inherent able to reading,

(37) Still, I think it might be useful to mention, by way of digression, a surprising feature about states which is not strictly connected with considerations of time.

> ... while *to be able to run* is never the same thing as *to run* or *to be able to write a letter* is by no means the same thing as *to write it*, it seems to be the case that, in some sense, *to be able to know* is *to know, to be able to love* is *to love*...
>
> ...Hence the airy feeling about *I can know, I can love, I can like*, and so forth. This also explains why *I can believe it* is very often used instead of *I believe it*.

Indeed, Vendler uses the inherent ability reading of statives as a test for classifying a verb as stative: 'run' and 'write' are not stative because 'to be able to run' and 'to be able to write' are not (respectively) equivalent to 'to run' and 'to write'. Conversely, 'know' is stative precisely because to 'be able to know' is equivalent to 'to know'.

We now have an answer to the question in (31b). Out of control *ka...a* is an event functor that type-shifts an event type into a lower event type. When it applies to a process verb like 'work', it suppresses the eventuality that defines the beginning of the event. The output of event decomposition is a verb associated with the same constant WORK (which represents the aspects of the meaning of 'work' that distinguishes it from other verbs with the same event structure) and the same argument structure but with the aspectual structure of a stative verb.[6] A

[6] Note that the event structure proposed in (28a) for stative verbs is clearly unsatisfactory: (28a) does not distinguish between an individual level property (e.g. *tall*) and a stative verb such as *know*. We cannot thus derive the addicity of a stative predicate from its event structure (which I take to be the null hypothesis, see D&D). Note that Pustejovsky (1995) proposes a more complex (i.e. bi-eventual) structure for statives (in particular, for psychological statives); however, defining the event structure of stative predicates is well-beyond the scope of this paper.
In this connection, note that derived unergatives - and their out of control counterparts which I have analysed as derived statives - are syntactically intransitive but semantically transitive. In particular, *cal* derived unergatives permit a *with object* (van Eijk 1985). A 'with object' is a *weak* object in de Hoop's (1992) sense: it is a generic/non-specific theme, requiring either the collective determiner **ki** as in (i) or the non-specific determiner **ku**.
(i) k'ác - cal -Ø/ (*- **as**) ki sts'wán-a
dry - ACT ABS/(*- ERG) COLL-DET salmon-DET
'She did some salmon-drying'
Following de Hoop (1992) and van Hout (1993), D& D analyse the weak object in (i) as either an incorporated theme or a predicate modifier. Assuming that (in)transitivizers in ST' background or foreground a subevent in an event structure, as I will propose in section VI, we can recast D&D's analysis as follows. Unergatives are derived from directive transitives which have the event structure: [**P T**] (a process causes a change of state). Suffixation of an intransitivizer such as *-cal* in (i), backgrounds the resulting change of state **T** in the causative event frame of the verb. Backgrounding/foregrounding determines projection of arguments into the syntax. Once the resulting

sentence with an activity verb affixed with out of control asserts the ***ability*** of the external argument to perform the action specified by the verb because stative verbs have an inherent 'able to' meaning.

In sections VIII-IX, I will show that the proposal that out of control is the equivalent of a passive defined on event structure uniformly derives the ability, the accidental reading and the spontaneous occurrence reading of out of control. However, in order to do so, we must first define the event structures of unaccusative and causative predicates.

VI WHY DOES OUT OF CONTROL APPLY TO UNACCUSATIVES?

Recall that when out of control applies to causatives, it yields a subset of the readings that it yields with unaccusatives. In particular, out of control yields an accidental reading with both causatives and unaccusatives but an ability reading with unergatives. Further, this reading is lost when either the unaccusative or the causative is under the scope of negation, the progressive, *papt* 'always' or modality - and an ability/capacity reading surfaces. However, applied to unaccusatives, out of control yields a suddenly, spontaneous occurrence (and/or accidental) reading. This set of facts raises the following questions.

First, *why can the same morphological operation suppress agent control with verbs that have an external argument and at the same time productively apply to predicates which denote events or states which are never under the control of an agent in the first place - since they lack an external argument altogether ?* How can such a morphological operation exist?

Second, why can out of control applied to an unaccusative yield an 'it accidentally (suddenly) happened' reading since *accidentally* is an adverb of volition or intentionality. Note, however, that "adverbs which relate to control" occur freely in inchoatives (Smith 1985:489). As Smith argues, this is the case because they can be associated with the coming into existence of the change a state denoted by the predicate (Smith further observes that a control adverb can even occur in statives in so far as one can "associate the adverbial with the inception or maintenance of the state by an unnamed agent.")

I believe that the answer to these questions is that unaccusatives have underlying causative semantics, as proposed in Chierchia (1989), Levin & Hovav (1995) Pustejovsky (1995) and Reinhart (1991) among others. This conclusion is surprising since ST' is a language where unaccusatives are morphologically 'primitive' - that is, a language where all transitives and unergatives are morphologically derived (Davis, to appear). I by no means dispute this analysis: I merely claim that the *semantic* representation of a morphologically unaccusative predicate is causative and that the underlying causative hypothesis explains why control is an opposition that cuts across all aspectual classes and, thus, pervades the grammar of Salish languages, as Thompson (1995) emphasizes. In particular, both controlled events (actions) and non-controlled events (states and changes of states) can all be marked as out of the control of an agent. (Recall that Thompson (1995: 420) states that out of control suggests "the spontaneous happening or result of some unspecified agent's act [emphasis added]").

I will argue that the hypothesis that unaccusatives have underlying causative semantics explains 1) why out of control can apply to unaccusative predicates, 2) why out of control applied to an causative yields a subset of

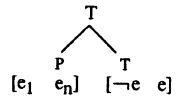
change of state **T** is backgrounded, the participant that identifies **T** can no longer be projected as an internal argument - it can, however, be syntactically realized as an adjunct.

readings that it yields with an unaccusative, and 3) why it yields a spontaneous occurrence, all at once, suddenly reading. I will first spell out this hypothesis.

VI.1. Unaccusatives are Underlyingly Causative

I propose that unaccusative and causative (be it control or non-control) predicates share the **same** underlying event structure, as in Pustejovsky (1995). In particular, both unaccusatives and causatives have the event type of a recursive transition, as shown in (38). The complex event structure in (38) is constituted of two subevents: a process P which brings about a resulting change of state T.

(38) **Event structure of unaccusatives and causatives**

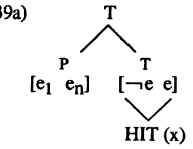


For Pustejovsky, the difference between an unaccusative and a causative predicate is, as is standardly assumed, a syntactic difference and an aspectual difference. Aspectually, a causative is an accomplishment: the event denoted by the verb is viewed as a whole, is presented in its entirety; the "focus of the interpretation" thus includes the natural endpoints of the event (the causing event P and the resulting event T). In contrast, an unaccusative is an achievement predicate: the focus of the interpretation is on the temporal interval that defines the end point of the event (the change of state T) but not on the temporal interval that brings about this change of state. In sum, both unaccusatives and causatives have the same underlying subeventual structure. The aspectual difference between a causative and an unaccusative lies in the relative prominence of the two subevents in (38): in an unaccusative predicate, only the final subevent (T) is foregrounded (focussed on) whereas in a causative, the initial subevent (P) is also foregrounded (focussed on). Event foregrounding (or focusing) is achieved via a mechanism called event-headedness, which I will not be assuming here (event-headedness indicates the relative prominence of a subevent).

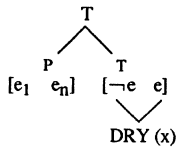
Syntactically, a causative projects two arguments whereas an unaccusative projects only one (internal) argument. Arguments correspond to participants in an event structure: the participant associated with the first subevent (the process) is the external argument of a predicate whereas the participant identifying the second subevent (the change of state) is the internal argument (see also Grimshaw 1990, van Hout 1994, to appear, or Ritter & Rosen 1993). Finally, syntactic projection of arguments is constrained by the relative prominence of the two subevents in (38). Informally, an unaccusative verb only projects an internal argument position because only the second subevent in (38) is foregrounded. When the first subevent is also foregrounded, as is the case with a causative, the verb will project two argument positions.

Turning to unaccusative roots in ST', I propose that roots such as √sek 'be(come) hit' or √k'ac 'be(come) dry' are lexically associated with the following event-representations:

(39a)



(b)



I will refer to the aspects of the meaning of the predicate that distinguishes it from other predicates with the same event structure, as the **name** of the predicate and use the name of the predicate in capital letters to represent this

constant; thus, HIT or DRY (respectively) represent the essence of 'hit' and 'dry'. Under this proposal, roots in ST' have a fundamentally unaccusative meaning because the name of the root is associated solely with the final subevent in (39). Under this analysis, the roots 'hit' and 'dry' have a patient-oriented meaning because HIT and DRY (respectively) identify the subevent in (39) that denotes a change of state. In other words, the subevent in (39) that is foregrounded or focused is the subevent that is associated with a name. Adapting Pustejovsky (1995), I assume that only subevents that are foregrounded project an argument position in the syntax. The only subevent that is foregrounded in (39) is the change of state T, thus only the participant that is associated with the change of state T can be projected onto an (internal) argument position in the syntax.

VI.2. Some Remarks on the Meaning of Unaccusative Predicates

There are over two thousand unaccusative predicates in ST'- see Davis (to appear) and van Eijk (1985) for a semantic classification of these predicates. I am *not* claiming that (39) is the event-structure of all unaccusative predicates in ST'. van Eijk (1985:167) states that agent control could be relevant for non-control predicates and, in particular, suggests a distinction between "states that preclude volition" and those that do not. This distinction is subsumed by the distinction between externally caused verbs and internally caused verbs, proposed in Levin & Hovav (1995). The latter argue that ***only unaccusative predicates that can be externally caused by an agent, an instrument or a natural force have underlying causative semantics.*** (39) will, thus, not be the semantic representation of roots which describe events which cannot be externally caused - such as nominal predicates (e.g. √qwu7, 'water'); or alternatively cannot be externally caused by a human agent (that is, which preclude volition) such as weather predicates (e.g. √kwis, 'to rain')). (39) will be the semantic representation of the subset of unaccusative roots in ST' that can be externally caused, be it by a human agent or not ; or alternatively of those roots which do not preclude volition. I surmise that these would include those roots which Davis (to appear) classifies as either 1) change of state predicates (e.g. √zuqw 'to die') or else are ambiguous between a change of state and a stative interpretation, (e.g. √k'ac 'become dry' or 'be dry' cf. (1a)); 2) as change of location predicates (√tsixw 'get there, arrive'); 3) as patient oriented predicates (√sek 'be(come) hit with a stick or whip' or √tup 'be(come) punched'); and 4) as psychological predicates (√páqwu7 'be afraid').

It goes without saying that only a careful investigation of the semantics of aspectual classes in ST' (and, in particular, how they are compositionally derived) can establish to what extent the above proposal is correct; this, however, is well beyond the scope of this paper. I will, nonetheless, provide three arguments (independent of out control) in support of the proposal that unaccusatives that can be externally caused are underlyingly causative.

vi.2.1 Verb + instrument meanings

Beck (1995) states that unaccusative verbs can have the schema [verb + instrument], as illustrated by the Lushootseed examples in (40a) quoted from Beck, or the ST' examples in (40b) (see (1b) and (12d) above). Note, crucially, that the instrument - which brings about the change of state specified by the predicate - is incorporated into the meaning of the root.

(40a) pus 'be struck by a flying object' (a') č'axʷ 'be struck by a stick' (a") t'uc' 'be shot'

(b) √sek 'be(come) hit with a stick or whip' (b') √qam't 'be(come) hit by thrown object'

One of the central arguments for assigning an underlying causative structure to unaccusatives comes from the fact that a sentence with a change of state predicate can make reference to the event that caused the change of state to come about (see Chierchia, Pustejovsky 1995 or Levin & Hovav 1995). For instance, the PP in *The package arrived with the postman* makes reference to the initial event that causes the package to arrive. Reference can be made to this initial event E1 precisely because E1 is part of the semantic representation of 'arrive'. (In contrast, **The package* arrived *by the postman* is ungrammatical because the *by*-phrase does not make reference to the initial event itself but rather to the agent of E1 - which in turn cannot be projected since E1 is not foregrounded). By the same reasoning, we can explain why roots such as those in (40) exist in Salish: the instrument that is incorporated into the meaning of the root reflects the presence - in the semantic representation of the root - of the causing event E1 with which the instrument (e.g. 'with a stick or whip', 'by flying object' or 'by a stick') must be construed.[7]

vi.2.2 Get passive readings

The causative hypothesis, moreover, explains why certain unaccusative verbs yield what I will refer to as a *get*-passive reading, as illustrated in (41). (42) shows that this reading also surfaces with roots suffixed with the INChoative suffix **-p**, which according to van Eijk (1985: 86) expresses a change in progress or "that a state is maintained over a certain period of time" (Note that roots can be bound to the inchoative **-p**).

(41a) √qam't ti sqáycw-a (b) √xan' ti sqáycw-a (c) √pulh 'to get boiled'
hit DET man-DET hurt DET man-DET (d) √kwelh 'to get spilled'
'The man got hit ' 'The man got hurt' (e) √7us 'to get thrown out'

(f) √tup (g) √lepinitás (h) √tsem (i) √k'etcw
'to get punched' 'to get punished' 'to get a burn' 'to get severed'

(j) √tup - us (k) √k'etcw -us
punched - face, 'to get punched in the face' sever - face, 'to get one's throat cut'

(42a) √tsem - p (b) √k'wes - p (c) √kwem - p (d) √tses-p
burn- INC singe - INC dull (blade) - INC stretch - INC
'to get burned' 'to get singed' 'to get dull (blade) 'to get stretched'

Thompson (1985) explicitly correlates the range of meanings that non-control predicates in Salish yield with the range of meanings associated with the verb 'get' in English, citing Lakoff (1971) who states that,

(43a) Get sometimes suggests responsibility on the part of the underlying (not superficial) subject.
(16a) How did this window get opened?
(16b) How was this window opened?
(16a) might be used if the speaker were indignant that the window had been opened: it often means something like, 'Who had the nerve to open this window?'...
(17a) How did this window get opened? Sir, I cannot tell a lie: I did it
(17d) ? How was this window opened? Sir, I cannot tell a lie: I did it(Lakoff 1971: 155)

[7] Note that the possibility of an instrumental PP is often used in the literature to motivate the presence of an implicit agent. On the basis of the meaning of certain roots, I am making the same argument to motivate the presence of an implicit causing event.

(b) (11a) The program has been pre-recorded

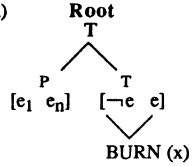
(11b) The program has gotten pre-recorded

(11b) is not likely to be heard on television whereas (11a) is a frequent utterance. If it were used, (11b) would imply that 'something was done to the program [emphasis added] to its detriment'. (1971: 154)

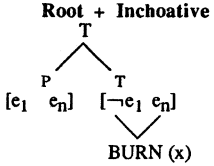
The relevant observation that emerges from (43) is that a *get*-passive reflects the presence of a causing event in the lexical meaning of the predicate: reference is made to the implicit initial event that caused the window to be opened in (16a), or the program to be recorded in (11b).

We can explain the *get*-passive reading that surfaces in (41-2), if we assume that unaccusative predicates such as √tsem 'to get a burn or √tsem-p 'to get burned' have the underlying causative structures in (44) (Note that since inchoatives describe an ongoing change, I assume that the resulting change of state **T** in (44b) does not culminate, as indicated by $\mathbf{e_n}$.)

(44a) **Root**



(b) **Root + Inchoative**



The unaccusative predicates illustrated in (41-2) can make reference to an implicit initial event - the event that caused x to be hit in (41a), x to be hurt in (41b) or x to be burned in (44) - because this causing event is part of the sub-eventual structure of the unaccusative predicate. Since, however, the causing event is backgrounded (that is, is not identified by the name of the predicate), the participant identifying this initial event cannot be projected into the syntax.

vi.2.3 Unaccusative and causative lexical reflexives

Finally, the causative hypothesis explains why there are two classes of so-called 'medio reflexives' in ST'. Medio-reflexives are (formally) intransitive predicates that have a self-directed (inherently reflexive) reading; they are derived by suffixation of *ilc/lec* to a root. There are two classes of medio-reflexives: control reflexives as in (45a) and non-control (inchoative) reflexives as in (45b); see Davis (1996, to appear) for discussion.

(45a) legw - **ílc** 'to hide oneself', k'ác - **lec** 'to dry oneself', kwís - **lec** 'to lower oneself',

(b) tlhúp- **lec** 'to get twisted', k'wúc'- **lec** 'to get crooked', zenp'- **lec**, 'to get tangled'

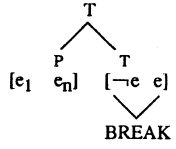
Davis & Demirdache (1995) analyse the control reflexives in (45a) as inherently reflexive causatives: the participant identifying the initial process (P) and the participant identifying the resulting change of state (T) in the bi-eventual sub-structure of a causative (cf. (38)) are lexically identified. Once we assume that unaccusatives are underlyingly causatives, we can extend this analysis to the unaccusative medio-reflexives in (45b): inchoative medio-reflexives are also inherently (that is, lexically) reflexivized causatives. In section VII.4, we will see that event focusing is responsible for the difference in control between these two types of lexical reflexives.

VII TRANSITIVE PREDICATES

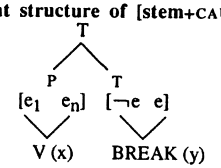
Assuming that both unaccusatives and causatives share the same underlying event structure, what then is the difference between an unaccusative and the causative which is morphologically derived from it by suffixation of the CAU transitivizer -**s**-? The answer is straightforward: suffixation of the CAU transitivizer does not alter the aspectual structure of the predicate. Suffixation of this transitivizer to a root merely serves to foreground the initial subevent in the event structure of the root. Recall that event foregrounding determines projection of argument positions in the syntax. Hence, once the causing event E1 is foregrounded, the participant that identifies this initial subevent can be projected onto an external argument position in the syntax.

Evidence for the claim that the CAU transitivizer -**s**- does not contribute aspectually to the meaning of root is provided by its distribution (cf. Davis & Demirdache 1995). -**s**- can co-occur with all other aspectual markers - that is, with the stative **s**-, the inchoative -**p**, the medio-reflexive -**lec**, and the active intransitive -**cal** (the latter event type shifts a telic predicate into an atelic (activity) predicate). In contrast, all other aspectual morphemes are in strict complementary distribution. The derivation of a syntactically causative predicate such as [sek'wp-s] 'to break' from an unaccusative predicate (√sek'wp 'become broken') is illustrated in (46).

(46a) **Event structure of the stem**



(b) **Event structure of [stem+CAU]**



In (46a), only the change of state (**T**) is foregrounded; hence the predicate is syntactically monadic, projecting only the participant which identifies this change of state. Once the CAU transitivizer is added to the stem, both subevents are foregrounded; hence the predicate is syntactically dyadic, projecting both an external and an internal argument. I have associated the initial subevent **P** with an unspecified name (V) to indicate that **P** is foregrounded. Crucially, however, the name associated with **P** in (46) lacks any lexical content whatsoever: it is merely a variable ranging over predicates. This analysis, thus, contrasts with theories of verb meanings which assume a higher predicate DO, ACT or CAUSE into which the notion of Agent is built (cf. Dowty 1979). We can dispense with CAUSE because causation is defined as a structural entailment between the two subevents in (46) (cf. Pustejovsky). We *want* to dispense with DO or ACT because the CAUsative is used to describe situations in which the subject lacks full control over the action denoted by the predicate. In particular, recall that only causatives derived by suffixation of -**s**- allow event descriptions in subject position, as was illustrated in (15) repeated below.

(47a) sek'w - p - s - ás ti nk'wan'ústen-a ti k'éxem-a
broken - INC - CAU - ERG DET window-DET DET wind-DET
'The wind broke the window'

(b) sek'w - p - s - ás ti nk'wan'ústen-a ti qel-alh-tmícw-a
broken - INC - CAU - ERG DET window-DET DET bad-CON-land-DET
'The storm broke the window'

In (47), the change of state (the window becomes broken) is not caused by a subevent of which the wind is an agent: the wind does not DO something which causes the breaking of the window. The causing event in (47) is the

external argument itself. As Parsons (1994) states is his discussion of event causatives such as *The explosion broke the window*,

(48) We certainly do not want to say that the explosion is the agent of some further event that caused the breaking of the window; the explosion did this by itself. (Parsons 1990:139)

To capture (48), I assume that in an event causative, the lexical content of the event nominal is mapped onto the causing sub-event **P**. This is possible precisely because the name associated with **P** in (46) lacks any lexical content whatsoever (it is merely a variable ranging over predicates). The event causatives in (47) have the following event representations where a process (the wind or the storm) causes the window to become broken.

(49)

VII.1 Full Control vs. Neutral Control Causatives

Recall that there are two primary transitivizers in ST': the CAUsative and the DIRective. As was discussed in section I.3, both the CAUsative and the DIRective transitivizers combine with an unaccusative predicate ('be hit' or 'be dry' in (1)) to yield a predicate with an inherent causative meaning - e.g. 'x caused y to be dry' or 'x caused y to be hit'. The difference between the CAUsative and the DIRective lies in the degree of control of the agent over the action denoted by the predicate. yields particula suffixation of the CAUsative yields a neutral control transitive. More precisely, the CAUsative differs from the DIRective in two correlated respects. First, it can (but need not) be used to describe a situation in which the subject lacks control over the action denoted by the verb. Second, there is no restriction on the subject of a causative: it can be a participant that is capable of willful agency or an external instigator such as 'the wind' or 'the storm' (cf.(47)). In section II, we concluded that the CAUsative merely specifies causation: the resulting event in (46b) could have been accidentally or deliberately caused by a human participant, or non-accidentally caused by an external instigator. In contrast, an out of control causative only specifies accidental causation. Finally, the DIRective specifies causation that is under the full control of a participant capable of willful agency.

I now turn to the question of how to derive full-control causatives. The analysis of transitive predicators proposed here differs significantly from Davis & Demirdache (1995; henceforth D & D) who do not assume that unaccusatives and transitives share the same underlying causative representation. I believe, however, that it preserves the core idea underlying their analysis of agentive (full-control) causatives, which I summarize in the next section.

VII.2 Davis & Demirdache (1995): Agentive Predications

The core idea underlying D&D's analysis is that Rosa in (50a) 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. This idea is summarized below:

(50a) Rosa melted the ice

(b) The participant identifying E1 is *a causal agent iff there is an intrinsic relation between the causing event and the resulting event* - that is, if the resulting (change of) state *be(come) V* is caused by a process of *V-ing*

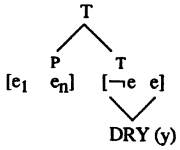
(c) In contrast, the participant identifying E1 is a causer (but not an agent) when there is no intrinsic relation between the causing event and the resulting (change) of state.[8]

VII.3 The Event Representation of Full Control Causatives

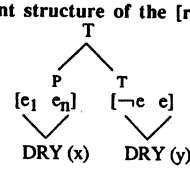
Although I am assuming contra D&D (1995) that unaccusatives are underlyingly causative, the analyse I present here is a reformulation of their analysis of agentive causatives. Recall that the core idea underlying their analysis is that Bucky in (51a) is an agent iff Bucky performs some action of drying which causes the salmon to be(come) dry, as in (50c) above.

(51a) [√k'ác - an' - as] ti s-ts'wán-a s-Bucky
dry - DIR - ERG DET NOM-salmon-DET NOM-Bucky
'Bucky dried the salmon'

(b) **Event structure of the root**



(c) **Event structure of the [root+DIR]**



The event structure lexically associated with the root √k'ác 'be(come) dry' is given in (51b). To ensure that the resulting change of state become dry is caused by a process of drying, D&D map the name DRY associated with the final subevent (**T**) onto the initial subevent (**P**) in (51b) *which is itself not associated with a name*- yielding the event structure in (51c). The operation that maps the lexical meaning DRY associated with the change of state in (51b) onto the initial process is called Predicate Cloning.[9] Predicate cloning is an operation on event structure equivalent to *syntactic incorporation* of a lower verb (constant) into a higher light verb (cf. Hale & Keyser 1993). Its effect is illustrated in (52-3): the name DRY identifying the transition in (52) is copied onto the initial subevent as in (53).[10]

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[8] D & D further argue that if the *causative* and the *agentive* reading of verbs are projected from different event structures, then we can dispense with predicates such as ACT or DO - that is, we no longer need to build the notion of Agent into the meaning of a primitive predicate.

[9] Its formalization is given below: predicate cloning is a function that takes the intransitive predicate in (53a) and yields a conjunction of two predicates with the same name, as in (iii).

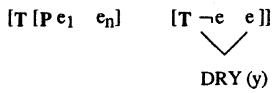
i (dry)* = $\lambda e\, \lambda y$ [dry' (y, e)]

ii (DIR)* = $\lambda V\, \lambda e_1 \lambda e_2\, \lambda x\, \lambda y$ [V (x,e_1) & V (y, e_2)]

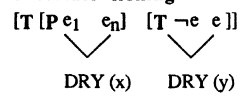
iii From (a) and (b), by lambda conversion -> $\lambda e_1 \lambda e_2 \lambda x \lambda y$ [dry' (x,e_1) & dry' (y, e_2)]

[10] Alternatively, I could follow D&D and assume that the DIR, like any lexical item, has its own **event structure**: its event type is a process. Crucially, *it has no name only aspectual content*, as represented in (54b) where V is a

(52) **Event structure of the root**



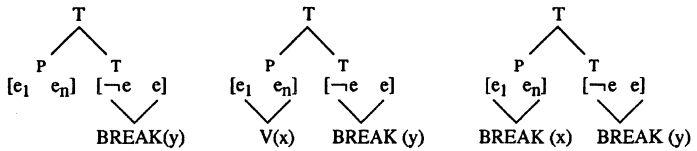
(53) **Predicate cloning**



Note that both subevents in a DIRective causative are associated with (the same) name DRY. Consequently, both subevents in (51c) are foregrounded, and the predicate 'dry' projects both an external and an internal argument. Why does directive yields an agentive predication? Because *there is an intrinsic relation between the process and the resulting (change) of state:* the change of state 'be(come) dry' is caused by a process of drying of which Bucky is the agent.

To recapitulate, I have proposed the following event representations:

(55a) **Unaccusative** (b) **Causative** (c) **Directive**



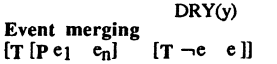
In (55a), only the resulting change of state is foregrounded; hence, the predicate associated with this event structure only projects an internal argument in the syntax. In contrast, both subevents are foregrounded in (55b-c); hence both the CAUSative and the DIRective yield syntactically dyadic predicates; for the event structure of derived unergatives, see footnote 6.

The directive yields an agentive predication because *there is an intrinsic relation between the process and the resulting (change) of state:* the change of state 'be(come) broken' is caused by a process of breaking. More generally, an agentive reading ensues whenever there is an intrinsic relation between the process and the resulting change of state - whenever the resulting state *be V* is caused by a process of *V-ing*. [11]

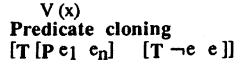
In contrast, the CAUSative yields a predicate that is neutral with respect to control because there is *no intrinsic relation* between the causing process and the resulting transition. This is the case because the process which caused the breaking of the window is unspecified (unnamed): the wind could be the causing event or Bucky

variable ranging over predicates. When the DIR combines with a root, its event structure merges with the initial subevent in the event structure of the root, as in (54c). Event merger, as defined in van Hout (to appear), composes two event types without creating a new event structure: the process in (54b) merges with the initial process in (54a), yielding (54c) . Finally, predicate cloning substitutes DRY for the predicate variable V itself associated with the initial process in (54c), yielding (54d).

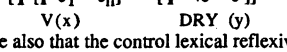
(54a) **Event structure of the root**



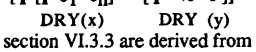
(b) **Event structure of the DIRective**



(c) **Event merging**



(d) **Predicate cloning**



[11] Note also that the control lexical reflexives discussed in section VI.3.3 are derived from the DIRective in (55c) via lexical reflexivization, following D&D.

could have engaged in a process of breaking in order to deliberately bring about the breaking of the window; but Bucky could just as well have broken the window by singing or by accidentally bumping into it.

Following D&D, I assume that the agentive and causative reading of a given predicate are *universally* projected from distinct event frames. In other words, the English sentence in (56a) is not ambiguous between an agentive and a causative reading. These two readings are projected from different event frames - as is clearly the case in languages like ST' which *morphologically* distinguish these readings. In particular, the DIRective event frame in (55c) yields the agentive reading of (56a), illustrated in (56b), whereas the CAUSative event frame in (55b) yields the causative reading of (56a) illustrated in (56c).

(56a) Rosa broke the window

(b) Rosa broke the window (*accidentally) (c) Rosa/The wind broke the window

Having defined the event structures associated with unaccusative and transitive predicates, we can now go back to the question of how to derive the spontaneous occurrence and/or accidental readings of out of control.

VIII DERIVING THE SPONTANEOUS OCCURRENCE/ACCIDENTAL READING

When out of control is applied to an unaccusative, it yields a reading which has been described as 'it happened spontaneously, suddenly, unexpectedly, all at once, accidentally' (cf. van Eijk 1983, 1985, Thompson 1985 or Davis to appear). Examples are provided in (57).

(57a) **ka** - páqu7 - **a** 'to get scared suddenly'
(b) **ka** - qám't - **a** 'to be hit suddenly, accidentally'
(c) **ka** - lh´vq' - **a** 'to feel pooped, to conk out (suddenly)'
(f) **ka** - nem' - **a** 'to go blind suddenly'
(g) **ka** - háhl' - **a** 'He appeared', or 'He was born'
(h) **ka** - lhéxw - **a** 'to appear all of sudden'
(i) **ka** - lwés - **a** 'to break, shatter all of sudden'
(j) **ka** - ním' - **a** 'to pass out'
(k) **ka** - xléq' - **a** 'to roll down suddenly'

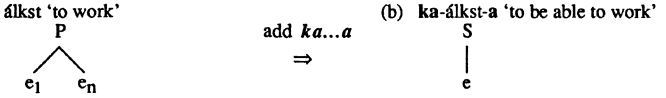
Recall our analysis of out of control *ka...a* : it is an event functor that type-shifts an event type into a lower event type, as was defined in (30) repeated below. I will now show how this proposal uniformly derives the ability reading of out of control applied to unergatives and the spontaneous occurrence/accidental reading of out of control applied to unaccusatives.

(58) When *ka...a* is affixed to a predicate, it shifts the event-type associated with this predicate into a lower event-type by suppressing the initial subevent in its event structure.

The derivation of the ability reading is repeated in (59). The event type associated with an activity verb is a process. Out of control suppresses the initial subevent in this process (the eventuality **e1**), yielding a verb with the event structure of a stative verb, as illustrated in (59b). The ability reading then arises because stative verbs have an inherent ability meaning, following Vendler (1967).

(59) **Event type shifting applied to a process**

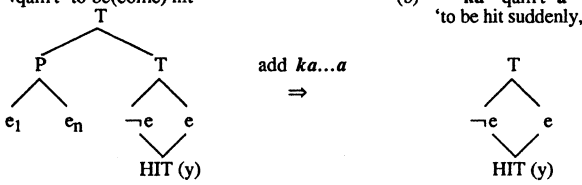
(a) álkst 'to work' (b) **ka**-álkst-**a** 'to be able to work'



Now, when out of control applies to an unaccusative, it also suppresses the initial subevent in its event structure, just as it does in (59). However, whereas the initial subevent in the event structure of an unergative is an atomic event (e_1), the initial subevent in the event structure of an unaccusative is not an atomic event but a Process - since unaccusatives have an underlyingly causative structure. When *ka...a.* applies to the recursive transition in (60a), it suppresses the causing event **P** and, thus, type shifts the causative into a simple change of state predicate:

(60) **Event type shifting applied to a recursive transition**

(a) √qám't 'to be(come) hit' (b) **ka** - qám't- **a**
'to be hit suddenly, accidentally'



Suppression of the initial (causing) event in (60) yields the 'it happened spontaneously, suddenly, unexpectedly, all at once, accidentally' reading of out of control. More precisely, the change of state specified by the root must be construed as coming into being suddenly, all at once, spontaneously - once the causing event in the event structure of the predicate has been suppressed. We have seen that the hypothesis that out of control is the equivalent of a passive defined on the event structure of a predicate together with the assumption that unaccusatives are underlyingly causative explains why out of control yields precisely an ability reading with unergatives but a spontaneous occurrence reading with unaccusatives.

More generally, the hypothesis that unaccusatives have causative semantics explains why a morphological operation that suppresses agent control with verbs that have an external argument can productively apply to predicates which denote events or states which are never under the control of an agent in the first place - since they lack an external argument altogether.

I now turn to the accidental reading of out of control transitives.

IX DERIVING ACCIDENTAL CAUSATION

An out of control transitive describes an action that is not under the control of an agent. Crucially, however, the subject of an out of control transitive cannot be an extrinsic instigator (e.g. *the storm*), as the contrast between (61a) and (61b) illustrates. It must be a participant that is capable of willful agency (see Section II). Out of control morphology signals that the action denoted by the verb is not under the control of this human agent. We concluded that out of control causation specifies accidental causation: the subject of an out of control causative must be a human participant because only participants capable of willful agency can *accidentally* cause an event. Thus, (61b) is ungrammatical because it can only have the illicit interpretation in (b').

(61a) **CAUsative transitive**

sek'w - p - s - ás ti nk'wan'ústen-a ti qel-alh-tmícw-a
broken - INC - CAU - ERG DET window-DET DET bad-CON-land-DET
'The storm broke the window'

(b) **Out of control transitive**

* **ka** - sek'w - p - s - ás - **a** ti nk'wan'ústen-a ti qel-alh-tmícw-a
OOC broken INC CAU ERG OOC DET window-DET DET bad-CON-land-DET
'The storm broke the window' (b') *'The storm broke the window accidentally'

But how do we derive the ungrammaticality of (61b)? I will assume, following D&D, that the generalization in (62) underlies the ungrammaticality of (62b).

(62) Out of Control only applies to **DIRective** transitives

If the input to out of control is ***always*** a full control (**DIR**ective) transitive, then the ungrammaticality of (61b) reduces to the ungrammaticality of (63).

(63) **DIRective transitive**

* sek'w - an - ás ti nk'wan'ústen-a ti qel-alh-tmícw-a
broken - DIR - ERG DET window-DET DET bad-CON-land-DET
'The storm broke the window'

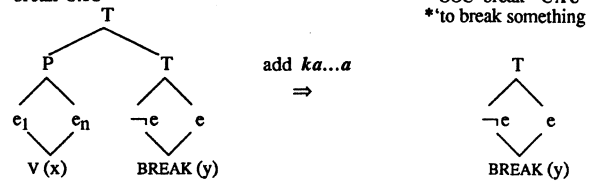
Conversely, if the input to out of control is ***never*** a neutral control (**CAU**sative) transitive, then (61b) will never arise in the first place and, hence, will never have to be ruled out. With this in mind let's see what happens when out of control is applied to a neutral control causative.

IX.1 Out of control applied to a neutral control causative

Applying out of control to a **CAU**sative transitive yields the derivation in (64). Note that the input to event-type shifting in (64a) is a dyadic predicate: it projects an external and an internal argument since both subevents in its event structure are foregrounded. Crucially, however, the output of event-type shifting in (64b) is a monadic (change of state) predicate: the participant which identifies the initial subevent can no longer be projected into the syntax since this initial subevent has *itself* been suppressed. In other words, applying out of control to the verb 'to break something' cannot yield 'to break something accidentally'.

(64) **Event type shifting applied to a neutral control transitive**

(a) sek'wp-s' 'to break something' (b) * ka- sek'wp -s - a
break-CAU OOC break CAU OOC
*'to break something accidentally'



At this point, we have two options. We can rule out the derivation in (64) altogether: suppression of the initial subevent **P** would be incompatible with the presence of the transitivizer **-s-** (e.g.*sek'wp-s*) since the function of **-s-** is precisely to foreground E1. Alternatively, we could assume that the output of event-type shifting is an out of control unaccusative. In other words, applying out of control to the **CAU**satives in (65a/b) would yield (respectively) the out of control unaccusatives in (65a'/b').

(65)	**CAUsative transitives**		**Out of control unaccusatives**
(a)	kwís - (t)s	(a')	ka- kwis - a
	fall **CAU**		OOC fall OOC
	'to drop something'		'to fall suddenly, accidentally'
(b)	sék'w- p- s	(b')	ka- sék'w - a
	broken INC **CAU**		OOC broken OOC
	'to break something hard'		'to break all of a sudden'

Whether we should rule out the derivations in (64) altogether or allow **CAU**satives to yield out of control unaccusatives, I leave as an open question in this paper (At this stage, I do not see what empirical evidence could decide between these two options.[12,13]

In sum, applying out of control to **CAU**satives is either ungrammatical or vacuous (since we never see its effect: it yields an out of control unaccusative but never an out of control transitive). This is precisely the result that we wanted: we can now explain the contrast in (66) repeated below. (66b) can never surface (be generated) since applying out of control to (66a) yields either an ungrammatical output or an out of control unaccusative.

(66a) **CAUsative transitive**

sek'w - p - s - ás ti nk'wan'ústen-a ti qel-alh-tmícw-a
broken - INC - CAU - ERG DET window-DET DET bad-CON-land-DET
'The storm broke the window'

(b) **Out of control transitive**

* **ka** - sek'w - p - s - ás - **a** ti nk'wan'ústen-a ti qel-alh-tmícw-a
OOC broken INC CAU ERG OOC DET window-DET DET bad-CON-land-DET
'The storm broke the window'

(b') *'The storm broke the window accidentally'

In contrast, applying out of control to either an unergative or an unaccusative (as in (59-60) above) is grammatical since both the input and the output of event-type shifting is a (syntactically) monadic predicate.

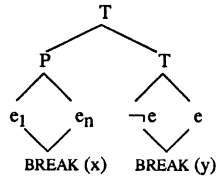
[12] For instance, the absence of the inchoative suffix **-p** in (65b') could be taken as evidence that (65b') is not derived from (65b).

[13] Note, however, that out of control unaccusatives cannot clearly be uniformly derived from morphological **CAU**satives since many (out of control) unaccusatives predicates either do not have a transitive counterpart (e.g. *ka-gúy't-a* 'to fall asleep suddenly', *ka-háhl'-a* 'he appeared, he was born', *ka-lh'vq'-a* 'to feel pooped, to conk out (suddenly)' or *ka-gwés-a* 'to rise to the surface', or *ka-nem'-a* 'to go blind suddenly', *ka-ctép'-a* 'to pass away', or *ka-nfm'-a* 'to pass out') or do not have a **CAU**sative counterpart (e.g. *ka-tsíq-a* 'to get stabbed accidentally, suddenly', *ka-tség-a* 'to get torn accidentally, suddenly' or *ka-láw-a* 'to get hooked by accident').

IX.2 Accidental Causation: Applying Out of Control to a Full Control Causative

Let's now see what happens when we apply out of control to a full control (directive)transitive. A full control transitive will have the event representation in (67).

(67)

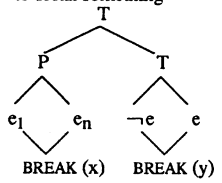


sék'w- an
broken **DIR**
'to break something'

Once again, out of control cannot licitly suppress the causing subevent in (67): suppression of **P** would either be blocked by the **DIR** transitivizer [**-an-**] or be vacuous (that is, yield an unaccusative). But then, how do we ever derive an out of control transitive? The answer comes from Hovav & Levin (1995) who propose that morphological processes which operate on the lexical representation of verb meanings (in their framework, derive new Lexical Conceptual Structures) either *alter the aspectual template associated with a predicate* ***or the pairing of a name (a constant) with an aspectual template***. Adopting this proposal, I redefine out of control as in (68). Applying out of control to a full control transitive then yields the derivation in (69).

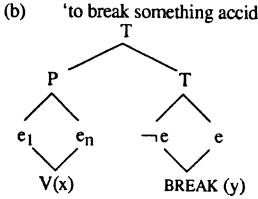
(68) When *ka...a* is affixed to a predicate, it suppresses the initial subevent in its event structure or the constant that is associated with this initial subevent.

(69a) 'to break something'



add *ka...a* ⇒

(b) 'to break something accidentally'



This time the derivation in (69) is licit: the input to out of control is a dyadic predicate and the output of out of control is a dyadic predicate. Recall that out of control transitives always surface with the causative transitivizer **-s-** (and not with the full control transitivizer, see (11) above). Why is this the case? Because the output of out of control in (69b) is precisely the event structure proposed for a neutral control causative; thus, compare (69b) with (46b).

Let's now turn to the question of why out of control causation specifies accidental causation. First, why must the subject of an out of control transitive be a participant that is capable of willful agency? Because out of control can only licitly apply to **DIR**ective transitives and the subject of a directive must be a participant that is capable of willful agency. Second, why does out of control morphology suppress the control that this human agent has over the action denoted by the verb? Because when out of control suppresses the name associated with the initial subevent in (69), it de facto suppresses agent control. In particular, recall D&D's analysis of agent control in (50), repeated below.

(70a) The participant identifying E1 is *a causal agent iff there is an intrinsic relation between the causing event and the resulting event* - that is, if the resulting (change of) state *be(come) V* is caused by a process of *V-ing*

(b) In contrast, the participant identifying E1 is a causer (but not an agent) when there is no intrinsic relation between the causing event and the resulting (change) of state.

In (69), there is no intrinsic relation between the causing event and the resulting change of state, once out of control suppresses the name that is lexically associated with the initial subevent. In particular, in (69a), the breaking of the window is caused by an activity of breaking of which x is the agent. In contrast, in (69b), the breaking of the window is caused by some unspecified event of which x is the agent (for instance, x bumped into the window). To conclude, note the telling translation that Van Eijk (1983) gives to illustrate the out of control transitive derived from the root *√kwis* 'to fall': the St'át'imcets sentence has not been translated as 'I accidentally dropped it' as expected, 'I bumped into it and it dropped'.

(71) **ka** -kwis -(t)s -kan -**a**
OOC fall CAU 1SG.SUB OOC
'I bumped into it and it dropped'

As the translation in (71) illustrates, an out of control transitive specifies accidental causation: there is no intrinsic relation between the process, 'I bumped into it', and the resulting change of state, 'it dropped'.

X CONCLUSION

I have proposed that the ability reading, the spontaneous occurrence and the accidental readings that out of control yields in ST' can be uniformly derived from the hypothesis that *out of control is a passive defined on the lexical meaning* of a predicate. A passive suppresses an external argument position or the agent role in the thematic grid of the verb (depending on the theory). In contrast, out of control does not suppress the agent. It suppresses the agentivity of the agent by suppressing either the subevent in an event structure that is precisely associated with the notion of agent or the name that is associated with this subevent.

The assumption that causatives and unaccusatives share the same underlying semantic structure explains why a morphological operation that suppresses agent control whenever there is an agent can also productively apply to predicates that lack an external argument altogether and, thus, why control is an opposition that cuts across all aspectual classes.

Appendix

Key to St'át'imcets (van Eijk) orthography

orthography	phonemic script	orthography	phonemic script
p	p	q'w	q̓ʷ
p'	p̓	x	χ
m	m	xw	χʷ
m'	m̓	r	ɣ
t	t	r'	ɣ̓
ts	c	g	ʕ
ts'	c̓	g'	ʕ̓
s	s	gw	ʕʷ
n	n	g'w	ʕ̓ʷ
n'	n̓	h	h
t'	t̓	w	w
lh	ɬ	w'	ẘ
l	l	y	y
l'	l̓	y'	y̓
k	k	z	z
k'	k̓	z'	z̓
kw	kʷ	7	ʔ
k'w	k̓ʷ	a	a
c	x	e	ə
cw	xʷ	i	ɨ
q	q	u	u
q'	q̓	v	ʌ
qw	qʷ		

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