

## Interesting Facts? Events, Inadvertent Cause and Unaccusativity in English present participles

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### 1. Introduction

- What is the relationship between ‘inadvertent cause’ and event representation such that unaccusative present participles pattern with subject experiencers in resisting dispositional readings? or:
- Why are ‘burning questions’ never flammable, and whatever happened to ‘\*noticing people’?

### 2. (More or less) familiar effects of inadvertence

#### 2.1. Backwards Binding

[Fujita (1996); Barss & Lasnik (1986), Larson (1988), Burzio (1986), Pesetsky (1995), Zubizarreta (1992)]

- a. ?John showed each other’s friends to Bill and Mary.  
b. \*John showed each other’s friends Bill and Mary.
- a. ?Each other’s remarks made Bill and Mary laugh.  
b. \*Each other’s friends (intentionally) made Bill and Mary laugh.
- a. ?Each other’s pictures gave Bill and Mary (an idea for) a book.  
b. \*Each other’s friends (intentionally) gave Bill and Mary a book.
- a. ?Each other’s pictures annoyed Sue and Mary.  
b. \*Each other’s friends (intentionally) annoyed Sue and Mary.

#### 2.2. Causer Subject Interpretations

- a. Interviewing Nixon gave Mailer a book.  
b. \*Interviewing Nixon gave a book to Mailer.
- a. The exam gave Mary a headache.  
b. \*The exam gave a headache to Mary.

#### 2.3. ‘Asian’ Causativisation

[Travis (2000); Phillips (2001)]

- a. Tsara ny trano. [Malagasy]  
beautiful the house  
‘The house is beautiful.’
- b. Maha-tsara ny trano ny voninkano.  
PRES.a.ha.beautiful the house the flower  
‘The flowers make the house beautiful.’
- c. \*Maha-tsara ny trano Rabe.  
PRES.a.ha.beautiful the house Rabe  
‘Rabe make the house beautiful.’

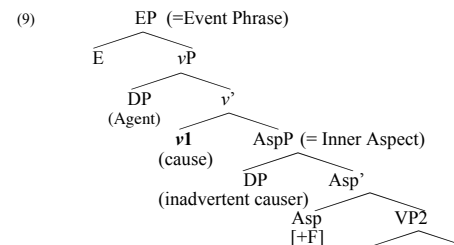
[Duffield (2004, (forthcoming); cf. Vichit-Vadakan (1976) for Thai]

- a. Cô làm vỡ cái đèn. [Vietnamese]  
PRN make break CLS lamp  
‘She broke the lamp (\*intentionally).’

b. Cô làm cái đèn vỡ. (làm NP V<sub>2</sub>)

c. \*Anh làm hát cô ấy.  
PRN make sing PRN-DEM  
‘You made her sing.’

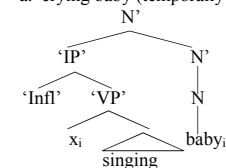
d. Anh làm cô ấy hát. (làm NP V<sub>2</sub>)



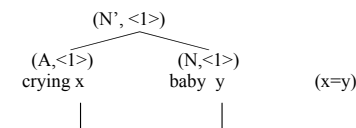
### 3. Interpreting prenominal present participles

[Ackerman & Goldberg (1996); also Jespersen (1940), Lakoff (1965/1970), Bresnan (1982, (2001), Levin & Rappaport (1986), Langacker (1991), Haspelmath (1993)]

- a. the frozen river/ a fallen leaf/a broken spoke  
b. \*the run man/\*a coughed patient/\*a swum contestant
- a. She was holding/wants to buy a burning candle. [\*DR/<sup>ok</sup>BR ]  
b. They were looking after/They didn’t want to have a crying baby [<sup>ok</sup>DR/<sup>ok</sup>BR]
- a. He found the burning candle. [\*DR/<sup>ok</sup>BR/<sup>ok</sup>IB]  
b. They found the crying baby. [<sup>ok</sup>DR/<sup>ok</sup>BR/<sup>ok</sup>IB]
- a. crying baby (temporally bound, participial)



b. crying baby (dispositional reading, adjectival)



<sup>1</sup> I assume that Travis’ ‘Outer Aspect’ corresponds to Reuland’s (1983) Infl projection in (13) in hosting the formal features of verbal -ing, and that all the phrasal material in (9) {EP, vP, AspP, VP2} corresponds to Reuland’s ‘VP’.

## 3.1.1. Further Evidence of a Split

## 3.1.2. (No) Contradiction under Sentential Negation

- (14) a. #This burning candle isn't burning (now).  
 b. #He watched a burning candle, but it wasn't burning that night.  
 c. #He waited for an arriving plane that never arrived.
- (15) a. Those crying children aren't crying (now).  
 b. He watched the Singing Nuns, but they weren't singing that night.  
 c. This snapping turtle isn't snapping (now).

## 3.1.3. Asymmetries in Lexicalisation

- (16) OED study based on [Sorace (2000): AUXILIARY SELECTION HIERARCHY (ASH)]

Change of Location (always BE)

Change of State (mostly BE)

Continuation of a pre-existent state (mostly BE, remain always BE)

Existence of State

Uncontrolled processes

Controlled processes (mostly HAVE)

Sampled Verbs:

- i. non-italicized items from Sorace (2000), italicized items added: come, arrive, leave, fall (non-agentive); rise, descend, ascend, become; wilt, bloom, decay, die; appear, *emerge*, disappear, happen, occur; stay, remain, last, survive, persist; exist, be, belong, sit, lie, seem, suffice, subsist, correspond, consist; tremble, waver, shiver, skid, *weep*
- ii. Psychological predicates: Subject Experiencer: *fearing, envying, admiring, loathing, liking, detesting*;  
 Object Experiencer: *pleasing, frightening, surprising, astonishing*.
- (17) a. 1848 MACAULAY *Hist. Eng.* I. 182 Indications of a coming storm.  
 b. 1848 MILL *Pol. Econ.* III. xxiv. §3 The speculative holders are unwilling to sell in a falling market.  
 c. 1876 FREEMAN *Norm. Conq.* IV. 73 Norwich, with its newly rising castle, was put under his special care.  
 d. 1884 *Century Mag.* Jan. 356/2 Wilting flowers are hardly appropriate to a steamship.  
 e. 1704 RAY in *Lett. Lit. Men* (Camden) 206, I look upon my self as a dying man.  
 f. 1853 R. S. SURTEES *Sponge's Sp. Tour* xli. (1893) 217 The staying guests could not do much for the good things set out.  
 g. 1859 MILL *Liberty* i. (1865) 5 The still subsisting habit of looking on the government as representing an opposite interest to the public.  
 h. 1980 G. M. FRASER *Mr American* II. xvii. 322 Mr Asquith...would find himself out of office, and the ticking bomb of Ireland could be hastily passed to his successor.

## 3.1.4. Compound Stress

- (18) a. 'Rocky the Flying **Squirrel**' wasn't in fact a **Flying** Squirrel.  
 b. Those dancing **girls** aren't **dancing** girls: the **dancing** girls are sitting over there!  
 c. Don't confuse that running **back** with the **running** back: they're different players (in different sports).
- (19) a. The Falling Leaf is not a falling leaf; it's an aerobatic stunt.  
 b. A blooming letter is not the same thing as a blooming letter.  
 c. On one side of the parapet was a disappearing gun; on the other, a Disappearing Gun, which happened not to be disappearing that day.

3.1.5. Basic Distributions: 'Nationality' Adjectives: (-ing<sup>TB</sup>) A<sub>NAT</sub> (-ing<sup>DR</sup>)

- (20) a. The rising British inflation-rate/?\*The British rising inflation-rate  
 e. The falling Japanese yen/?\*The Japanese falling yen  
 f. The disappearing Vulgarian diplomats/?\*The Vulgarian disappearing diplomats.
- (21) a. The Canadian running back/The running Canadian back  
 b. The running Canadian running back
- (22) a. The singing English nuns (TB only)/The English singing nuns (DR only)  
 b. \*The weeping Irish willow/The Irish weeping willow

## 3.1.6. Semantic Opacity (Drift)

- (23) a. sleeping partner (commercial), sleeping policeman (speed bump)  
 b. Burning Bush, Disappearing Gun,  
 c. shrinking violet

## 3.2. Asymmetric Thematic Constraints

- (24) a. I'd like to buy a \*melting/soft cheese. (*cf.* a cheese that melts easily).  
 b. Don't buy lenses with \*breaking glass; only buy specially toughened glass, or plastic ones.  
 c. Do you have \*burning paper in that waste-paper basket? (*cf.* flammable material)
- (25) a. I'd like to get a melting iron/knife. (= an iron used for melting)  
 b. He drove her to breaking point. (= point at which s.o. breaks)  
 c. The conjuror performed the usual vanishing tricks. (the trick doesn't vanish)
- (26) a. sinking<sub>verbal</sub> ships (= temporally-bound = ships that are sinking)  
 b. sinking<sub>adjectival</sub> ships (= dispositional = ships that cause others to sink: e.g., battleships, not submarines)
- (27) a. heart-breaking stories [DR only]  
 b. fat-burning exercises  
 c. mind-bending drugs  
 d. bulb-growing countries
- 4. A related split in Psychological Predicates**
- (28) a. Frightening animals are best avoided.  
 b. Troubling tenants are a nuisance.  
 c. Astonishing discoveries have been made in every century.  
 d. This is a surprising fact.
- (29) a. She is a \*fearing/fearful woman.  
 b. He was an \*envying/envious man.  
 c. She is the most \*knowing/knowledgeable person.  
 d. She is an extremely \*noticing/perceptive person.

Observe also that where subject experiencer participles do allow pre-nominal participles, the thematic role is not that of an experiencer. For example, there are many citations for loving, with readings that do not seem to be temporally bound; in all these cases however, the correct relative clause paraphrase seems to be 'that causes others to feel loved' as opposed to 'that experiences love'. Thus, a loving person need not necessarily experience herself, but she should demonstrate love towards others.

- (30) a. a god-fearing woman  
 b. a ?wealth-envying, ?power-envying man  
 c. an all-knowing God  
 d. fun-loving children, pleasure-loving adults

**4.1. Additional Thematic Constraints: \*pure activity**

- (31) a. #Alex is an entertaining person, yet he's not remotely entertaining.  
 b. Alex is an entertainer, yet he's not remotely entertaining.  
 c. Your entertainer friends (=friends in the entertainment business)  
 d. Your entertaining friends (=friends who entertain me)
- (32) a. He's a frightening boy. #Fortunately, no one is really scared by him.  
 b. He's a wild boy: he goes round frightening people. ?Fortunately, no one is really scared by him.

**5. Towards an Analysis**

**(33) Unique Mapping Constraint**

The argument mapped to the argument position of the adjective template must be projected into the [Spec, Asp'] position of the participle at the point of conversion: only predicates with +[telic] or +[bounded] Asp permit conversion.

- (34) [vP [v' [AspP DP[Asp' +bounded [vp2 (y) [v' V+ing ]]]]]  
 [ ap X [ A Xing ]]

**5.1.1. Deriving the main unaccusative vs. unergative contrast...**

- (35) a. [vp [ v [AspP ∅ [Asp' +bounded [vp2 (candle) [v' burn+ing ]]]]]  
 \*[ ap X [[A burning ]]]
- b. [vP [ v [ AspP (child) [Asp' +bounded [vp2 [v' cry+ing ]]]]]  
 [ ap X [[A crying ]]]

**5.1.2. Deriving the 'causative' reading for unaccusatives that do work...**

- (36) a. [vP [ v1' [AspP ∅ [Asp' +bounded [vp2 (ship) [v' sink+ing ]]]]]  
 \*[ ap X [[A sinking ]]]
- b. [vP [ v1' [AspP (ship) [Asp' +bounded [vp2 (other) [v' sinking]]]]]]  
 [ ap X [[A sinking ]]]

**5.1.3. Deriving the 'Achievement not Activity' reading for ObjExps...**

- (37) a. [vP [ v' [AspP children [Asp' -telic [vp2 [v' frighten+ing ]]]]]  
 \*[ ap X [[A frightening ]]]
- b. [vP [ v' [AspP children [Asp' +bounded [vp2 [v' frighten+ing ]]]]]  
 [ ap X [[A frightening ]]]

**5.1.4. Why perfect unaccusatives work, and perfect unergatives don't...**

- (38) a. \*[vP [ v1' [AspP ∅ [Asp'-EN[vp2 [v' sing ]]]]] (unergative)  
 \*[ap X [[A sung ]]]

external theta-role suppressed, no argument in [Spec, Asp]: blocks temporally bound reading (for lack of any argument role) and bleeds adjective conversion (for lack of an external one).

- b. [vP [ v' [AspP ∅ [Asp' +EN [vp2 y [v' burn ]]]]] (unaccusative)  
 \*[ ap X [[A burnt ]]]

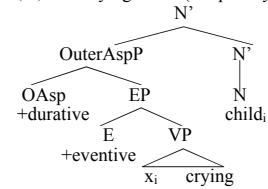
internal theta-role assigned to [Spec, VP2], temporally bound reading ok: but no adjective conversion.

**5.1.5. Deriving the lexicalization effects**

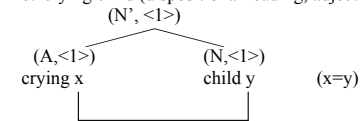
**5.1.6. Deriving the temporally-bound reading for verbal participles**

[Travis (2000); Parsons (1990), Pustejovsky (1991); Davidson (1966), Higginbotham (1985)]

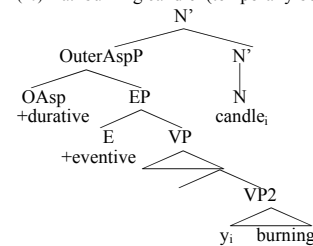
- (39) a. crying child (temporally bound, participial)



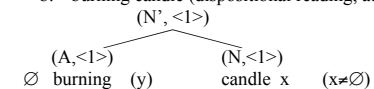
- b. crying child (dispositional reading, adjectival)



- (40) a. burning candle (temporally bound, participial)



- b. \*burning candle (dispositional reading, adjectival, unavailable)



(Cf. ?burning iron (= branding iron))

**5.2. Some unexpected consequences**

- ing forms generally treated as '+bounded'
- unergatives treated as '+bounded'
- restriction on subject experiencers [present participles] left unexplained.

- (41) a. interested parties  
b. entertained children  
c. fascinated students  
d. bewildered customers
- (42) a. known issues  
b. much-loved children  
c. remembered anniversaries  
d. forgotten sins

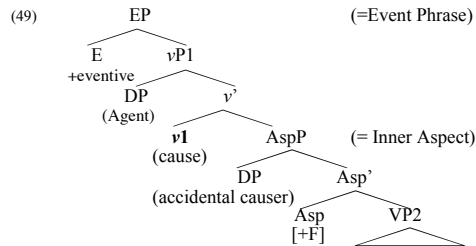
5.2.1. Exceptional Experiencers

- (43) a. Karen is finally understanding this proof.  
b. Donald is finding your accusations ludicrous.  
c. I think Bill is really liking this performance.  
d. Sue is truly hating the sea-urchin sushi.  
e. Harry is clearly fearing an outbreak of the flu.
- (44) a. ??Odd noises were continually depressing Sue.  
b. ??Bill was sitting around happy as a lark, when an unexpected groan from the next room suddenly depressed him.
- (45) a. Odd noises were continually scaring Sue.  
b. Bill was sitting around happy as a lark, when an unexpected groan from the next room scared him.

'Like *scare* are *terrify*, *alarm*, *startle*, *dismay*, *shock* and *surprise*, among others. Like *depress* are *worry* and *bore*. It is quite likely that the relevant distinction has to do with the nature of the onset of the emotion referenced by the ObjExp verb. I conjecture that emotions that typically come on suddenly and consciously (e.g., frights and surprises) allow the iterative progressive, whereas emotions that typically grow imperceptibly (e.g., boredom and depression) do not, but I have not investigated these matters carefully.'

5.2.2. Identification of emotion and event/situation

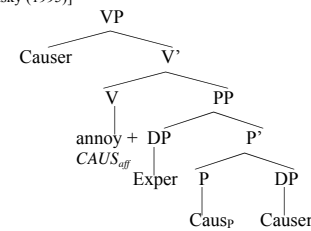
- (46) a. Yesterday, Amy had a scare/shock/surprise/?alarm, when her mother appeared on t.v.  
b. The scare lasted for two hours, then everyone was allowed back into the building.  
c. The news gave her a scare/shock.
- (47) a. Yesterday, Amy had a ??depression/\*bore(dom), when her mother appeared on t.v.  
b. ?The worry lasted for two hours, then everyone was allowed back into the building?<sup>2</sup>  
c. The news gave her a ??depression/\*bore. (cf. The news reinforced her depression.)
- (48) -Eventive is incompatible with +F (+telic, +bounded)



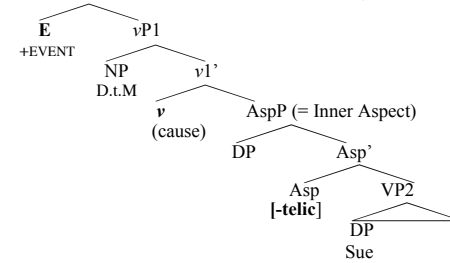
<sup>2</sup> There are contexts in which *worry* may be identified with situations, such as *The worry is that he will decline our offer*. The difference is that the situation or event itself is not inherently worrying, but only accidentally so. Contrast this to a *scare* which is itself necessarily scary.

5.3. Backwards Binding and \*Activity

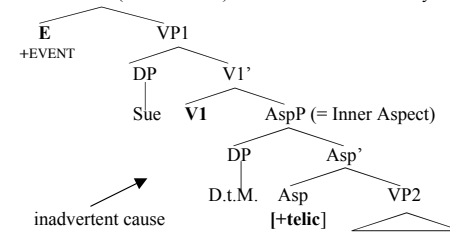
[Pesetsky (1995)]  
(50)



(51) a. EP (Event Phrase) 'Denise the Menace annoyed Sue all day'



b. EP (Event Phrase) 'Denise the Menace annoyed Sue yesterday.'



- (52) a. ?Dennis the Menace annoyed Sue all day, but she wasn't annoyed.  
b. ?A good ghost will go around scaring five people a day, but they won't be scared.  
c. ?Our neighbour's child was frightening us six times a day with his Halloween mask, but we weren't (really) frightened.  
d. #She depressed me with her stories, but I wasn't depressed (by them).  
e. #That lecturer bored me, but I wasn't bored.  
f. #She worried me yesterday, but I wasn't worried.
- (53) a. Questi pettegolezzi su di se<sub>i</sub> preoccupano Gianni più di ogni altra cosa.  
these rumours about self worry Gianni more of every other thing  
'These rumours about himself<sub>i</sub> worry Gianni; more than anything else.'

- b. I propri; sostenitori preoccupano Gianni.  
his own supporters worry Gianni  
'His own supporters worry Gianni.'
- c. Each other's; supporters worried Freud and Jung.  
d. I was worried by your supporters, until I discovered you didn't have any.
- (54) a. \*Their own; sheepdog was worrying John's flock; all last summer.  
b. For that reason, his; dog began to t<sub>i</sub> worry John; himself.
- (55) a. \*Each other;'s flies were bothering the horses; all day.  
b. ?Typically, each other;'s flies didn't bother the horses.  
c. The horses; were being bothered all day by each other's; flies.

## 6. Summary

This paper has drawn attention to interpretive effects involving English pre-nominal present participles, distinguishing participles derived from certain unaccusative predicates from those derived from unergatives. The contrast was also shown to partition the set of Experiencer Predicates, where, unexpectedly from a theoretical viewpoint, a subset of Object Experiencer predicates pattern with unergatives, rather than unaccusatives. Part of the analysis of this contrast is in terms of a syntactic distinction between two types of structurally represented CAUSE elements, distinguishing intentional from 'inadvertent' cause. The analysis also appeals to a structurally represented Event anaphor, marking Topic Time, and determining the temporal anchoring of both types of predicate under a particular realization.

## 7. Appendix: Travis' Malagasy data

- (56) a. Namory ny ankizy ny mpatrampianatra  
PAST.an.meet the children the teachers  
'The teachers gathered the children...'
- b. ... nefa tsy nanana fotoana izy.  
... but NEG PAST.have time they  
'...but they didn't have time.'
- (57) a. Nahavory ny ankizy ny mpatrampianatra  
PAST.a.ha meet the children the teachers  
'The teachers gathered the children...'
- b. \*... nefa tsy nanana fotoana izy.  
... but NEG PAST.have time they  
'...but they didn't have time.'
- (58) a. mijery 'to look at' mahajery 'to notice'  
b. mandinika 'to examine' mahadinika 'to remark'
- (59) a. *maha* causative (cf. 36b)  
[vp 1 [ v1' [AspP X [Asp' ha [vp2 Y [v' √ ]]]]  
'cause' +telic (Th)
- b. *maha* achievement (cf. 40, rhs)  
[vp 1 [ v1' [AspP X [Asp' ha [vp2 Y [v' √ ]]]]  
'agent' +telic (Agent, Th)

## 8. References

Ackerman, Farrell; and Goldberg, Adele E. (1996). Constraints on adjectival past participles. In *Conceptual Structure, Discourse and Language*, Adele E. Goldberg (ed.). Stanford, CA: CSLI Publications.

- Barss, Andrew; and Lasnik, Howard (1986). A Note on Anaphora and Double Objects. *Linguistic Inquiry* 17, 347-354.
- Bresnan, Joan (ed.) (1982). *The mental representation of grammatical relations*. Cambridge, Massachusetts: MIT Press.
- (2001). *Lexical-Functional Syntax*: Blackwell.
- Burzio, Luigi (1986). *Italian Syntax: a Government-Binding Approach*: SNLLT. Dordrecht: Reidel.
- Davidson, Donald (1966). The logical form of action sentences. In *Essays on action and events [1980]*, Donald Davidson (ed.), 105-122. Oxford: Clarendon Press.
- Duffield, Nigel (2004). Events, Inadvertent Cause, and the Temporal Anchoring of Present Participles, ms. University of Sheffield.
- (2005). Flying Squirrels and Dancing Girls: Events, Inadvertent Cause and Unaccusativity in English. In *Proceedings of NELS 35*, Leah Bateman and Cherlon Ussery (eds.).
- Fujita, Koji (1996). Double objects, causatives and derivational economy. *Linguistic Inquiry* 27 (1), 146-173.
- Haspelmath, Martin (1993). Passive participles across languages. In *Voice: form and function*, Barbara Fox and Paul J Hopper (eds.), 151-178. Amsterdam: John Benjamins Publishing Company.
- Higginbotham, James (1985). On Semantics. *Linguistic Inquiry* 16, 547-593.
- Jespersen, Otto (1940). *A modern English grammar. Part V. Syntax*. London: Allen and Unwin; Copenhagen: Munksgaard.
- Lakoff, George (1965/1970). *On the Nature of Syntactic Irregularity*. *Indiana University dissertation*. Published by New York, NY: Holt, Rinehart and Winston as *Irregularity in Syntax*.
- Langacker, Ron (1991). *Foundations of cognitive grammar*. Stanford, CA: Stanford University Press.
- Larson, Richard K (1988). On the double object construction. *Linguistic Inquiry* 19, 335-391.
- Levin, Beth; and Rappaport, Malka (1986). The formation of adjectival passives. *Linguistic Inquiry* 17, 623-661.
- Parsons, Terence (1990). *Events in the Semantics of English: a study in subatomic semantics*. Cambridge, MA: MIT Press.
- Pesetsky, David (1995). *Zero Syntax*. Cambridge, Massachusetts: MIT Press.
- Phillips, Vivianne (2001). The interactions between prefix and root: the case of *maha* in Malagasy. In *Formal issues in Austronesian linguistics*, Vivianne Phillips, Ileana Paul and Lisa Travis (eds.). Dordrecht: Kluwer Academic Publishers.
- Sorace, Antonella (2000). Gradients in auxiliary selection with intransitive verbs. *Language* 76 (4), 859-890.
- Travis, Lisa (2000). Event structure in syntax. In *Events as grammatical objects*, Carol Tenny and James Pustejovsky (eds.), 145-187: CSLI Publications.
- Vichit-Vadakan, Rasami (1976). The Concept of Inadvertence in Thai Periphrastic Causative Constructions. In *Syntax and Semantics*, Masayoshi Shibatani (ed.), 459-476. New York: Academic Press.
- Zubizarreta, Maria Luisa (1992). The lexical encoding of scope relations among arguments. In *Syntax and Semantics 26: syntax and the lexicon*, Tim Stowell and Eric Wehrli (eds.). San Diego, California: Academic Press.