De-agentivised causers or non-active causative predications

Dalina Kallulli

1 Anticausatives with overt causers[1]

This paper examines the construction type illustrated in (1) which consists of an anticausative core combined with a dative DP (or in Greek, a genitive), and found in all Balkan languages and beyond, such as German, Russian and Spanish. As revealed by the English translations, the examples in (1) have among other possible interpretations (discussed in the following section) a reading best described in terms of *accidental causation*, in the sense that the dative/genitive DPs here are interpreted as involuntary causers.

(1)a. *Benit   i-u   thye   vazoja.*   (Albanian)
    Ben.the$_{dat}$ him$_{dat.cl}$-nact.Aor   broke.3S   vase.the$_{nom}$
    'Ben accidentally broke the vase'

  b. *Tu   Ben   tu   kaike   i   supa.* (Greek)
    the$_{gen}$ Ben   him$_{gen.cl}$ burn-nactP   the$_{nom}$ soup
    'Ben accidentally burned the soup'

  c. *Na Ivan   mu   se   šcupixa   očilata.*   (Bulgarian)
    to Ivan   him$_{dat.cl}$ Refl   broke.3PL   glasses.the
    'Ivan accidentally broke the glasses'

  d. *Lui Jon   i   se   sparse   ferestrea.*   (Rumanian)
    John$_{dat}$ him$_{dat.cl}$ Refl   broke.3s   window.the$_{nom}$
    'John accidentally broke the window'

  e. *Dem   Ben ist das   Fenster   zerbrochen.*   (German)
    the$_{dat}$ Ben is the$_{nom}$ window   broken
    'Ben accidentally broke the window'

  f. *A Pedro   se   le   rompió   el coche.*   (Spanish)
    To Pedro   REFL cl.dat broke   the car$_{nom}$
    'Pedro accidentally broke the car'

It is well known that in many languages, notably Indo-European, anticausatives (and more generally, unaccusatives) systematically involve morphological marking that is shared by reflexive and/or passive predicates, involving a pronoun, a clitic or verbal inflection. Accordingly, the predicates of the sentences in (1) qualify as unaccusative firstly by the fact that they bear unaccusative morphology: non-active voice in Albanian and Greek, reflexive in Bulgarian, Rumanian, Serbo-Croatian and Spanish, and they select the auxiliary *sein* ('be') and not *haben* ('have') in German perfect tenses.[2] Second, the predicates in (1) are non-agentive, that is the dative/genitive causer here has

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[2] Albanian and Greek have two distinct conjugational paradigms, active vs. non-active, corresponding (roughly) to the unergative/unaccusative distinction (the latter including passive, lexical reflexive, middle, and deponent predicates). This correspondence is rough by virtue of the fact that while unergatives are always active, some unaccusative verbs appear in this voice, too. However, in both languages unergatives cannot be formally non-active, just as passives, lexical reflexives and middles cannot be formally active.

no control over the event named by the verb. This contrasts with their transitive unergative counterparts, which can (though need not) have a truly agentive interpretation. To illustrate, the Albanian example in (2) is the unergative counterpart of the sentence in (1a).

(2)   *Beni*   *theu*   *vazon.*   (Albanian)
      Ben.the$_{nom}$ broke.Act,Aor,3S   vase.the$_{nom}$
      'Ben broke the vase'

Both the active predicate in (2) and the non-active predicate in (1a) can be used to describe a situation in which Ben inadvertently breaks the vase. However, unlike the active causative predicate in (2) which may also describe an event that is willfully brought about by the human causer, the non-active causative predicate in (1a) only specifies accidental causation. It seems then that true agents (in the sense: volitional participants, or participants capable of intentionality) are excluded from non-active causatives. Again, the same facts hold also for the other Balkan languages in (1), as well as for German and Spanish, irrespective of the fact that unaccusative morphology in these languages is not expressed through non-active morphology. The German example in (1e) deserves special attention here. Following Kratzer (2000) and others, the German sentence in (1e) is in fact a state or adjectival passive, since "German state or adjectival passives select the auxiliary *sein* ('be'), and are therefore clearly distinguished from verbal or 'Vorgangs'- passives ('process passives'), which use the auxiliary *werden* ('get', 'become')" (Kratzer 2000: 1). Crucially, Kratzer (2000) argues that adjectival passives are purely stative, in the sense that they lack an agent (external) argument. If Kratzer is correct, the causative reading of the sentence in (1e) has nothing to do with the agent or the syntactic element (head) responsible for introducing the external argument. It is therefore important to figure out how this accidental causation reading comes about. Furthermore, unaccusative causatives differ from unergative causatives in that the causer in the former must be a human participant; substitution of the nominal *the earthquake* or *the wind* for Ben in (1) yields ungrammaticality, as is shown in (3a,b) for Albanian and German. In contrast, (4a,b) show that an active causative imposes no such restriction on its subject.

(3)a.   **Tërmetit   / erës i-u   thye   vazoja.*   (Albanian)
        earthquake$_{dat}$/wind$_{dat}$ it$_{dat.cl}$-nact.Aor break.3S   vase$_{nom}$
   b.   **Dem Erdbeben / dem Wind ist die Vase zerbrochen.*   (German)
        the$_{dat}$ earthquake/the$_{dat}$ wind is the$_{nom}$ vase broken
        'The earthquake/the wind accidentally broke the vase'

(4)a.   *Tërmeti   / era   theu   vazon.*   (Albanian)
        earthquake$_{nom}$ / wind$_{nom}$ broke.act.Aor.3S   vase$_{acc}$
   b.   *Das Erdbeben / der Wind   hat die Vase   zerbrochen.* (German)
        the$_{nom}$ earthquake / the$_{nom}$ wind   has the$_{acc}$ vase broken
        'The earthquake / the wind broke the vase.'

In sum, an unergative causative merely specifies causation, irrespective of whether the resulting event is accidentally or deliberately caused by a human participant or non-accidentally caused by an extrinsic instigator. An unaccusative causative on the other

hand only specifies accidental causation. Crucially then, the accidental causation reading of the sentences in (1) cannot be equated with an agentive reading.

Finally, the predicates in (1) qualify as unaccusatives by their inability to undergo impersonal passivization. In this context, note that in all the languages of the Balkans impersonal passives also involve non-active and/or reflexive morphology. And as is well-known also from other languages, passive-like formations (and reflexives) cannot passivize further.

In sum, the construction type in (1) can be described as dyadic unaccusatives.

The existence of the dyadic unaccusative construction with overt causers illustrated in (1) seems to be direct evidence for Chierchia's (2004), Reinhart's (1996) and Levin and Rappaport Hovav's (1995) claim that anticausatives have underlying causative semantics. Likewise, the construction is interesting in the context of the configurational approaches to unaccusativity. For instance, in Chomsky's (1995, 2001) shell theory the semantic concepts of agentivity and causativity are related to little v, and the presence of an external argument depends on the presence of little v (and vice versa), meaning that unaccusativity is structurally expressed not by the lack of an external argument, but by the absence of the v-projection. However, the unagentive unaccusatives with overt causers in (1) show that this picture is too simplistic. While Chomsky (op. cit.) and also Kratzer (1996) collapse the semantic concepts of agentivity and causativity in terms of their syntactic encoding, here I will argue, following Davis and Demirdache (1995), Demirdache (1997), that agentive and causative predications are universally derived from distinct frames (cf. also Reinhart 2003).

2   The other readings - ambiguity or vagueness?

The sentences in (1) may, depending on the interpretation of the dative/genitive DPs in them, have in addition to the accidental causation reading also other readings. For instance, the dative DP in the Albanian sentence in (1a), can in addition to being interpreted as an accidental causer also be interpreted as a somehow affected participant (such as a benefactive/malefactive) and as a possessor, as in 'Ben was (somehow) affected by the vase breaking' and 'Ben's vase broke'. The question is whether the different readings are due to ambiguity or vagueness. I believe that the constructions are truly ambiguous between an accidental causation reading, an 'affected' reading, and a possessor reading.[3] Let me start with the possessor reading.

The datives/genitives in the dyadic unaccusative construction in (1) cannot be interpreted as possessors in the presence of overt possessors. This is illustrated for Albanian in (5), the overt-possessor counterpart of (1a).

(5) *Benit*   *i-u*   *thye*   *vazoja*   *e Anës.*
     Ben.the$_{dat}$ himdat.cl-nact.Aor   broke.3S   vase.the$_{nom}$ agr. Ann.the$_{dat}$
     (i) 'Ben accidentally broke Ann's vase'
     (ii) 'Ben was (somehow) affected by the breaking of Ann's vase'
     (iii) *'Ben's vase broke'.

Note that the overt possessor in (5) is also expressed through a dative morphologically. However, unlike the dative in (1a), the overt dative possessor in (5) follows the head

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[3] The notion 'affected', notoriously difficult to formalise as it is, is throughout this paper used in a sense similar to benefactive/malefactive, which is however different from the notion 'patient'.

noun. Due to the fact that overt possessors in Balkan (and more generally, Indo-European) languages have the same morphological case as involuntary experiencers, accidental causers, or affected participants, namely dative (or in Greek genitive), in the absence of an overt possessor nothing would prevent a dative/genitive DP from receiving such an interpretation. In other words, the ambiguity possessor vs. other of the dative participant is expected in the absence of overt possessors.

A similar argument can be construed to account for the ambiguity, namely between the accidental causation reading and the affected reading. One argument suggesting that the accidental causation reading is structurally (and therefore semantically) different from the affected reading involves the following facts. In the presence of an oblique argument expressing the causing participant, the dative/genitive in the sentences in (1) can only be interpreted as an affected (and/or possessor) but not as an accidental causer. This is illustrated for the Albanian example in (1a) in (6).[4]

(6)a.   *Anës iu   thye   vazoja   nga   era / i shoqi.*
        Ann$_{dat}$ her$_{dat}$Nact   broke vase$_{nom}$ from/by   wind / husband
        (i) 'The wind / her husband broke the vase to Ann'
        (ii) 'Ann's vase broke from the wind / her husband'
        (iii) *'Ann accidentally broke the vase through the wind/her husband'

Another argument can be adduced in support of the idea that the dyadic unaccusative construction is truly ambiguous. When an overt adverbial meaning *accidentally* or *inadvertently* is inserted, the affected reading is excluded (unless an overt causer in a prepositional by-phrase is inserted, in which case the resulting construction is a passive, similar to the sentence in (6), as is illustrated through the Albanian example in (7).

(7)a.   *Benit i-u   thye   vazoja   padashje.*   (Albanian)
        Ben$_{dat}$ him$_{dat.cl}$-Nact broke.3S   vase$_{nom}$ inadvertently
        (i) 'Ben accidentally broke the/his vase'
        (ii) *'Ben was (somehow) affected by the vase breaking'

A third argument suggesting that the affected and the accidental causation reading are semantically (and assuming a close mapping between syntax and semantics, also structurally) distinct is the fact that a sentence like the Albanian (8a), or its German counterpart (8b), which contain constituent negation, seems to mean that Ben and not Eva was responsible for the vase breaking. That is, these sentences do not deny that there was a vase-breaking event, but the identity of the participant responsible for it.

(8)a.   *Vazoja   ime   u   thye,*
        vase.the$_{nom}$ my   Nact broke
        por   nuk   i-u   thye Evës   por   Benit.
        but   not   her$_{cl.dat}$-Nact   broke Eva.the$_{dat}$ but   Ben.the$_{dat}$
        'My vase broke, but it was not Eva but Ben that it broke to'

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[4] Unlike in English, in Albanian both extrinsic instigators (i.e. forces of nature etc.) and agentive participants may be introduced by the preposition *nga* 'by', as shown in (6). (Alternatively it may be stated that *nga* means both 'by' and 'from'.)

    b.   *Meine Vase   zerbrach, aber nicht der Eva, sondern dem Ben.*
        my$_{nom}$ vase   broke   but not   the$_{dat}$ Eva but the$_{dat}$ Ben
        'My vase broke, but Ben not Eva was responsible for that'

In sum, the different readings of the dative unaccusative construction are due to ambiguity, not vagueness.

3   Analysis

Rappaport Hovav and Levin (1998) distinguish between two types of morphological operations, one which alters the argument structure of verbs and/or grammatical relation alignments with arguments, that is, operations which only affect the lexical syntactic representations of verbs, and one which alters lexical meaning with possible effects on the grammatical relation status of arguments, that is, operations which derive new lexical semantic representations. Operations that affect verb meanings alter either the aspectual template of a predicate or the pairing of a *name* (a constant) with an aspectual template. I claim that unaccusative morphology of all shapes (e.g. non-active, reflexive and/or null) is an operation that affects the lexical meaning of a predicate.

3.1   The syntax of events and event composition

The analysis developed here relies on the model of lexical meaning proposed in Pustejovsky (1991, 1995). For Pustejovsky, the aspectual properties of verbs, and then verb phrases, are configurationally and compositionally defined in terms of recursive event structures. In particular, he argues that the different event types are not atomic entities but are composed of subeventual structures. He distinguishes three primitive event types whose terminals are atomic events: *states*, *processes* and *transitions*. A state S is defined as a single event evaluated relative to no other event. A process P is defined as a sequence of identical events identifying the same semantic expression. A transition T is defined as a single event identifying a semantic expression which is evaluated relative to another single event: its opposition.

      In Pustejovsky, every verb in natural language is characterized as belonging to one of the three basic event types. For instance, a stative verb is lexically associated with the event type of a state whereas an activity verb with the event type of a process. 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 event evaluated relative to its opposition. The event structure is interpreted as representing both temporal precedence and exhaustive event inclusion. For example, a predicate such as *build a house* denotes a transition. It has a process as its first subevent (*building at the house*) and a state as its final subevent (*the house is built*). In the case of *build* the transitional event structure is lexically given. In other cases, the complex event type of a transition is constructed compositionally on the basis of the event types of the verb and prepositional elements. For instance, *run* is lexically associated with the event type of a process. However, when it occurs with a directional PP such as *to the store*, which is a function from a process to a transition, the event type of the VP *run to the store* is a transition from a running process to a state of being at the store. This process of composing events on the basis of the primitive event types given above is referred to as *event composition*. Event composition derives shifts in the event types of verbs (e.g. while the verb *run* by itself denotes an atelic event, *run to the store* denotes a telic event). The output of event composition must conform to

(10). In sum, aspectual properties of verbs, verb phrases or entire sentences are compositionally derived by morpho-syntactic operations on event structures.

## 3.2   Unaccusative morphology and event decomposition

I assume that certain morphosyntactic processes operate at the level of event structure. Building on earlier work on non-active morphology in Albanian (Kallulli 1999), my proposal on unaccusative morphology of all shapes is stated in (10).

(10)   <u>*Definition*</u>
When unaccusative morphology is attached to a predicate, it suppresses either the initial subevent in its event structure or the name that is associated with this initial subevent.

3.3   The event structure of causatives

In particular, I assume that causative predicates have the event structure of a recursive transition as in (11), which is composed of two subevents: a process P that brings about a resulting change of state T.

(11)
$$
\begin{array}{ccc}
 & T & \\
P & & T \\
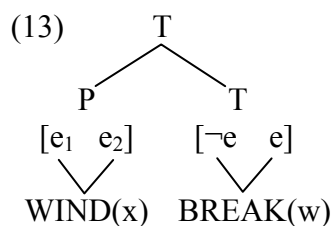[e_1\ e_2] & & [\neg e\ \ e]
\end{array}
$$
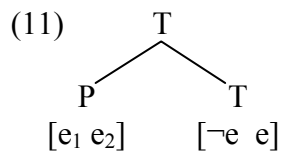
Aspectually a causative is an accomplishment: the event denoted by the verb is viewed in its entirety. Syntactically, a causative projects two arguments. Arguments correspond to participants in an event structure: the participant associated with the first subevent (P) is the external argument whereas the participant associated with a second subevent (T) is the internal argument of a predicate. Adopting Pustejovsky, I assume that (unergative) causatives are lexically associated with the event-representation in (12).

(12)
$$
\begin{array}{ccc}
 & T & \\
P & & T \\
[e_1\ \ e_2] & & [\neg e\ \ \ e] \\
\downarrow & & \downarrow \\
V(x) & & BREAK(x)
\end{array}
$$
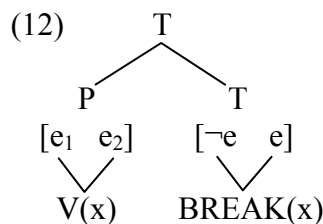
Following Rappaport Hovav and Levin (1998) I have referred to the aspects of the meaning of the predicate that distinguishes it from other predicates with the same event structure, as the name of the predicate and I have used the name of the predicate in capital letters to represent this constant. Thus, BREAK represents the essence of *break*. In (13), both subevents are foregrounded. Hence the predicate is syntactically dyadic; it projects both an external and an internal argument. In (13) the inital subevent P is associated with a contentless name (V – which is a variable ranging over predicates) just to indicate that P is foregrounded. This analysis thus contrasts with theories of verb meanings which postulate a higher predicate DO or ACT into which the notion of 'agent' is built. The predicate CAUSE can be dispensed with because causation is in the Pustejovskian notation in (12) defined as a structural entailment between the two

subevents. DO or ACT should be dispensed with because an active causative predicate does not need (though it may have) a subject which can control the action denoted by the predicate. In this context, recall that only unergative causative predicates but not unaccusative causative predicates allow event nominals, as was illustrated through the opposition of (4a) vs. (3a) and (4b) vs. (3b), respectively. In (4a,b), the change of state (the vase becomes broken) is not caused by a subevent of which the earthquake or the wind is an agent: the earthquake/the wind does not do anything to break the vase. The causing event itself is the external argument in (4a,b). That is, the earthquake in (4a,b) is a causer, though not an agent. To capture this, I follow Demirdache (1997) in assuming that in an event causative, the lexical content of an event nominal is mapped onto the causing subevent P. Such mapping is possible because the name associated with P in (12) is just a placeholder. The event causatives in (4) have the event representations in (13), where a process (*the wind*) causes the vase to become broken.

(13)

$$
\begin{array}{c}
T \\
\diagup \diagdown \\
P \qquad T \\
[e_1 \ e_2] \quad [\neg e \ \ e] \\
\diagdown \diagup \quad \diagdown \diagup \\
\text{WIND}(x) \quad \text{BREAK}(w)
\end{array}
$$

3.4   Deriving anticausatives

I contend that anticausatives are derived from the event representation in (12) as a result of unaccusative morphology suppressing the initial subevent (in line with the first part of the definition in (10)). Therefore, the event-representation of an anticausative is as in (14). The initial subevent in (14) is P; hence P is not foregrounded. Since every subevent is associated with one argument, then there will only be one (internal) argument projected.

(14)

$$
\begin{array}{c}
T \\
\diagup \diagdown \\
P \qquad T \\
[e_1 \ e_2] \quad [\neg e \ \ e] \\
\diagdown \diagup \\
\text{BREAK}(x)
\end{array}
$$
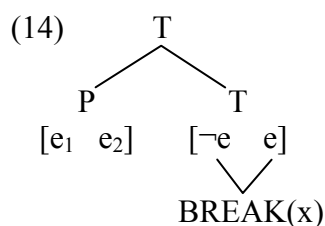
Thus, anticausative predicates have a fundamentally patient-oriented meaning because their names are associated only with the final subevent in (14), namely with the temporal boundary that determines the end point of an event but not with the temporal boundary that brings about this event.

3.5   Deriving (dyadic) unaccusative causatives

Recall that an unergative causative predicate can though need not be used to describe a situation in which the subject lacks control over the action denoted by the verb, which is why the subject of an unergative causative predicate can be a non-human participant. In contrast, the causer in an unaccusative causative sentence can only be a human participant. In this section, I propose that this is so because unaccusative causatives are derived from agentive predicates, not from unergative causative predicates. Agentive

predicates are not associated with the representation in (14) but with the representation in (15a), due to an operation like *Predicate Cloning* (Davis and Demirdache 1996). Unaccusative causatives are derived from agentive causatives through suppression of the *name* associated with the first subevent (and concurrently of agency, which is related to the initial subevent P) by unaccusative morphology. As shown in (15b), both the input and the output of unaccusative morphology is a dyadic predicate. Note that the event representation of an unaccusative causative is identical to the event representation of a non-agentive active causative (i.e. (12)), also a desirable consequence.

(15)   a. Agentive causative   b. Unaccusative causative

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