Nominalization and Event Complexity

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1. Deficiency in English nominalization

English Nominalization is in some sense 'deficient' when compared with English vP/VP. Abstracting away from the external argument, nominalizations also appear to lack the structural space often attributed to an extended VP (Chomsky 1970, Rappaport 1983, Kayne 1984, Abney 1987): ECM, double objects, object control, and particle shift have been claimed to require VP shell-structure or Agr-o (Larson 1988, 1990; Den Dikken 1995; Collins & Thrainsson 1996, Svenonius 1996). These constructions are all lacking in derived nominals and in ING-OF gerunds, though available in the POSS-ING variety:

(1) a. *John’s belief / believing of [Bill to be Caesar] ECM
   b. John’s believing [Bill to be Caesar]
(2) a. *John’s gift / rental /giving (of) Mary of a fiat Double objects
   b. John’s giving/renting Mary a fiat
(3) a. *John’s persuasion / persuading of Mary [PRO to stay] Object Control
   b. John’s persuading Mary [PRO to stay]
(4) a. John’s explanation (*away) of the problem (*away) Particle-Shift
   b. John’s explaining (away) of the problem (*away)
   c. John’s explaining (away) the problem (away)

In what sense exactly are nominalizations deficient? In addition to 'pure morpho-syntax' it has also been claimed that the OBJ grammatical function is missing (Rappaport 1983). Given the division of the class of direct objects into those associated with activities and accomplishments (Levin 1999; Rapoport 1999; Marantz 2005; Ramchand 2007), it is possible that not all types of direct objects are missing but only a subset, as defined by the structure of events. If so, at least part of the deficiency observed in nominalization may ultimately reduce to deficiency in the kinds of events compatible with nominalization.

Initial indication: The particle construction is impossible in derived nominals (4a), and is possible in its non-shifted form in ING-OF in (4b) (Harley 2006). Taking particles to add an end-point to an activity, this suggests that ING-OF gerunds may denote complex events while derived nominals may not.

Central Claim: The size of the event matters. Derived nominals with idiosyncratic affixes (-ation/-ment/-ance/-al) are restricted to simple events. ING-OF nominalization can host complex events.
The proposal combines two sets of known restrictions and claims that they are two aspects of a single restriction to simple events.

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2. Restrictions on Transitive Derived Nominals

There is a class of CAUSE arguments in the pre-nominal genitive which is systematically excluded in derived nominals (Chomsky 1970). Pesetsky (1995): causatives that don't alternate produce grammatical transitive derived nominals, but verbs which occur in the inchoative/causative alternation don't produce transitive derived nominals.

(6) a. Bill's cultivation of tomatoes / *Tomatoes cultivated
b. The bomb's destruction of the town / *The town destroyed
c. The volcano's fortuitous burial of Herculaneum / *Herculaneum buried
d. The emperor's restoration of the monarchy
e. the proposal's creation of controversy
f. the sun's illumination of the room
g. Bill's discontinuation / suspension of the activity

(7) a. *Bill's growth of tomatoes / Tomatoes grew
b. *The mechanism's drop of the curtain / The curtain dropped
c. *The thief's return of the money / The money returned
d. *inflation's shrinkage of his salary
e. *inflation's diminishment of his salary
f. *gravity's swing of the pendulum
g. *the bow's vibration of the string
h. *Bill's cessation / stoppage of the activity

Levin and Rappaport-Hovav (1995): non-alternating verbs are based on roots which imply external causation, and alternating verbs imply internal causation.

Marantz (1997): the contrast supports the direct derivation of nominalizations from a category-neutral root. The external argument associated with the latter must be introduced by a separate head in an extended vP. In the former class, since the external argument is implied by the root, it may also be expressed by a pre-nominal genitive. The absence of transitive derived nominals based on alternating causatives shows, from this perspective, that nominalization proceeds directly from a category-neutral root, and that vP does not nominalize.

This analysis of the restriction can be characterized as lexical since it draws the division at the level of the root, between those that imply external causation and those which do not.
Harley & Noyer (2000) dispute the division based on verb class and emphasize the construal of the external argument. Alternating verbs *do* produce transitive derived nominals as long as the external argument can be construed as a direct cause:

(8) a. the balloon exploded / the balloon's explosion
b. the army exploded the bridge / the army's explosion of the bridge

(9) a. Wealth accumulated / the wealth's accumulation
b. John accumulated wealth / John's accumulation of wealth

(10) a. Jim and Tammy Faye separated / Jim and Tammy Faye's separation
b. The teacher separated the children / The teacher's separation of the children

(11) a. The German principalities unified / the principalities' unification
b. Bismarck unified the German principalities / Bismarck's unification of the German principalities

(12) a. Dust accumulated on the table
b. the accumulation of dust on the table
c. #John's accumulation of dust on the table

(13) a. Adultery separated Jim and Tammy Faye
b. #Adultery's separation of Jim and Tammy Faye
c. The cold war separated E. and W. Germany
d. #The cold war's separation of E. and W. Germany
e. The 19th century unified the principalities
f. #the 19th century's unification of the principalities

Wolff (2003): A direct cause is the most proximate event in the causal chain leading to the event denoted by the head of the phrase; 'Adultery', 'the cold war' and 'the 19th century' denote macro-events or time spans which are too broad to qualify as direct causes.

Harley & Noyer (2000): the possibility for external causation must be part of our encyclopedic knowledge about all roots and the events they potentially denote. In addition, the pre-nominal genitive must be construed as a *direct* cause.

Why should that be, especially since the corresponding verb is not so restricted?

Alexiadou, Anagnostopoulou & Schäfer (2008): agents are privileged and agentivity is directly given by encyclopedic knowledge associated with the root.

The cost for both accounts is that agentive or direct cause meaning is postulated for all potentially transitive roots, including alternating verbs such as 'explode', 'separate', 'unify'. This neutralizes the division between alternating and non-alternating verbs and leads to over-generation in both the verbal and nominal domains. In the verbal domain it neutralizes the distinction between passive and inchoative anti-causatives, which have no implication of agentivity at all:

(14) a. The vase was broken \(\rightarrow\) agentivity is implied
b. The vase broke \(\rightarrow\) agentivity is not implied

In the nominal domain, derived nominals based on obligatory transitives continue to imply agentivity, whereas derived nominals based on alternating verbs produce ambiguity:

(15) a. the destruction of the city \(\rightarrow\) agentivity is implied
b. the creation of controversy
c. the burial of John

(16) a. the separation of Jim and Tammy Faye \(\rightarrow\) ambiguous
b. the explosion of the balloon
c. the solidification of our agreement
Derived nominals in Hebrew show that the restriction has some generality beyond English. I. Unlike English, causatives built from unergatives are not necessarily agentive. The corresponding derived nominals, however, are. II. Unlike English, Hebrew allows some eventive nominalization of Obj-Exp verbs. The verb allows generalized causative readings whereas the nominalization is restricted to agentive interpretation.

I. Causative nominalization:

(17) a. ha-me'amen heric et ha-pluga be-meSex xaci Sa'a
    the-trainer ran.caus ACC the-battalion for half hour
    'The trainer ran the battalion for half an hour'

d. ha-kin'a merica oto
    the-jealosy run.caus him
    'Jealousy makes him run (=motivates him)'

c. ha-joki hikpic et ha-sus
    the-jocky jumped.caus ACC the-horse
    'The jocky jumped the horse'

d. ha-de'aga hikpica oto me-ha-mita
    the-worry jumped.cause him from-the-bed
    'His worries caused him to jump out of bed'

(18) a. ha-haraca Sel ha-pluga (al yede y ha-me'amen)
    the-running.caus of the-battalion (by the trainer)
    'The running of the battalion by the trainer'

b. *ha-haraca Selo al yede / biglal ha-kin'a


c. hakpacato me-ha-mita (al yede y ha-m agad)
    jumping.cause.his from-the-bed (by the commander)
    'His being made to jump from bed by the commander'

d. *hakpacato me-ha-mita al yede / biglal ha-de'aga
    jumping.cause.his from-the-bed by because the worry

Hebrew derived nominals based on causatives of unergative verbs pattern exactly like English nominals derived from alternating verbs. The verbal form in both allows both agents and causes, whereas the nominalization is restricted to an agentive interpretation.

II. Psych Nominalization

Unlike English, where psych nominalizations are mostly stative (the amusement / boredom of the children), Hebrew allows some eventive psych nominalizations. Again, where the corresponding verb can have a CAUSE subject, in nominalizations it is restricted to agents.

(19) a. ha-seret hifxid et rina
    the-film frightened rina
    causative

b. dani hifxid et rina
    dani frightened rina
    possibly agentive

c. rina paxda (ba-seret / me-dani)
    rina was.afraid in.the-film / from dani
    stative

(20) a. ha-xadaSot hix'isu et rina
    the-film angered rina
    causative

b. ha-yeladim hix'isu et rina
    possibly agentive
the-children angered rina

c. rina ka'asa biglal ha-xadaSot / al ha-yeladim stative
rina was. angry because the-film / on the-children

Nominalization of the causative:

(21) a. ha-hafxada Sel rina only agentive
the-frightening of rina
b. *ha-hafxada Sel ha-seret / dani et rina
the-confusion of the-film / dani acc. rina
c. ha-hafxada Sel rina al yedey dani only agentive
the-frightening of rina by dani
d. * ha-hafxada Sel rina al yedey ha-seret
the-frightening of rina by the-film

(22) a. ha-hax'asa Sel rina only agentive
the-angering of rina
b. *ha-hax'asa Sel ha-xadaSot / ha-yeladim et rina
the-angering of the-news / the-kids acc. rina
c. ha-hax'asa Sel rina al yedey ha-yeladim only agentive
the-angering of rina by dani
d. *ha-hax'asa Sel rina al yedey ha-xadaSot
the-angering of rina by the-news

Nominalization of the anti-causative seems to produce a result noun:

(23) a. ha-pxadim ha-txufim Sel rina
the-fears the-frequent of rina
b. ha-ke'asim ha-xolfim Sel dina
the-angers the-passing of dina

→ Obj-Exp verbs produce an event nominalization which is exclusively agentive.

Q1: What is the notion of agency or direct causation relevant for derived nominals?  
A1: the empirical generalization involves teleological capability and direct participation, and not agentity as defined solely in terms of properties of the participant.
Q2: Why should derived nominals impose this restriction, absent in the corresponding verbs?  
A2: Because they are restricted to single, simple events.

3. Teleological capability, direct participation, and event co-temporality

The restriction applies only to derived nominals whose corresponding verbal forms have an external argument as subject, and only to the choice between agents and CAUSES:

(24) a. John's receipt of the package
b. The navy's transmission of the message
c. Mary's realization of the source of her problems
d. Dina's adherence to our manifesto
Crucially, the constraint appears not to involve a restriction to humans. All of the cases below involve inanimes. Some are good and some are bad. I will refer to inanimate entities of the sort in (24) (repeated from (6)) as 'forces'.

(25) a. The bomb's destruction of the camp  
    b. The sun's illumination of the room  
    c. The volcano's fortuitous burial of Herculaneum

The distribution of forces in the pre-nominal genitive position is sensitive to the combination of the denotations of the participants and the root in a way which suggests direct participation. Folli and Harley (2006, 2008) (following Higginbotham 1997) refer to this property as teleological capability: an inanimate entity is associated with inherent properties which endow it with the ability to initiate the event on its own: the sun illuminates and the bomb destroys. Here I treat teleological capability and direct participation as derived notions, following from the restriction to simple events.

I will assume that the subject in English lexical causatives has to be a direct cause of the event denoted by the verb. The following examples show that in derived nominals the restriction is tighter, and requires also direct participation.

Derived nominals based on non-alternating verbs:

(26) a. The hurricane destroyed all the crops  
    b. The hurricane's destruction of our crops  
    c. The destruction of our crops by the hurricane  
    d. The hurricane devastated ten coastal communities in Nicaragua  
    e. The hurricane's devastation of ten coastal communities in Nicaragua  
    f. the devastation of ten coastal communities by the hurricane

(27) a. The approaching hurricane justified the abrupt evacuation of the inhabitants  
    b. #The approaching hurricane's justification of the abrupt evacuation of the inhabitants  
    c. #the justification of the abrupt evacuation of the inhabitants by the hurricane  
    d. The authorities justified the rapid evacuation of the inhabitants  
    e. The authorities' justification of the rapid evacuation of the inhabitants  
    f. the justification of the rapid evacuation of the inhabitants by the authorities

(28) a. The results verified the initial diagnosis  
    b. #the result's verification of the initial diagnosis  
    c. #the verification of the initial diagnosis by the results  
    d. The expert's verification of the initial diagnosis  
    e. the verification of the initial diagnosis by the expert

Derived nominals based on alternating verbs:

(29) a. The economy de-stabilized  
    b. The war destabilized the economy  
    c. The war's destabilization of the economy brought more people to the poles  
    d. the war separated Jim and Tammy Faye  
    e. #the war's separation of Jim and Tammy Faye

(30) a. Her skills developed  
    b. The exercise developed her analytic skills  
    c. The exercise's development of her analytic skills surprised Mary
d. The exercise expanded her interest in syntax
e. #The exercise's expansion of her interest in syntax surprised Mary

(31) a. Mary's mood improved
b. The weather gradually improved her mood
c. John was amazed by the weather's gradual improvement of Mary's mood
d. The weather altered their plans
e. #The weather's alteration of their plans disappointed Jim and Tammy Faye
f. The wind altered the position of the rocks
g. The wind's alteration of the position of the rocks

Inanimates are compatible with derived nominals only when they can be construed as forces which directly bring about the event, and impossible when construed as causing events, even if causation is direct. Direct participation may be guaranteed by the relationship between the event denoted by the nominal and some property which is inherent to the entity denoted by the genitive (teleological capability). With humans, on the other hand, their inherent properties, including intentionality, volition and mobility, will usually be sufficient to allow for direct participation regardless of the choice of nominal.

Whereas direct causes may be sufficient with verbs, direct participation is required in derived nominals. The relations are close but they are not identical. A direct cause may be temporally or spatially removed from the main event. Direct participants, on the other hand, must be co-temporal and in some sense co-spatial with the unfolding event.¹

Proposal: To derive the restriction to direct participation from a more general restriction to simple events. Crucially, the nominalizations of accomplishment and causative verbs denote simple events. This is ensured by conditions on event-identification (Levin & Rappaport-Hovav (1999, 2002), Rapport-Hovav & Levin (2001): Non-co-temporal complex events have the complex structure of an accomplishment; a co-temporal complex event, in which the sub-eventualities fully overlap, is represented as a single, simple event.

(32) Conditions on event identification
I. The sub-events must have the same location and are necessarily temporally dependent. To be identical, two events must have the same spatial and temporal properties.
II. One sub-event must have a property that serves to measure out that subevent in time; this property is predicated of an entity that is necessarily a participant in both subevents. This ensures temporal dependence, i.e. that the two sub-events unfold at the same rate.

These conditions were designed to account for activities augmented by Bare XP resultatives. They continue to denote a single event due to (32).

(33) a. Carey ran / waltzed out of the room
b. The clothes steamed dry
c. The kettle boiled dry
d. Carey rustled out of the room

Unlike bare XP resultatives, however, event identification in nominals derived from causative / accomplishment verbs does not hold of separately lexicalized activities and results, and the shared participant is not an internal argument. To apply event co-temporality to transitive derived

¹ The caveat with respect to spatial identity is intended so as to apply to somewhat abstract relations between forces and events and our conceptualization of these relationships, as in (29) where 'the war' may be waged overseas and 'de-stabilization' may apply to the homefront economy.
nominals, it must be extended to the relationship between the CAUSE and the event denoted by the derived nominal: the participation of the CAUSE is co-temporal with the unfolding of the event denoted by the derived nominal, and the shared participant is the external argument. To recall:

(34)  a. The teacher's separation of Jim and Tammy Fay  
      b. #The war's separation of Jim and Tammy Fay 
      c. The war's de-stabilization of the economy

I will assume that derived nominals are restricted to simple, single, events. The relation between the external argument and the unfolding event in derived nominals is subject to the condition in (35a) and its corollary in (35b).

(35)  a. If a simple event includes an external argument, the participation of the argument is co-temporal with the initiation of the event 
      b. Corollary: When the participation of the external argument is not co-temporal the event is a complex event

→ On this view, the so-called thematic restriction (agency, and more specifically teleological capability) is derived from the size of the event.

4. Nominal Passive

4.1 Restrictions on the Internal Argument

The constraint on derived nominals sanctions any sort of event as long as it is simple. Sections 2 and 3 focused on the instigation of the event and restrictions on the external argument in transitive derived nominals. Another option, consistent with the generalization, is that only the lower portion of a complex event is included, an option which appears to be realized in nominal passive in English.

- Nominal passive appears to be confined to a reduced structure (Grimshaw (1990); Doron and Rappaport (1991); Den Dikken & Sybesma (1998) and Alexiadou (2001)). Nominal passive is eventive (Snyder (1998)).

Affectedness:

(36)  a. the tomatoes’ growth  
      b. the bow’s vibration  
      c. his salary’s diminishment  
      d. *the cliff’s avoidance  
      e. *that car’s pursuit  
      f. *the mistake’s realization

The external argument appears to be completely absent:

(37)  a. The dispersal of the crowd nude gave the officer a bad reputation  
      b. *The crowd’s dispersal nude gave the officer a bad reputation

(38)  a. the translation of the book [in order PRO to make it available to a wider audience]  
      b. *the book’s translation [in order PRO to make it available to a wider audience]

Doron & Rappaport (1991): Affectedness is defined structurally, in terms of events: an affected object is contained within a sub-event distinct from the sub-event containing the external argument. The subset of derived nominals which allow passive are those in which the object is contained
within a distinct and lower sub-event. Direct objects in complex accomplishment structures have been independently claimed to be subjects of the lower, embedded sub-event (Tenny 1994, Rapoport 1999, Levin 1999).

→ The entire causing sub-event is absent in nominal passive; passive derived nominals are confined to the lower sub-event.

5.2 Restrictions on the By-phrase

Fox & Grodzinsky (1998) show that unlike its verbal counterpart, the nominal by-phrase is limited to 'effectors'. It allows agents, instruments, and creators, and excludes goals and experiencers:

(39) a. the imprisonment of refugees by the government            agent
    b. the destruction of the city by lightning                 instrument
    c. CK1 by Calvin Klein                                      creator/possessor
    d. the receipt of the package (*by John)                    goal
    e. the realization of the mistake (*by John)                experiencer

F&G: by is ambiguous. This is unlikely since it looks like a functional morpheme. Rather, the difference should be derived from the general difference between verbal and nominal projections. The distribution of inanimates in the by-phrase shows that it is just like the pre-nominal genitive in active derived nominals, where participation must be co-temporal:

(40) a. The devastation of ten coastal communities by the hurricane
    b. The destruction of our crops by the tornado
    c. the verification of the initial diagnosis (by the expert / #by the results)
    d. the justification of the evacuation (by the authorities / #by the hurricane/tornado)
    e. the separation of Jim and Tammy Faye (by the teacher / #by the war)
    f. the destabilization of the economy by the ongoing war

Speculation: nominal 'by' is sensitive to event structure because derived nominals are; i.e. 'by' never makes a semantic contribution. The restriction in (39) should be understood in terms of event complexity: it is actually the same as the 'affectedness' constraint, where non-accomplishment predicates are excluded. Maybe: 'by' can only be introduced at event boundaries.

Interim Summary:
Accomplishments and lexical causatives have complex event-structure which cannot fit into the event size allotted to derived nominals. One way to fit them in is via co-temporality of the INITIATOR, the route to English transitive derived nominals. Another route, leading to nominal passive in English, is via suppression of the causing sub-event.

5. Speculations about the Event-structure / Syntax / Word Formation Interfaces

The derivation of direct participation / teleological capability from the restriction to simple events entails a constructionist view of argument-structure (Hale and Keyser 2002, Borer 2005) if event structure is reflected in syntactic structure.

- Is the event structure of nominalization reflected in syntactic structure?
- How is the restriction to simple events linguistically encoded?
Assumption: the restriction is a property of the nominalizing affix, and refers to the kinds of things that nominalizing affixes can combine with.

What sort of restriction is this? Lexical? If not, is the restriction defined syntactically or semantically?

It is unlikely that idiosyncratic affixes combine with their morphological bases in the traditional lexicon, since the requirement is for an event of a particular size, and this must be computed on the basis of the head noun and the participants denoted by its arguments (the teacher’s / # the war’s separation of Jim and Tammy Faye). This suggests that word formation in these derived nominals must be done within the syntactic derivation (Hazout 1991, Borer 1993, Marantz 1997, Alexiadou, Anagnostopoulou & Schäfer (2008) among others).

It is also unlikely that the restriction is exclusively semantic since simple events and complex events do not have distinct denotations, at least not on standard semantic assumptions.

→ This suggests that the restriction is a syntactic one and that (at least some aspects of) the structure of events is represented syntactically (Travis 1992, Borer 2005, Ramchand 2009 among others).

What sort of constituent do idiosyncratic affixes select for? Not a vP/VP, since there is no way to ensure that vP/VP denotes a simple event and does not embed lower material which would augment it to a complex event (John cried himself silly). A feasible candidate seems to be the rootP (Marantz 1996, 1997). An XP merged in the specifier of rootP is interpreted as a direct participant; an XP merged in the specifier of a higher v head is interpreted as a non-co-temporal CAUSE.

6. Complex Events in ING-OF nominalizations

ACC-ING and POSS-ING gerunds: the morpho-syntactic restrictions observed in derived nominals are neutralized and the full array of verbal constructions is observed.

Derived nominals: morpho-syntactic deficiency and event-structure deficiency

ING-OF gerunds: morpho-syntactic deficiency and license complex events

Many of the examples considered above improve substantially in ING-OF nominalizations (see also Marantz 1997, Wechsler 2005, Harley 2006):

(41) a. #Bill's growth of tomatoes
    b. Bill's growing of tomatoes
    c. #inflation's shrinkage of his salary
    d. ?inflation's shrinking of his salary

(42) a. #Adultery's separation of Jim and Tammy Faye
    b. ?Adultery's separating of Jim and Tammy Faye
    c. ?The cold war's separating of East and West Germany
    d. #The 19th century's unification of the principalities
    e. ?The 19th century's unifying of the principalities
Lexical causatives exhibit temporal independence (Levin & Rappaport Hovav (2002)):

(44) a. The widow murdered the old man by putting arsenic in his coffee
b. Casey's persistent banging broke the window

Lexical causatives in which the CAUSE is explicitly not co-temporal with the result state produce good ING-OF nominalizations:

(45) a. the waking of the baby by playing the piano
b. the shocking of Sandy by deciding to run for office
c. the murdering of the old man by putting poison in his soup
d. the wind's eventual shutting of the door

Additional effects not expected on a thematic analysis: Activity verbs augmented by the addition of adjectival predicates or particles produce complex events, and in these cases the shift from a simple event to a complex event has nothing to do with the external argument. To the extent that ING-OF nominalizations license complex events, these are expected to be possible.

Resultatives with non-selected direct objects allow temporal independence between the two sub-events (Levin & Rappaport Hovav (1999), (2002). They also allow ING-OF gerunds:

(46) a. The joggers ran the pavement thin
b. the running of the pavement thin
c. The dog barked the neighbor awake
d. the barking of the neighbor awake
e. the rubbing of the tiredness out of their eyes
f. the scrubbing of her hands raw
g. the singing of us all to sleep

Particles add a result ingredient to an activity and give rise to complex events (Ramchand and Svenonius (2002), among others), a natural candidate for acceptability in ING-OF nominalization. While ING-OF nominalizations, unlike ACC-ING and POSS-ING gerunds, do not allow particle shift, it is of immediate interest that ING-OF allows particles at all since derived nominals do not (Harley and Noyer (1998), Harley (2008)).

(47) a. John’s explanation (*away) of the problem (*away)
b. John's explaining (away) of the problem (*away)
c. John’s explaining (away) the problem (away)

_ING-OF patterns with other gerunds in allowing a particle, and it patterns with derived nominals in its deficient syntax, accounting for the absence of particle shift.
Particles with non-selected objects produce complex events. They are good as ING-OF nominalizations:

(48) a. They laughed / drank away their sorrows  
    b. She winked / buzzed in the guests

(49) a. The drinking / laughing away of their sorrows  
    b. The winking / buzzing in of the guests

8. Beyond Nominalization

As it turns out, the restriction of English derived nominals to single simple events is probably not a special nominal property. There are verbal environments which display this restriction as well. Fare-causatives in Italian come in two versions: one in which the embedded external argument has dative Case, and one in which it is an adjunct marked by da. There are numerous differences between these constructions. In particular, the former type exhibit a restriction to agentivity/teleological capability (Folli and Harley 2007a, 2007b), in (50). The latter type look like passives. They also exhibit the Affectedness constraint familiar from nominal passive (Guasti 1993, 1996), in (51).

(50) a. Maria / Il ramo ha rotto la finestra  
    Maria / the branch has broken the window  
    'Maria / The branch broke the window'
    b. Gianni ha fatto rompere la finestra a Maria / *al ramo  
    Gianni has made break the window to Maria / to.the branch  
    'Gianni made Maria / *the branch break the window'
    c. Il tecnico / Il programma ha disinfettato il computer  
    The technician / the program has disinfected the computer  
    'The technician / The program has disinfected the computer'
    d. Gianni ha fatto disinfettare il computer al tecnico / *al programma  
    Gianni has made disinfect the computer to.the technician / to.the program  
    'Gianni has made the technician disinfect the computer'

(51) a. I soldati hanno fatto pulire le toilette dal generale  
    The soldiers had made clean the toilets by.the general  
    'The soldiers had the toilets cleaned by the general'
    b. *Cio ha fatto pensare (da Maria) delle scioecchezze (da Maria)  
    This has made think (by Maria) some foolish things (by Maria)
    c. *L'avvocato ha fatto perdere la causa da Gianni  
    The lawyer has made lose the suit by Gianni  
    'The lawyer made Gianni lose the suit'
    d. *La grandine ha fatto temere un disastro dai contadini  
    The hail has made fear a disaster by.the farmers  
    'The hail made the farmers fear a disaster'

→ The observation that these two restrictions are found together in an entirely different domain independently supports grouping them together, as different manifestations of a broader restriction to simple, single, events.
→ Fare (and its cognates) like nominalization affixes, selects a single, simple event, on a par with idiosyncratic nominal affixes in English.
→ The XP it selects for must be category-neutral, i.e. rootP.
8. **Conclusions**

- Restrictions in the distribution of pre-nominal inanimates in transitive derived nominals cannot be defined thematically, only in terms of the properties of participants, and hinge on the significance of the entire event.
- Above and beyond well-known syntactic limitations in derived nominals, derived nominals are also constrained to host simple, single events.
- When an instigator is present, its participation must coincide with the beginning of the unfolding event, leading to event identification and the reduction of causatives and accomplishments to single events.
- English nominal passive illustrates another option, where only the result component is included.
- The restriction to single, simple, events derives the restriction to agentivity and teleological capability. Thematic restrictions in this domain are derivative of the shape of the event.
- The shape and size of the event is reflected syntactically. Idiosyncratic nominal affixes select for a simple XP, most likely rootP.
- This entails a constructionist view of argument structure. An XP merged in the specifier of rootP is interpreted as a direct initiator; an XP merged in the specifier of a higher head is interpreted as a non-co-temporal *cause*.
- The patterns examined above suggest that the ingredients which underlie the representation of complex events reduce to the minimal difference between *ing-of* and derived nominals and point specifically to the contribution of *ing*. What exactly is the contribution of *ing*?

**References**


