On the Categorical Specification of Causative Morphemes: Evidence from Georgian

ON THE CATEGORIAL SPECIFICATION OF CAUSATIVE MORPHEMES: EVIDENCE FROM GEORGIAN*

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1. Introduction.

In this paper I argue that Causative Morphemes (henceforth, CMs) may be of two types cross-linguistically: verbal and non-verbal. The existence of the first class is non-controversial, whereas, with the only exception of Pesetsky (1992), no accounts for the second class have been put forth. It is for the existence of the second class that I will plead in this study by providing some general theoretical justification and the factual evidence from Georgian.

I propose that CMs (independent, as the causative *faire* in French, or dependent, as the causative *-sase* in Japanese) should be decomposed into two parts - nominal and verbal. The nominal part will be responsable for the dethematizing properties of the causative operation, while the verbal part will provide the nominalization thus created with the necessary verbal support. Crucially, I claim that these subparts of causative operation occupy different ***structural*** positions within the clause. Therefore, causativization is reduced to ***transitive passivization***. I will also analyse possible consequences induced by the existence of nominal CMs on the general architecture of VP-shells in the sense of Larson (1988).

2. Causative morpheme as dethematizer.

Some current work assumes that CMs can dethematize the verb they attach to. Specifically, it has been proposed by Zubizarreta (1985) that *fare* in Italian behaves as a dethematizing affix in the way that its presence blocks the reflexive *se*. Consider (1a-b):

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(1) a.Il vento ha fatto dissipare/*dissiparsi le nubi.
"The wind made-disperse the clouds/disperseSE the clouds"

b.Le nubi *(si) dissipano
"The clouds SEdispersed"

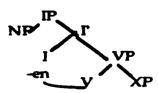
Pesetsky (1992) attributes to the zero affix CAUS, covertly present in psychological predicates of the class *annoy*, the same dethematizing property. He claims that in the French examples (2a-b) CAUS suppresses the external argument SE.

(2) a. Jean a (*s')étonnéCAUS Marie.
"John (*SE) surprised Mary"

b.*Marie a étonné √ Marie s'est étonnée
"Mary was surprised"

Another type of morphemes to which the same dethematizing function is commonly attributed is Passive Morphemes (henceforth, PMs). Baker et.al. (1989) analyse PMs as nominal elements (clitics attached to a functional head INFL) which require a th-role and Case, as is shown in diagram (3):

(3)



Following Hoekstra and Roberts (1990), I will consider the English PM-*en* as a clitic attached to some functional head F,which c-commands and is coindexed with (i.e. identifies) the small arbitrary pro in SPEC,VP. This treatment of PMs enables us to dispense with the vague notion of "absorption" of th-role and Case.

However, even this modification of the passive operation is difficult to maintain for all PMs, in view of the factual counterevidence from those languages where PMs are verbal, e.g. Japanese and Korean (cf. Li 1990, Marantz 1985). If th-roles are assigned to arguments in the present theoretical framework, it is unclear why a verbal category would need a th-role. We are facing therefore a controversial issue: on the one hand, external role is always suppressed in passives, on the other hand, cross-linguistically PMs can be verbal which makes it difficult to directly link the external th-role suppression to its assignation to PMs.

In order to reconcile factual evidence with important theoretical assumptions we are led to say that verbal PMs are decomposable into the nominal subpart that "absorbs" the external th-role and the 'light' verbal subpart that serves as a verbaliser, i.e. makes the participle "visible" to Tense. Thus English passive complex *be+ -en* parallels the Japanese PM *rare*. Verbal PMs may in principle be either transitive as in (4) (*-rare* in indirect passives (cf.Marantz 1985, Watanabe 1993), or intransitive as in (5) (*-rare* in direct passives):

(4) John-ga Kodomo-o sensei-ni shikar-are-ta
John-NOM child-ACC teacher-DAT scold-PASS-PAST
"John had the child scolded by the teacher (John is the experiencer)"

(5) Kodomo-ga sensei-ni shikar-are-ta
child-NOM teacherDAT scold-PASS-PAST
"The child was scolded by the teacher"

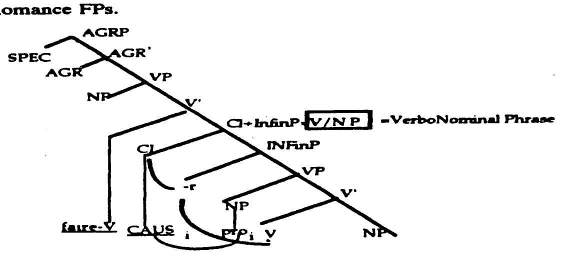
These examples present a problem for Case-theory. How is ACC available for the embedded object in (4)? According to Watanabe (1993) *rare* always selects an AGR_OP, but the mechanism of generalized case absorption disactivates it as no functional head governs AGR_OP (to ensure case-checking follow-up). Therefore, embedded objects must raise to the SPEC of the superior AGR_OP. We can slightly modify this proposal by incorporating the idea that passive morphemes are of ambiguous verbal-nominal category. The (zero) nominal subpart of the PM *rare* is coindexed with the external argument of the embedded clause and hence needs to be case-marked, therefore the embedded structural case is absorbed (assigned to the chain $\underline{pro_i\text{-nominal } PM_i}$). If the verbal *rare* is transitive, the embedded object will raise to the SPEC of the superior activated AGR_OP, this movement being legitimate by the principle of equidistance (Chomsky 1992). If the verbal *rare* is unaccusative, no accusative (AGR_O-case) is available, so the embedded object is forced to raise higher up, presumably to SPEC,AGR_SP, to receive nominative case.

This line of argumentation can be extended to French causative constructions in (6-7) (cf. Kayne 1975, Rouveret & Vergnaud 1980, Zubizarreta 1985). French has two causative constructions labeled since Kayne (1975) *faire-infinitif* (FI) and *faire-par* (FP):

(6) Elle fera écrire cette lettre à Jean "She will have John write the letter"
(7) Il a fait photographier ses enfants par Jean
"He had his children photographed by John"

FP in (7) shows some resemblence to passives: in both constructions the embedded subject appears as the oblique *par*-phrase which displays typical adjunct properties. If we apply the analysis proposed for Japanese transitive *rare* to this type of causative constructions we shall get the following picture (8):

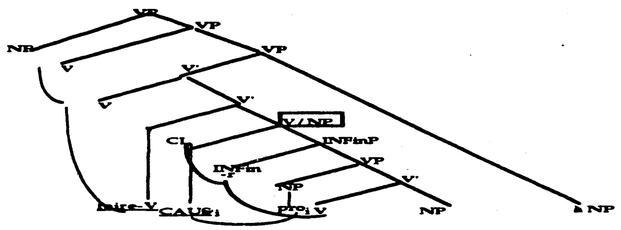
(8) Romance FPs.



In (8) the causative verb *faire* is decomposed into two subparts: nominal - responsable for the dethematization of the embedded verb and verbal support. The nominal subpart of *faire*, the null morpheme CAUS, which is cliticized onto INFinitivalP (Kayne 1991), "absorbs" the external th-role of the embedded verb and the structural case, thus turning the infinitive 'photographier' into a nominal category V/NP. As the verbal subpart of the causative operation is transitive (the verb *faire* itself) it can case-license the embedded object 'ses enfants'.

I would like to propose that FIs are derived from FPs as shown in (9):

(9) Romance FIs



The only difference between the two constructions in (8) and (9) lies in the fact that the verbal subpart of *faire* in FPs is a regular transitive verb, while in FIs it behaves as a triadic verb. This alternation is very common in French and other Romance languages: e.g.*écrire* - *écrire à* (write-write to), *lire* - *lire à* (read-read to). Therefore, the present analysis predicts that syntactically active dative causees in FIs are parallel to indirect dative NPs of simplex ditransitive verbs; *à NP* in (9) is the indirect object of the complex predicate faire+V/NP.

Many linguists who studied causatives have compared them to passives. Specifically, Kayne (1975) demonstrated that FPs and passives share many properties, although he dismissed the passive analysis for FPs due to several reasons, the most important being that no passive morphology is present in FPs: **Jean a fait mangé les pommes* ("*John made eaten the apples").

In the same vein, Alsina (1992) correctly assumes that the present analyses of passive constructions in GB theory which have morphological basis are incompatible with "passive analyses" of causative constructions. Cross-linguistically, the passive morpheme never appears on the verb stem to which the causative morpheme is attached. He notes: *"In order to make the "passive" analysis of causatives work, one would have to posit a phonologically null allomorph of the passive morpheme that would appear exclusively on verb stems that further combine with the causative affix. This null allomorph would have no independent motivation, and its distribution would be completely ad hoc, and unstatable in a natural way."* And Alsina is right - unless we have some morphological evidence that the external role of the embedded VP is "absorbed" in causatives, the present analysis of French causatives remains speculative.

Here is the crucial question: if we are right about the dual nature of CMs, and claim that they are comparable to PMs, can we have some factual evidence that CMs are in fact a combination of a dethematizing nominal subpart plus a (light) transitive verb? In other words, is the causative mirror image of Japanese *-rare* (in indirect passives), i.e. a nominal and hence intransitive CM, attested cross-linguistically? Note that such CM will have the following properties: (1) it will identify pro in SPEC,VP, (2) it will be assigned Case, (3) a transitive auxiliary (or a light verb) would be obligatory for the embedded verb to surface as a causative predicate. In what follows I will demonstrate that CMs of this type may exist. The crucial data come from Georgian.

3. Georgian Evidence.

Georgian uses different strategies for causativization of transitive and intransitive verbs. Intransitive causatives bear just the prefix **a-**, whereas transitive causatives appear with the additional suffix **-in-** as shown in (10-12):

(10) vano **a-**čerebs mankanas "Vano stops the car"
vanoNOM CAUS-stop-Pres carDAT/ACC

(11) vano **a-**mušavebs megobars "Vano makes the friend work"
vanoNOM CAUS-work-Pres friendDAT/ACC

(12) vano **a-**xaTv-**in-**ebs das xes
vanoNOM CAUS-draw-CAUS-Pres sisterDAT treeDAT/ACC
"Vano makes his sister draw the tree"

3.1. The suffix -in-.

Let us first consider the causatives of transitive verbs. Georgian is a head-final language with free word-order. In order to form a causative verb from a regular transitive verb *xaT*-"draw", a prefix **a-** is attached to the verbal stem and a suffix **-in-** to its right. However, the suffix **-in-** is not attached to the root directly but rather to the root followed by the nominalizing suffix as is shown in (13).[1] This suffix (which has several varieties) can be compared to French infinitival marker *-(e)r* or to Germanic infinitival *-en*. As Georgian does not distinguish between infinitives and gerunds, I will refer to this marker as V/NM (verbo-nominal marker). I will assume that **-in-** is affixed to some verbal projection and not to the verbal head.[2]

(13) a.xaT-v-a ("to draw/drawing") **a-**xaT-v-**in**-a ("(he) made-drawPST")
b.da-Karg-v-a ("to lose/losing") da-**a-**Karg-v-**in**-a ("(he) made-losePST")
c.Cer-Ø-a ("to write/writing") **a-**Cer-Ø-**in**-a ("(he) made-writePST")

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[1]The reader will notice that some lexical material may precede the causative **a-**. These are aspectual markers (glossed as PREV) irrelevant for the present study.

[2]This is reminiscent of the causativization facts from Romance where the verb embedded under *faire* appears in the infinitival form. We can say that infinitival markers head a projection immediately dominating VP. I further assume that infinitival markers are not "nominal" enough to dethematize the embedded verb. In our analysis, it is the causative morpheme that "absorbs" a th-role (in Hoekstra &Roberts's sense). Basically I claim that the nominal subpart of causatives must attach to "verbal enough" categories, such as InfP or VP.

Interestingly, verbal nouns formed from causatives are grammatical in Georgian in their nominal (14) and infinitival (15) uses. In these cases only one causative marker, namely **-in-**, is preserved, whereas **a-** disappears:

(14) masCavleblis mier bavšvebze aseti ramis da-xaT-v-**in**-eb-a
teacherGEN by children-on such thingGEN PREV-draw-V/NM-CAUS-V/NM-NOM
vis gaugonia
whoDAT hearPERF
"Who has heard of a teacher's making-draw children such a thing"
"Who has heard of a teacher making children draw such a thing"

(15) ?Ninos ar šeudzlia bavšvebze aseti ramis da-xaT-v-**in**-eb-a
NinoDAT not can children-on such thingGEN PREV-draw-V/NM-CAUS-V/NM-NOM
"Nino cannot make children draw such a thing"

Thusfar, the causative configurations seem straightforward: the causative marker-**in**- selects an infinitival complement. Let us now consider the behavior of the causee. It is generally acknowledged that while causatives of intransitive verbs display similar behavior across languages, the same is not true for causatives of transtive verbs.(cf. Baker 1988, Comrie 1976, Marantz 1984). The subject of the embedded transitive verb can be syntactically active in which case the causative construction resembles a three-place predicate. Alternatively, the causee may optionally surface as an oblique adjunct-like element similar to (but not always equivalent to) *by*-phrases in passives.

Georgian data convincingly show that only the first type, similar to French FI, exists in this language. Causees marked with dative case are syntactically active in these constructions. The tests (cf. Kayne 1975, Burzio 1986) show that the causee functions as a possible antecedent of the anaphor in the embedded clause in (16), as the subject of the secondary predicate in (17) and as the controller of PRO in (18):

(16) Vano$_i$ Ninos$_j$ tavis tavs$_{i/j}$ da-**a**-nax-v-**in**-ebs sarKeši
VanoNOM NinoDAT selfDAT/ACC PREV-CAUS-see-V/NM-CAUS-FUT mirror-in
"Vano will make <u>Nino$_j$</u> see himself/<u>herself$_j$</u> in the mirror"

(17) Nino$_i$ bavšvs$_j$ zγapars damǯdari$_{i/j}$ mo-**a**-q̇ol-**in**-ebs
NinoNOM childDAT taleDAT/ACC seated PREV-CAUS-tell-CAUS-FUT
"Nino$_i$ will make <u>the child$_j$</u> tell the story <u>seated$_{i/j}$</u>

(18) Es pilmi Ninos$_i$ sakartveloši PRO$_i$ Casvlas gada-**a**-Cq̇veT-**in**-ebs
this movieNOM NinoDAT Georgia-in (PRO) goingDAT ACC PREV-CAUS-decide-CAUS-FUT
"This movie will make Nino decide to go to Georgia"

Furthermore, only one dative NP may appear per clause in causative constructions. As shown in (19) it is always interpreted as the causee and never as the embedded indirect object. The goal argument of the embedded clause in (20) surfaces as an oblique PP.[3]

(19) Vano Ninos q̇vavilebs ga-**a**-gzavn-**in**-ebs
VanoNOM NinoDAT flowersDAT/ACC PREV-CAUS-send-CAUS-FUT
"Vano will make-send Nino the flowers"(Nino-√causee, *goal)

(20) Vano Ninos q̇vavilebs megobristvis ga-**a**-gzavn-**in**-ebs
VanoNOM NinoDAT flowersDAT/ACC friendGEN-for PREV-CAUS-send-CAUS-FUT
"Vano will make Nino send the flowers to a friend"

If we look back at the examples in (10-12), we notice that **-in-** appears only in transitive causatives, whereas another affix **a-** shows up in both transitive and intransitive constructions. Therefore, it seems more logical to suppose that **a-** is the true causative affix and to attribute the presence of **-in-** to other factors. While I will claim at the end that **a-** is indeed a "very light" causative affix, I will first demonstrate that **a-**'s main function is to license dative arguments.

3.2.1. The prefix ***a-****.*

Generally, Georgian has three applicative morphemes. Positionally, they are all mutually exclusive prefixes. Simplifiyng greatly, let us say that **u-** is a benefactive morpheme which licenses, i.e. "signals" the presence of, benefactive datives (22), **i-** is its reflexive counterpart (benefactive-reflexive) (23), and **a-** licenses locative (affected) dative NPs (24).

(21) Vano Purs Čris "Vano cuts the bread"
VanoNOM breadDAT/ACC cutPRES

(22) Vano Ninos Purs **u-**Čris "Vano cuts Nino the bread"
VanoNOM NinoDAT breadDAT/ACC BEN-cutPRES

(23) Vano Purs **i-**Čris "Vano cuts himself the bread"
VanoNOM breadDAT/ACC REFL-cutPRES

(24) Vano Purs xaxvs **a-**Čris "Vano cuts the onions (onto)the bread"
VanoNOM breadDAT onionDAT/ACC LOC-cutPRES

Let us concentrate on the prefix **a-**. When attached to a basic transitive verb it adds an argument to the thematic grid of the verb as shown in (25a-c):

[3] The same facts have been observed in the literature on Romance FI constructions, which do not normally allow the presence of embedded indirect objects, while in FPs they may occur freely.

(25) a.Cers a-Cers ("write-<u>write on(to)</u>")
b.xaTavs a-xaTavs ("draw-<u>draw on(to)</u>")
c.debs a-debs ("put-<u>put on(to)</u>")

Therefore, **a-** can be considered either as an incorporated "preposition" onto, or an abstract verb PUT. I prefer to refer to it as a "thematic marker" (term borrowed from Larson (1988)), as the term *preposition* is misleading wrt Georgian. As a head-final language, it naturally lacks strucural (or lexical) prepositions. (I tacitly assume that postpositions are never structural).

This formulation is too approximate, though. In Georgian, the assignation of dative case is tightly linked with the finiteness of verbs. Dative NPs may not appear in non-finite clauses. Instead, oblique postpositional phrases are employed to convey the desired meaning. Importantly, the "thematic markers" **a-** and **u-** are also obligatorily absent from the non-finite verbal forms. Their absence in the non-finite forms must be linked with the non-availability of Dative case. Let us conclude then, that every dative NP must be licensed by a thematic prefix.[4]

If our analysis of the thematic markers is correct, we are led to conclude that there is nothing semantically or intrinsically causative about the prefix **a-**. In its semantic vacuity, it may be compared to the English causative *have* (cf. Belvin 1993, Kayne 1993: ft.16, Ritter and Rosen 1993).

Marantz (1989) analyzes the thematic markers in Georgian as "light" verbs occupying higher V-slots in the Larsonian-type (1988) VP. Assuming that he is right, let us suggest that in causative constructions the light verb **a-** selects a predicate consisting of the verb and the suffix **-in-**. As demonstrated in (21-24), light verbs (i.e. thematic markers) select verbal complements in Georgian. The prediction is that causative verbs without **a-** can still function as verbs (cf. (21)), but they will not have the dative causee. In other words, they will be instances of FP type causatives with an (optional) oblique causee. However, the prediction is not borne out. Georgian causative verbs are ungrammatical without **a-** as the following pair (26a-b) illustrates:

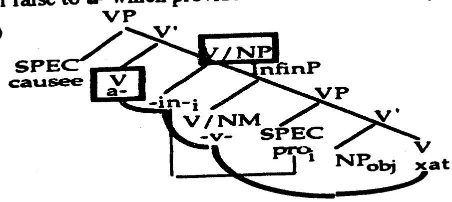
(26) a. Nino Vanos surats *a-xaTv-in-ebs* b.*Nino surats *xaTv-in-ebs*
"Nino makes Vano draw a picture"

Georgian crucially lacks the FP strategy. The question is why? I would like to suggest that **xaTvinebs* is not a possible verb in Georgian. Once a transitive (non-finite) verb *xaT-v* raises to the causative morpheme **-in-** in (27), the amalgamated form ceases to be verbal. If we make a simple assumption that **-in-** is a (pro)nominal category then everything follows straightforwardly: **-in-** is the nominal subpart of the causative operation which "identifies" (is coindexed with) the external pro arb subject of the transitive verb. As <u>verb+-in-</u> is headed by **in-** it cannot surface as a verb, given its nominal status. Therefore, <u>verb+-in-</u> must

[4]There are few basic ditransitive verbs in Georgian that bear no applicative prefixes in certain tenses, while still licensing dative NPs. But the same ditransitive verbs in the neighbouring language Svan obligatorily bear the prefix **a-**. Therefore, **a-** may be considered as a default licenser of dative arguments, it can license a wide array of dative NPs- goals, affected locations, experiencers, causees, etc., while **u-** generally licenses a semantically unified class of (dative) possessor-benefactors.

further raise to a- which provides it with the necessary verbal support.

(27)



To recapitulate, in order to derive a legitimate causative construction from transitive verbs in Georgian, the verbal support is provided by the light verb a-, a morpheme which not only verbalizes the predicate but also licenses the causee. One wants to know why these two quite different operations are linked.

3.2.2. On light verbs and VP-shells.

In order to fully understand the function of a- in causative constructions we must address the following general questions: what are the exact syntactic properties of "light" verbs? Can they head their own projection VP like "heavy" verbs or do they occupy a position within the VP headed by another verb? In other words, can a light verb occupy a higher V-slot in the layered VP (cf. Larson op.cit.), the lowermost slot of which is filled by another lexical verb?

Grimshaw & Mester (1988) suggest that the Japanese light verb *suru* lacks any argument structure or th-grid. Its complement is a nominalization with its thematic grid transferred to the light verb by the principle of *Argument transfer*. If we translate this proposal into the terms of VP-shell analysis, this means that *suru* occupies a V-slot in the verbal projection of another categorially neutralized verb.

Chomsky (1992) suggests that light verbs are not visible at LF due to their thematic defectivity. These elements play an important role before SPELLOUT by facilitating the lexical verbs to surface at PF: they provide morphological support for tense and agreement features. Let us suggest then that light verbs can be associated within the VP-shell only with those "verbal" projections which cannot be identified or checked in TP. Crucially, I assume that nouns or nominalized verbs cannot raise to T either at S-structure or at LF.

In their study on the syntactic representation of lexical arguments, Hale and Keyser (1992) set a condition on the well-formedness of VP-shells: only inherently predicative categories can occur as complements of light verbs in the VP-shell structure. The Subject Condition requires that the SPEC of the light verb be obligatorilly filled by NP which will function as the subject of the complement of the light verb. According to H&K, the only candidates which qualify as inherently predicative are APs and PPs, whence the grammaticality of (28a-b):

(28) a.John made$_i$ the sauce t$_i$ thick
b.John put$_i$ the books t$_i$ on the shelf

However, as we have just observed for Japanese, cross-linguistically light verbs can select "nominalizations". Furthermore, in English the highlighted complements of the light verb *give* in (29) are clearly nominal.

(29) a.John gave **a sigh**
b.Mary gave the floor **a sweep**
c.Mary gave John **a kick**

Therefore, I will modify H&K's proposal about the possible class of complements of light verbs and include deverbal categories +N/+V as possible complements along APs and PPs. (Note, that categorially these elements are "adjectives"). But I will keep their condition that the SPEC of the light verb be occupied by the subject of its complement. We may view light verbs as "transparent" heads of domains of predication, where "domain" is employed in the sense of Chomsky (1992:16): "the domain of a head α is the set of nodes contained in MAX(α) that are distinct from and do not contain α."

This condition will suffice to account for the obligatory presence of the dative argument in the Spec of the light verb **a-** in the causative constructions in Georgian.

3.2.3. Nominal CAUS in make constructions in English.

We can extend the same reasoning to all cases of English causative constructions involving the light verb *make* (and not only to the configurations *make+AdjP* as in (28a), discussed by H&K (op.cit)). Consider (30-32):

(30) John **made**$_i$ Mary CAUS$_i$leave
(31) *John **made**$_i$ CAUS$_i$sweep the room (by someone)
(32) *John **made**$_i$ the room CAUS$_i$swept (by someone)

We might suggest that the underlined lexical verbs leave and sweep are in fact verb+CAUS (cf. Pesetsky 1992). CAUS (abstractly) raises or is coindexed with *make* (which functions as the "light" causative verbalizer). (31) is ungrammatical because the configuration (parallel to Romance FPs) does not obey the Subject Condition: the SPEC of *make* is not filled with the "inner" subject. (32) is ruled out because the lexical verb which bears the dethematizing affix CAUS may not be further passivized.[5]

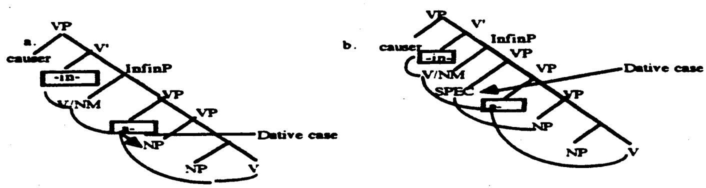
[5]In many Germanic languages structures parallel to (31) do exist. Guasti (1992) suggests that the loss of infinitival markers should be linked with the loss of FP-strategy in English. I tacitly assume throughout this study that French FP constructions are not VP-shell structures in the sense of Larson. This can be attributed to the fact that in English, due to the 'bareness' of infinitives, the nominal CAUS must be associated with (incorporated into) *make*, i.e. the verbal part of the causative operation, while in French the nominal CAUS is "reanalyzed" as (or fused with) the infinitival marker -r, thus turning the underspecified infinitive into +N category. (I owe this observation to A. Rouveret (p.c.)). The idea that the complements of causative *make* are nouns was discussed in Roeper & Vergnaud (1980). (See also Pollock (1993) on degrees of nouniness of infinitives in French and Italian causatives).

3.3. Alternative analyses.

Another analysis may be elaborated for Georgian causatives. In fact, many linguists working on Romance causatives have proposed that FIs and FPs have different underlying structures. FPs involve a bare, subjectless VP complement, while in FIs the causative verb selects an exocentric clause (cf. Burzio 1986, Guasti 1992, Li 1990). Importantly, the dative NP structurally is the embedded subject, i.e. it occupies the subject (SPEC,VP) position within the embedded clause.

Let us assume for the sake of argumentation that the analyses which advocate for the base-generation of the dative subject in the embedded clause are correct. My aim is to demonstrate why this analysis, although plausible for some languages, is not tenable for Georgian. Consider (33a-b):

33.



In (33a) the lexical verb first raises to the light verb **a-** and then the amalgameted form a-+verb raises to the causative suffix **-in-**. The dative case is assigned by **a-** (by government) to the subject NP in SPEC,VP. In (33b) the verb undergoes the same movement but this time the embedded subject also raises to SPEC of **a-** to get the structural dative case by SPEC-Head agreement with **a-**. Note that within this approach we are still obliged to consider **-in-** as the causative category which carries the lexical causative meaning. Recall that in non-finite causative forms in (14-15) **a-** is absent, while **-in-** remains.

The major problem for this analysis is the above-mentioned fact that it is impossible to affix the Dative case licensing morphemes (**a-** being one of them) to non-finite forms in Georgian. Therefore, a-+verb must be "visible" to Tense and cannot be embedded under the causative affix **-in-**.

In addition, causative verbs, like other simplex verbs, can appear with other light verbs (or "thematic markers") (cf. sect. 3.2). For example, the causative verb ***a**-xaTv-in-ebs* ("he makes draw") can have its benefactive and reflexive counterparts as in (34-35):

(34) Vano Rezos surats **u**-xaT-v-**in**-ebs
VanoNOM RezoDAT pictureDAT/ACC BEN-draw-V/NM-CAUS-PRES
" Vano makes (someone) draw Rezo a picture"
"*Vano makes Rezo draw picture for someone"

(35) Vano surats **i-xaT-v-in-ebs**
VanoNOM pictureDAT/ACC BEN/REFL-draw-V:NM-CAUS-PRES
" Vano$_i$ makes (someone$_j$) draw himself$_{i/*j}$ a picture"
"*Vano makes himself draw a picture"

(34) demonstrates that the dative NP licensed by the light verb other than **a-** has scope over the (embedded) arguments of the causative verb; the dative Rezo is interpreted as the augmented benefactive argument of the causative verb rather than the embedded transitive verb. Consequently, the causee (licensed normally by **a-**) cannot be licensed in the presence of other light verbs, so the causative construction turns into FP. Moreover, (34-35) show that other light verbs can provide the verbal support for the causative configuration. This again corroborates our treatment of **a-** as semantically very light verb: it does not add any causative meaning to the causative predicate. If the contrary were true, the causative force of (34-35) would be modified or lost due to the absence of **a-**.

To sum up, in this subsection I have provided sufficient evidence against the alternative analyses according to which the dative embedded subject originates and is licensed by **a-** below **-in-**.

3.4. Causatives of unaccusative and unergative verbs.

Let us turn now to unaccusative and unergative verbs. I will begin by demonstrating that their corresponding causative verbs are syntactically derived. The literature on causatives distinguishes between lexical causatives and syntactic causatives normally derived from transitive verbs. Lexical causatives include transitive counterparts of inchoatives and other unaccustive verbs. In Japanese both classes exist, as argued by Miyagawa (1980) and Marantz (1984). In this language two causative affixes should be distinguished: lexical *-ase* in (36a) is a transitive member of the anticausative alternation, while syntactic *-sase* in (36b) is a true productive causative affix.

(36) a.eigo kantoku ga zyoyuu o odorok-**asi**-ta
directorNOM actressACC surpriseCAUSE PAST
"The movie director surprised the actress"

b.eigo kantoku ga zyoyuu o odorok-**ase**-ta
directorNOM actressACC surpriseCAUSE PAST
"The movie director made the actress be surprised (at something)"

Ruwet (1972) also distinguishes between lexical and syntactic causative verbs in French. Importantly, only in the latter class the embedded subject has some control over the event expressed by the embedded verb.

(37)a. Alice a fait remonter Humpty Dumpty sur son mur, mais elle ne l'a pas remonté (elle-même)
b.$Alice a remonté Humpty Dumpty sur son mur, mais elle ne l'a pas remonté.

Borer (1991) discusses the problem of syntactic vs. morphological nature of causative-inchoative alternation in English and Hebrew. She claims that the causative counterparts of inchoative verbs are derived before the syntactic component in these languages, because the adjuncts which are compatible with inchoative verbs may not appear with causatives, as illustrated in (38).

(38) a. The shirt was white as snow.
b. The shirt whitened as snow.
c.*John whitened the shirt as snow

The same tests are applied to Georgian causatives of unaccusative verbs in (39-41). They prove that these causatives are syntactically derived.

(39) Režisori am scenaši Kac msaxiobs upro a-**a**-γelvebs,
movie directorNOM this scene-in male- actorDAT/ACC more PREV- CAUS-excite-FUT
kal msaxiobs Ki coTa da-**a**-mCq̃narebs.
actressDAT/ACC but a bit PREV- CAUS-calm- FUT
"The movie director will make the actor be more excited in this scene, but he will make the actress be calmer"

(40) Alisa HampTis a-**a**-cocebs Kedelze, tviton Ki ar
AliceNOM HumptyDAT/ACC PREV-CAUS-climb-FUT wall-on, herselfNOM but not
a-**a**-cocebs, hampTi marTo a-coc-d-eba
PREV-CAUS-climb-FUT, HumptyNOM alone PREV- go-up-INCH-FUT
"Alice will make Humpty climb up the wall, she will not "climb" him up herself, he will climb up alone"

(41) a.sadini tovlisavit ga-tetr-d-eba
sheetNOM snow-as PREV-whiten- INCH-FUT
"The sheet will whiten as snow"
b.Vano sadins tovlisavit ga-**a**-tetrebs
VanoNOM sheetDAT/ACC snow-as PREV-CAUS- whiten-FUT
"Vano will whiten the sheet as snow"

If we have been correct in analyzing **-in-** as a causative "nominal" morpheme coindexed with the external pro arb argument of the embedded verb, we can attribute its non-occurance in (41b) to the simple fact that there is no external argument to be coindexed with (or to identify) in unaccusatives.

But the facts seem to be more complicated. When one regards the causative-inchoative alternation cross-linguistically, either both members of such pairs have the identical morphological shape, e.g. English *break*, or only one member of the pair is moprhologically "marked", e.g. French *énerver-s'énerver*. In Georgian, inchoative verbs which constitute the largest part of unaccusative verbs appear with the obligatory suffix **-d-**. This suffix disappears in the causative counterparts (42b), which, as discussed above, are built by means of **a-**, as well as in non-finite forms (42c):

(42) a.Vano čer-**d**-eba "Vano stops"
VanoNOM stop-INCH-PRES
b.Vano **a**-čer-(***d**-)-ebs Ninos "Vano stops Nino"
VanoNOM CAUS-stop-(*INCH)-PRES NinoDAT/ACC
c.ga-čer-(***d**-)-eba — PREV-stop-(*INCH-)-NOM "stopping"

3.4.1. The suffix -d-.

The following questions arise: what is the nature of **-d-** and why is it absent in the causative counterparts? Before trying to provide a satisfying answer to these questions let us consider some previous analyses of inchoative verbs.

The general assumption is that inchoative verbs are derived in lexicon by the lexical rule of external argument suppression. However, Hale and Keyser (1988) suggest that unchoative verbs have a hidden (lcs) argument, equal to Cause, which functions as the external argument of most unaccusative verbs. Pesetsky (1992) proposes that the external th-role Ambient Cause of *reflexiva tantum* (inchoative) verbs in Russian and French is assigned to the reflexive clitic.

In view of these treatments let us return to the inchoative suffix **-d-** which has only one use in Georgian: it appears in the unaccusative counterparts of causative or transitive verbs formed by means of the affix **a-**. In other words, **-d-** the mirror image of **a-**. There is some strong evidence, however, which suggests that at least some part of inchoative verbs are derived from stative verbs.[6]

(43)	a.duγs	duγ-**d**-eba	**a**-duγebs	"boil(stative)-boil(inchoat)-boil(caus)"
	b.dums	dum-**d**-eba	**a**-dumebs	"is silent-get silent-make silent"
	c.Cuxs	Cux-**d**-eba	**a**-Cuxebs	"worry-get worried-make worry"

Inchoative verbs in (43) are derived from stative verbs by the suffixation of **-d-** akin to *se* in French *reflexiva tantum* verbs. This affix functions as the internal causative morpheme, coreferential with the surface subject, whereas the other CM **-in-** obligatorily gets the arbitrary interpretation and is, therefore, referentially disjoint from the Cause argument.

3.4.2. Causatives of unergative verbs.

Unaccusative and unergative verbs form causative forms in the same fashion, namely by the prefixation of ***a***- to the verbal stem, as shown in (44-45):

(44) Vano sTudenTebs **a**-mušav-ebs "Vano makes students work"
VanoNOM studentsDAT/ACC CAUS-work-PRES

(45) Vano Ninos **a**-laParak-ebs kartulad
VanoNOM NinoDAT/ACC CAUS-speak-PRES Georgian-in
"Vano makes Nino speak in Georgian"

One might expect that **a**- attaches directly to unergative verbs. However, (46) illustrates that forms without **a**- are ungrammatical. Thus, it seems that the light verb **a**- selects deverbal, nominal categories rather than unergative verbs themselves.

(46)(cf.44)*Vano mušavebs √Vano mušaobs "Vano works"
VanoNOM workPRES

[6] Interestingly, almost all psychological verbs of type *annoy* participate in this tripartition.

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To conclude, let us suggest that the light verb a- always selects a subjectless (unsaturated) complement of the category <u>V/N+(zero)CAUS</u>, while the surface direct "derived" object occupies the SPEC of a- as required by the Subject Condition on light verbs. The overt -in- is attached high enough in the tree to c-command and "identify" SPEC,VP, while its null counterpart is attached to the lowermost V-shell. As the result of this affixation, the lexical category base-generated in this layer, is "dethematized" in the sense of Higginbotham (1985) or Grimshaw (1990): its "external" or the most prominent th-role is assigned to CAUS.

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