Verbal compounding in Latin: the case of -MAKE verbs

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1. Introduction

1.1. *What*

Latin compound verbs (CVs) whose second member is a verbal constituent connected with *facio* 'to do, make' (-*facio*, -*fio*, -*fico(r)*):

- o   subclasses conveying causative meaning (e.g. *calefacio* 'to make hot'; *labefacio* "to make totten"; *amplifico* "to widen" etc.);
- o   relationship between morphological causatives and other means to encode causative meaning (e.g. *facere*+ infinitive).

1.2. *Why*

a)   <u>Morphologic reasons</u>:
- o   -MAKE CVs represent an island of productivity in the generally unproductive area of verbal compounding in Latin;
- o   -MAKE CVs are endocentric constructions *vs*. exocentric nominal compounds;
- o   -MAKE CVs allow different morphological patterns (e.g. A+V; V+V);
- o   -MAKE formatives do not exhibit a homogeneous morphonological status.

b)   <u>Semantic-functional reasons (causatives)</u>:
- o   What type of causative meaning?
- o   How Latin meets typological classifications?

c)   <u>Diachronic reasons</u>:
- o   discontinuity Latin→Romance ('-*facio*' pattern does not continue, '-*fico*' pattern continues but -*fico* is a suffix, e.g. It. *identificare*, Fr. *identifier*, Sp. *identificar*, Rom. *a identifica*).

1.3. *How*

Corpus: entries ending with -*facio,*-*fio*, -*fico(r)* in Lewis and Short's dictionary (*Perseus project*).

2. Formal features of Latin *make*-compounds

2.1. *-facio* verbs (also attested in the passive lexical form –*fio*)

2.1.1.   <u>Adv + *facio* subtype</u>, with an adverb as first member (e.g. *benefacio* 'to do/make something well', *malefacio* 'to do/make something wrong', *fabrefacio* 'to make skillfully', *satisfacio* 'to satisfy') → Adv specifies the way in which something is done (non-causative meaning, see Lehmann fc.).

2.1.2.   <u>Genitive + *facio* subtype</u>, with a genitive of value in the first member (e.g. *lucrifacio* 'to gain, win, acquire', *compendifacio* 'to economize something', *multifacio* 'to make much of, to esteem or value highly', *magnifacio* 'to make or thing much of a thing'):

(1) *Orationis operam compendi face*
"Do cut short the trouble of your talking" (Plautus, *Mostellaria* 60)

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(2) *Advocati tamen [iam pene] nocturni, qui volebant pallium lucri facere*
"This time some policemen had been called in to punish us; they wanted to make a profit out of the cloak" (Petronius, *Satyrica* 15.2.3)

(3) *Perseverasti ut pecuniam lucrifaceres*
"You have persisted in order to earn money" (Quintilianus, *Declamationes minores* 269.15.2)

(4) *Ut ego ob tuam, Simia, perfidiam te amo et metuo et magni facio*
"How do I love you, Simia, for your roguery and both fear and laud" (Plautus, *Pseudolus* 944)

➢ Are these examples 'true' compounds or rather a type of phrases?
  Atomicity condition → the constituents of a compound:
  o cannot be separated by lexical material;
  o cannot be deleted under coordination;
  o cannot be topicalized or be part of yes-no questions;
  o cannot be co-referential with other elements in the same syntactic environment
     (cf. Scalise and Bisetto 1999; Masini and Scalise 2012).

➢ Compounds *vs.* canonical phrases (Benigni and Masini 2009:176)
  o at least one of the constituents of a compound tends to be a bounded form (e.g. a root, a stem, etc);
  o relational information (inflection, conjunctions, etc.) generally disappears in compounds, while linking vowels emerge;
  o the order is sometimes reversed with respect to phrases (this criterion doesn't work for Latin, the typical word-order pattern 'modifier - head' can often be reversed in normal syntax thus making potentially erroneous every generalization).

➢ Phrasal lexemes (Masini 2009):
  o complex constructions formally akin to phrases, but lexical in nature;
  o stored in the mental lexicon of native speakers and referring to a linguistic concept as a whole (cf. Sprenger 2003: 4);
  o more fixed than free phrases → they normally cannot:
     a) be interrupted by other lexical material;
     b) undergo paradigmatic commutability;
     c) be internally modified.

2.1.3. Verbal stem + *facio* subtype:
  o characteristic pattern of –*facio* compound (Fruyt 2001:85);
  o ambiguous verbal status of the 1st constituent (see Hahn 1947: see also '*pinguefacio* type' in b)).

2.1.3.1. Intransitive stative bases in -*eo* (e.g. *caleo* 'to be hot') + *facio* → productive causative CVs meaning 'make Q', where Q is a quality/state/condition (also called 'factitive' or 'transformative', see Kulikov 2001:886; Lehmann fc.), e.g. *calefacio* 'to make hot', *madefacio* 'to make wet', *patefacio* 'to (lay) open', *tepefacio* 'to make lukewarm':

(5) *Is clausum lato patefecit limite campum*
"He laid open my closed field with a wide path" (Catullus, *Carmina* 68b.67)

(6) *Sanguine Tlepolemus Lyciam tepefecerat hastam*
"Tlepolemus had warmed up the Lycian spear with his blood" (Ovidius, *Epistulae* (*vel Heroides*) 1.19)

(7) *Ego tibi unum sumptum adferam, quod balneum calfacias oportebit*
"There is one expense I shall put you to: you will have to heat a bath for me" (Cicero, Epistulae ad Familiares 9. 16.9.4)

➢ Although rarely, the constituents of the compound may occur in tmesis (Leumann, Hofman e Szantyr 1965:566):

(8) *Principio terram sol excoquit et facit are*
"A first example: the sun bakes and dries up the earth" (Lucretius, *De Rerum Natura* 6.962)

(9) *Postea ferve bene facitō: ubi ferverit, in catinum indito*
"And let it boil very thoroughly again: after boiling turn it into a dish" (Cato, *De Agricultura* 157.9.5)

➢ Compounds or agglutinated forms?
  o *agglutinated forms* (Fruyt 2011:172-173): the presence of *tmesis* suggests agglutination, rather than compounding ("freezing and rigidification of a syntactic sequence to form a lexical item");
  o *compounds*: on the basis of Benigni and Masini (2009), the *calefacio* type should be analyzed as a compound *stricto sensu*: a) the first member is always a stem-form; b) no relational information between first and second member; c) the order of the constituents cannot be inverted.

2.1.3.2. Ancient causative verbs in *-eo* (e.g. *perterreo* 'to terrify'; *commoneo* 'to recall, bring to mind') + *facio*:
  o created through analogy motivated by the formal productivity of the pattern '*-eo ~ -facio*' (since *madeo ~ madefacio*, then *commoneo ~ commonefacio*, see Hahn 1947:306-307):
  o all the instances of this subclass (except *commonefacio*) are rare (Hahn 1947);
  o *facio* does not yield any additional causative meaning nor introduces any semantic change in the first member (e.g. *perterrefacio* 'to terrify'; *commonefacio* 'to recall, bring to mind').

(10) *Tuum est officium has bene ut adsimules nuptias: perterrefacias Davum*
"It's your duty to pretend these nuptials cleverly, to terrify Davus" (Terentius, *Andria* 169)

(11) *Hoc unum commonefaciam: ista voluptas naturalis est, non necessaria*
"I will remind you only one thing: this pleasure is natural, not necessary" (Seneca, *Epistulae morales ad Lucilium* 21.11.5)

2.1.3.3. (alternation with) Inchoative *-sco* verbs:
  o 'labile verbs', e.g. *assuesco* 'to become accustomed/to accustom'→ *-facio* CV (e.g. *assuefacio* 'to accustom') will equal the meaning at work in the causative use of the verb in the first member;
  o intransitive verbs, e.g. *obstupesco* 'to become senseless, lose feeling; to be stupefied, benumbed' → *-facio* CV acquires a causative meaning (*obstupefacio* "to astonish, amaze, astound, stupefy, benumb");
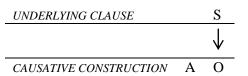
o intransitive –*sco* verbs based on adjectives, e.g. *raresco* 'to become rare, to be rarefied', *pinguesco* 'to become fat' → *rarefacio* 'to make thin, rare', *pinguefacio* 'to make fat'.

(12) *Equosque eodem remanere vestigio adsuefaciunt*
"And train their horses to stand still in the very spot on which they leave them" (Caesar, *de Bello Gallico*, 4.2.3.3)

(13) *Ipso miraculo audaciae obstupefecit hostes*
"He astounded the enemies with a miracle of courage" (Livius, *Ab Urbe Condita*, 2.10.6.1)

2.1.3.4. Verbs of 1st and 3rd conjugation:
o transitive (e.g. *maturo* 'to ripen'; *expergo* 'to arouse') → –*facio* does not alter the basic meaning (e.g. *maturefacio* 'to ripen', *expergefacio* 'to arouse');
o intransitive (e.g. *labo* 'to totter') → –*facio* adds the causative meaning (*labefacio* 'to cause to totter; to make ready to fall').

(14) *Hic Italiam tumultus expergefecit terrore subito*
"This tumult aroused Italy with a sudden terror" (Cicero, *Rhetorica ad Herennium*, 4.45.23)

(15) *Quem numquam ulla vis, ullae minae, ulla invidia labefecit*
"Whom no violence, no threats, and no unpopularity ever shook" (Cicero, *Pro Sestio*, 101.6).

2.2. *-fico(r)* verbs
o cf. nominal compounds in *-fex* and adjectival formations in –*ficus* (e.g. *munifico* 'to donate'/*munifex* 'one who performs duties'/*munificus* 'present-making'):

2.2.1. N + *-fico* (e.g. *aedifico* 'to erect a building', *ludifico(r)* 'to make game of') → "incorporating type", i.e. N is syntactically the direct internal argument of the verb:

(16) *Si aedificabis, operis, iumentis, materiae adiuuabunt*
"If you build, the neighbours will help you with their work, their teams, and their materials" (Cato, *De Agri Cultura*, 4.1.10)

(17) *Ita belli modo, modo pacis mora consulem ludificare.*
"And thus amused the consul with alternate procrastinations of war and of peace" (Sallustius, *Bellum Iugurthinum*, 36.3.1)

2.2.2. Adj + *-fico* ("factitive", e.g. *amplifico* 'to widen', *laetifico* 'to delight; to render fruitful') → Adj has a predicative function:

(18) *Quae quidem a te ipso integritate et clementia tua sic amplificata est ut nihil addi posse videatur.*
"Though, indeed, you have yourself so enhanced it by the purity and lenity of your administration, that it seems scarcely to admit of any increase." (Cicero, *Epistulae ad Familiares*, 2.18.1.5)

(19) *Et litore solus / dux stetit Hesperio, non illum gloria pulsi / laetificat Magni*
"On Italian soil, sole lord stood Caesar: but the glory of the triumph over Magnus does not delight him" (Lucanus, *Bellum civile*, 3.49)

➢ *-fico* verbs are frequent in technical works (e.g. *crassifico* 'to fatten (animals)') and will develop in Christian Latin, also as morphological calques of Greek verbs (e.g. *beatifico < makarízō* 'to make blessed'; *deifico< theopoiéō* 'to deify, consecrate') (Fruyt 2011:171).

➢ linking vowel: *-i-* vowel at the end of the first constituent (Bennet 1913[1895]:115): characteristic of the process of compounding especially in languages with an "overtly expressed paradigmatic inflection" (Ralli 2006 and references therein).

➢ *fic-* form and *-i-* vowel suggest that:
  o *-fico* verbs represent more ancient formations than –*facio* verbs;
  o the two components show a higher degree of cohesion compared with –*facio* verbs;
  o increase of semantic opacity of the formative *-fico*, which progressively undergoes a of reanalysis as a verbalizing suffix (cf. –*ĭgo* compounds, see Flobert 1978:89; Fruyt 2001; Brucale 2012:112);
  o *-fic-* acts as a productive suffix which forms verbs from adjectives in Romance languages (e.g. It. *identificare*, Fr. *identifier*, Sp. *identificar*, Rom. *a identifica*).

3. Causative CVs

3.1. Definition and theoretical assumptions

3.1.1. "The causative construction is a linguistic expression which denotes a complex situation consisting of two component events: 1) the causing event in which the causer does or initiates something; and 2) the caused event in which the causee carries out an action or undergoes a change of condition or state as a result of the causer's action" (Song 2011, based on Comrie 1989:165-166 and Song 2001:256-259; see also Shibatani 1976:1)).

3.1.2. Increase of valency: "Causative adds a new A[gent] argument (prototypically to an intransitive clause – the old S[ubject] becoming O[bject] – often also a transitive" (Dixon 2000:31).

a) Intransitive clauses → causative clauses:

UNDERLYING CLAUSE	S
	↓
CAUSATIVE CONSTRUCTION	A O

Tab. 1. Causatives from intransitives (Dixon 2000:31)

b) Transitive clauses → causative clauses:

TYPE	CAUSER	ORIGINAL A(CAUSEE)	ORIGINAL O
(i)	A	special marking	O
(ii)	A	retains A-marking	O
(iii)	A	has O-marking	has O-marking
(iv)	A	O	non-core
(v)	*A*	*non-core*	*O*

Tab. 2. Causatives from transitives (Dixon 2000:48)

3.1.3.   Base predicate implicational hierarchy for causativization (Lehmann fc.):

a) <u>Semantic complexity</u>: "an additional higher agent is both more expected and easier to accommodate in a situation the fewer participants this already contains and the less control these already have".

b) <u>Structural complexity</u>: "the ensuing upheaval of the base verb valency is less radical, and the resulting valency has better chances to fit into an existent base-verb model, the lesser the valency of the base and the better the argument with the highest syntactic function fits an undergoer role".

adjective (> *factitives*)	←	inactive intransitive verb	←	active intransitive verb	←	transitive verb	←	multivalent verb

Tab. 3. Base predicate hierarchy for causativization (Lehmann fc.)

3.1.4.   Strategies of causativization:

DIRECTNESS OF CAUSATION

- ···➤ +

analytic [i.e. periphrastic]	*morphological*	*lexical*

- ···➤ +

DEGREE OF CONTROL

Tab. 4. Continuum of causative strategies (Comrie 1989: 171 ff.)

CONTINUUM OF REDUCTION ···➤

-                          +

Association with V or N	LEXICAL-SYNTACTIC	GRAMMATICALIZATION			
		Analytic	*Synthetic*	*Fusional*	*Zero*
VERBAL	Complex sentences (full V 'to cause' overtly encodes the relation between participants)	Periphrastic (function V, e.g. "support verb" + non-finite V)	Derivational (morphological operator, e.g. suffix, on a base predicate)	Alternation (causative formative lexicalized with the base predicate)	Valency conversion ('break' type)
NOMINAL	Coverb (+ intransitive base)	Adposition	Case		

Tab. 5. Strategies of causativization (Lehmann fc., adapted; see also Comrie 1985; Shibatani 2006:229)

◀·· COMPACTNESS

-                        +

TYPE OF MECHANISM	constructions with two verbs (causative + lexical) in separate clauses	two verbs in one predicate (serial verbs, e.g. *faire* in French; compounding)	Morphological (e.g. internal, reduplication, affixation, etc.)	Lexical (e.g. *walk*, *melt* in English)

Tab. 6. Scale of compactness (Dixon 2000:74, adapted)

3.1.5.   Semantic parameters of causativity (Dixon 2000:61 ff.)
When a language has more than one causative strategy, there is always a semantic difference involving one or more semantic parameters:
  a) <u>Relating to the verb</u>: 1) state *vs.* action; 2) intransitive *vs.* transitive (ditransitive)
  b) <u>Relating to the causee</u>: 3) low control *vs.* high control; 4) volition *vs.* non-volition; 5) partial *vs.* total affectedness;
  c) <u>Relating to the causer</u>: 6) directness *vs.* indirectness, 7) intentional *vs.* accidental; 8) naturally *vs.* effort, 9) involvement.

➢ *Correlation between semantic parameters and degree of compactness*:
that is, 'more compact' strategies more likely meet the following values: 1) applying only to some verbs (at the intransitive and/or state); 2) causee only partially affected, willing, lacking control; 3) causer: naturally rather than with effort, intentionally rather than accidentally, directly rather than indirectly.

3.2.   Causatives in Latin: between morphology and syntax.

VERBAL STRATEGIES IN LATIN					
CONTINUUM OF REDUCTION ··· >					
Lexical-syntactic	*Analytic*	*Synthetic*		*Fusional*	*Lexical alternation*
		Causative verbs			
Complex sentences (*facio, efficio, curo, compello, impello* etc.)	Periphrastic *Facere* +infinitive	Compound verbs with *-facio, -fico*	Derived verbs in -ē- (IE -éye/o-): *moneo, torreo* ⟹		*fio/facio, accido/efficio, intereo/interficio, pereo/perdo* ecc.

Tab. 7. Strategies of causativization in Latin (adapted from Lehmann fc.)

3.2.1. Different strategies of causativization show different degree of productivity:
   o   Causative verbs in -ē- stands as relics in Latin (due to the competition of the homophonous stative morphemes, see Sihler 1995:531) → some of them are re-causativized by means of the –*facio* compounding (e.g. *perterrefacio*, see 2.1.3.2.);
   o   Compounds in –*fico* (factive) appears to be productive, as it is suggested by their persistence in Romance languages;
   o   Compounds in –*facio*, among which the *calefacio* type represents an island of productivity in Latin, but they do not survive in Romance languages;
   o   Syntactic causatives, attested in preclassical and classical Latin, increase throughout the history Latin and are still productive in Romance languages → in particular, the *facio* + infinitive type is the forerunner of the "Standard Romance Solution" (Simone and Cerbasi 2001, e.g. It. *far fare, far mangiare*, see also Chamberlain 1986):

INTRANSITIVE :
(20) *Ignes qui faciunt solem certa de surgere parte*
"Fires that make sun rise from a determined part" (Lucretius, *De rerum natura* 5.703)

(21) *Et lento igni fervere facias*
"And bring to a boil over a slow fire" (Apicius, *De re coquinaria* 3.2.8)
(from Simone and Cerbasi 2001:454)

(22) *Nulla res magis penetrat in animos eosque fingit format flectit talisque oratores videri facit, qualis ipsi se videri volunt* (Cicero, *Brutus* 142)
"Nothing else so penetrates the mind, shapes, moulds, turns it, and causes the orator to seem such a man as he wills to seem"

TRANSITIVE:
(23) *Fuit tamen faber qui fecit phialam vitream, quae non frangebatur. Admissus ergo Caesarem est cum suo munere, deinde fecit reporrigere Caesari et illam in pavimentum proiecit*

"But there was once a workman who made a glass cup that was unbreakable. So he was given an audience of Caesar with his invention; he made Caesar give it back to him and then threw it on the floor" (Petronius, *Satyricon* 51.2)

(24) *Ut faciam ei […] invenire mercedem*
"So that I will make him get a reward " (*Vitae Patrum* 5.10.28) (from Väänänen 1982:241)

3.2.2. Semantic parameters of causativity

A) Relating to the verb:

More compact strategies	Causative compounds based on states	Adj + *-fico* (2.2.) (>) States in *-eo* + *-facio* (2.1.3.2) *–facio* alternating with *–sco* (2.1.3.3)	increase of valency: A + (S>)O
	Causative compounds based on transitive bases	Rare (see 2.1.3.2, 2.1.3l.4)	no increase of valency: A + O > A + O
Less compact strategies	Periphrases with *facio*	*Facio* + (intransitive) infinitive	increase of valency: A + (S>)O
		Facio + (transitive) infinitive	increase of valency: A + (S>)O(IO) + O

➢ Comrie's (1975) hierarchy of marking of the original A in Romance languages:
  SUBJECT – DIRECT OBJECT – INDIRECT OBJECT – OBLIQUE – GENITIVE – OBJECT OF COMPARISON
  depending on the degree of transitivity of the verbal base, the cause (original S or A) will fill the first avalable slot (je ferai courir *Jean*; je ferai manger les gâteaux *à Jean*; je ferai écrire une lettre au directeur *par Jean*).

B) Relating to the causee:

DEGREE OF TRANSITIVITY /DEGREE OF ACTION	*DEGREE OF CONTROL*	*DEGREE OF VOLITION*	*DEGREE OF AFFECTEDNESS*
Non-active, non-transitive bases (compounds)	low (none)	low (none)	high or total
Active, transitive bases (compounds)	-	.	.
Non-active, non-transitive bases (periphrases) -	*id.*	*id.*	*id.*
Active, transitive bases (periphrases) +	Shared control (causer and causee)	high	low

➢ Shared control (*split agency*, Luraghi 1995):
  o the causee is conceived of as a secondary agent, i.e. an "instrumental to the attainment of the target defined by A_1" (Simone and Cerbasi 2001:446).
  o *causee adjunct strategy* (nominal strategy, Lehmann fc.): the causee is introduced by a preposition, typically *per* (mediate agency) and the base subject is interpreted as causer:

(25) Labienus [...] Caesarem *per nuntios* facit certiorem quid faciendum existimet (Caesar, *de bello Gallico*, 7.87)

"Labienus […] informs Caesar by messengers (has messengers inform Caesar) of what he thinks should be done"

4.   Some open-ended questions

A) <u>Morphology</u>: *-fico* compounds → Indo-European type (formal reduction) *vs*. *-facio* compound → Romance type (in terms of Rassmussen 2002:333); however, *-facio* compounds do not survive in Romance languages, whereas *-fico* becomes a productive suffix.

B) <u>Causatives</u>: *-facio* and *-fico* compounds is productively used to form "factitive" verbs based on states or adjectives:
  o consistency with Dixon's (2000) analysis: "more compact", i.e. more grammaticalized strategies tend to apply only to some verbs (mostly intransitives and states);
  o the semantic features of the causee do not fully meet Dixon's (2000) generalization;
  o what about active intransitive and transitive bases? (Simone and Cerbasi 2001:454: "Latin was not a strongly causative-oriented language");
  o is there a difference between the two strategies, i.e. *–facio* strategy and *–fico* strategy?

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