Verb doubling in Breton and Gungbe

Obligatory exponence at the sentence level*

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Breton tensed verbs show an synthetic/analytic structure alternation (*I.know vs. to.know I.do*), that is not conditioned by their semantic or aspectual structure but by their syntactic environment, namely word order. Such a paradigm of verb-doubling poses a strong case against iconicity, because knowing where a verb can double requires full information about the entire derivation of the sentence. The sentence is correct if and only if the tensed element is not at the left-edge of the sentence. The infinitive form of the analytic construction prevents the tensed element from occurring in the most left-edge position. This paper proposes that the analytic structure (*to.know I.do*) responds to the same trigger as expletive insertion (*expl I.know*). I claim that analytic tense formation is a last-resort strategy that forms the equivalent of an expletive by excorporation of the verbal root out of the complex tensed head. The excorporated lexical verb appears fronted as an infinitive form by default. The tensed auxiliary is either realized as a dummy 'do' auxiliary (*to.know I.do*), or, for an idiosyncratic list of verbs, as the tensed reiteration of the excorporated verb itself (doubling; *to. know I.know*).

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Abbreviations: R marks the preverbal particle, the '*rannig-verb*' that appears (syntactically at least) before all inflected verbs (Fin head in the left periphery, cf. Jouitteau 2005/2010). In the examples translations, small caps signal informational salience. OBL = oblique ; POSS = possessive, PRT=particle.

1. Introduction

Breton, the modern Continental Celtic language, allows for two types of analytic constructions. In the most common case (1a), an infinitive verb precedes a semantically dummy auxiliary that bears the tense and subject agreement markers. Though this auxiliary means 'to do' in isolation, its semantic import in the construction is null, and the sentence as a whole is fully equivalent to the synthetic constructions in (2a). Verb doubling as illustrated in (1b) is an alternative and rarer case of analytic construction, where the infinitive verb precedes its own inflected form. Though the auxiliary repeats the lexical content of the verb, the import of the repetition in the construction is null, and the sentence as a whole is fully equivalent to the synthetic construction in (2b).[1]

Analytic structures:

(1) a. ***Debriñ*** *a* ***ran*** *avaloù.* (Standard Breton)
eat R do.1SG apples
'I eat apples.'

b. ***Mont*** *a* ***yan*** *d' ar jardin.* (Quimperlé Breton)
go R go.1SG at the garden
'I am going into the garden.'

Synthetic structures:

(2) a. ***Bez'*** *e tebr****an*** *avaloù.* (Western Breton)
EXPL R eat.1SG apples
'I eat apples.'

b. *Bez' ez* ***an*** *d' ar jardin.* (Standard Breton)
EXPL R go.1SG at the garden
'I am going into the garden.'

Breton is a 'linear verb-second' language (Borsley & Kathol 2000; Jouitteau 2009), in the sense that the element that bears both tense and agreement morphemes cannot stand as the left-most element in a sentence (3). For clarity, I use in this paper the term 'Tense-second' instead of 'verb-second'.

(3) **E tebr****an*** *avaloù.* (Standard Breton)
R go.1SG apples
'I eat apples.'

1. The Breton data comes from a corpus of different dialects, and fieldwork in Quimperlé. The verbal particle, the *rannig*, noted 'R', is a realization of the Fin Head into which the tensed element incorporates (Jouitteau 2005/2010).

The goal of this article is to provide an account of the under-documented analytic constructions in (1). I propose that the two analytic constructions in (1), both with 'do' and with doubling, represent an expletive strategy alternative to the [expletive + synthetic Tense] groups in (2). I will show that analytic constructions in (1) appear, like the *bez* expletive, if and only if they serve as a last resort operation in order to meet obligatory exponence in the pre-tense position. The analysis will derive the odd facts of (1): first, in both cases of analytic constructions in (1), there is at least one element that fails to be interpreted. In (1a), the auxiliary doesn't seem to do more than providing morphological support, and in (1b), the lexical verb has two occurrences, only one of which seems to be interpreted, because it does not require two subjects, in apparent violation of the theta-criterion. Second, in both analytic constructions, the two verbal/auxiliary occurrences are phonologically distinct, and obligatorily appear in the relative [Infinitive – Tense] order: in analytic constructions, the infinitive lexical verb never appears to the right of the tensed element. In (4), the pre-Tense position has been filled with a focalized element. Despite satisfaction of the canonical 'Tense-second' order, the lexical verb cannot appear to the right of the tensed element.

(4) a. **Avaloù a ran debriñ.*
apples R do.1SG eat
'I eat APPLES.'

b. **D' ar jardin a yan mont.*
at the garden R go.1SG go
'I am going INTO THE GARDEN.'

This distributional restriction is even more strict than strictly left-edge, because infinitive verbs of analytic constructions can never appear in a sentence where another element fills in the pre-tense position. In (5), an object and a prepositional phrase have been fronted by focus, and still the lexical verb cannot appear outside the tensed complex. Only synthetic tenses are allowed (6), showing that analytic tenses have a last-resort dimension.

(5) a. **Avaloù debriñ a ran*
apples eat R do.1SG
'I eat APPLES.'

b. **D' ar jardin mont a yan.*
at the garden go R go.1SG
'I am going INTO THE GARDEN.'

(6) a. *Avaloù a zebran.*
apples R eat.1SG
'I eat APPLES.'

b. *D' ar jardin e yan.*
at the garden R go.1SG
'I am going INTO THE GARDEN.'

This striking distribution recalls the distribution of the Breton expletive *bez'* as illustrated in (2). Like infinitives of analytic constructions, the expletive *bez'* occurs only to the left of tensed elements, as a last resort strategy to avoid Tense-first orders as in (3). In formal terms, this means that there is some kind of a trigger in the grammar of the language that requires at least one element, head or XP, to precede the inflected element (Jouitteau 2005/2010, 2007). LEIT, as defined in (7), is the unique motivation for expletive insertion in (2).

(7) *Late Expletive Insertion Trigger*
LEIT is a morphological operation that operates at the level of the sentence and bans (Tense)-first orders.
As a last resort, it either merges an expletive or attracts the closest postverbal element into the preverbal position.
LEIT effects are invisible to the interpretative module.

In this paper, I will show that both analytic constructions (1a) and b pattern like expletives and show evidence for the LEIT. I therefore propose that the Breton analytic paradigms illustrate the creation of an expletive by means of a morphological excorporation operation (8). The dummy verb 'do' *ober* is not included in the numeration. Instead, it is generated as a last-resort default as in (8a) illustrated in (1a). An idiosyncratic alternative to this last-resort insertion is to pronounce the lower copy of the excorporated verb, leading to doubling structures as in (8b), illustrated in (1b).

(8) a. **V** [FINP R [(~~**V**~~)**do.T.AGR**] [$_{vP}$ ~~S~~ ~~V~~ PP] analytic tense in 'do'

b. **V** [FINP R [**V.T.AGR**] [$_{vP}$ ~~S~~ ~~V~~ PP] verb doubling

I will start in Section 2 by investigating the syntactic properties of the analytic construction in 'do', and show that all these properties follow from the last-resort aspect of what is basically an expletive strategy. In the third section, I will contrast these properties with those of the doubling construction (1b). I will propose that despite their differences, verb doubling is a subcase of the 'do' auxiliation case. In a fourth section, I will focus on the main contrast between the two analytic constructions: their productivity. The analytic construction in (1a) is fully productive, whereas (1b) is clearly idiosyncratic. Only certain verbs can double. The list of the doubling verbs varies across dialects, and even from speaker to speaker. The list of doubling verbs always fails to form a homogeneous syntactic class. In Section 5,

I discuss several theoretical consequences of the idiosyncratic restriction of doubling in (1b), and propose that LEIT operates in a post-syntactic morphological module. I mention comparative evidence from Yimas and Basque verbal morphology, and propose an interpretation of V2 in terms of obligatory exponence. Section 6 provides a comparative exploration of verbal reduplication in Gungbe, opening the discussion to non sentence-initial environments.

2. Analytic construction with *ober*, 'do'

2.1 Syntactic properties of verbal head fronting

The analytic construction (henceforth AC) with *ober*, 'do' is very productive in Standard Breton and in all dialects, as briefly illustrated here below.

(9) ***Eva*** *a rafe* *eur werennad lêz.*
drink R would.do.3SG DET glass milk
'He would (like to) drink a glass of milk.' (Kerne Breton, Trépos 2001: 438)

(10) ***Ober*** *a ray* *glao a-raog an noz.*
do R do.FUT.3SG rain before DET night
'It will rain before night.' (Kerne Breton, Trépos 2001: 438)

(11) ***Koéh*** *e hras* *ar benneu hé deuhlin* (…)
fall R did.PAST.3SG on ends POSS dual.knee
'She fell on her knees.' (Gwened Breton, Guillevic et Le Goff 1986: 161)

(12) ***Tremen*** *a reont* *evit tud vad.* (Quéré 1906: 230)
pass R do.PRES.3PL for people good
'They pass for good people.'

Verbal head fronting with 'do' has the syntactic properties listed below.

(13) *Verbal head fronting properties*
i. it is restricted to root tensed clauses.
ii. it is neutral in terms of information packaging.
iii. it is fully productive (except for some compounds of 'be').
iv. verb fronting is local.
v. the infinitive head is moved alone.
vi. movement violates the syntactic ban on excorporation.
vii. it is restricted to [VINF-do] order.
viii. it (sometimes) has a doubling counterpart (1).

All these properties, except **(viii)**, directly follow from verb head fronting being a LEIT last-resort operation preventing tense-initial orders. I briefly review them here.

Verb fronting with auxiliary *ober* 'do' occurs only in environments where Tense-second is the canonical word order, hence the restriction to matrices of tensed domains, because embedded domains are canonically Tense-first (C-VSO, with complementizers that can be phonologically null).

(14) Standard Breton

a. *Larout a ran* ***ø*** (**debriñ a ran /e tebran*) *avaloù.*
say R do.1SG C eat R do.1SG /R eat.1SG apples
'I say that I eat apples.'

b. *Un azen* ***hag*** (**debriñ a ra /a zebr*) *avaloù.*
A donkey C eat R do.3SG R eat.3SG apples
'a donkey that eats apples.'

Verb head fronting with 'do' is also banned from the imperative mood (Ernault 1888: 247). The imperative mood is canonically tense-initial.

(15) Standard Breton

(* *Debriñ a (g)ra / Debr*) *avaloù!*
eat R do.IMP eat.IMP apples
'Eat apples!'

We already saw in (5) that analytic tense is not possible when focalized material occupies the pre-Tense position, that is, in minimalist terms, when preverbal A-bar material is brought into the left-periphery for independent reasons, and accidentally satisfies LEIT by providing pre-Tense material. In terms of information packaging, Stephens (1982: 114) qualifies verb head-initial structures as 'neutral', which is also Schafer (1997)'s conclusion from a Modern Breton corpus study. Following Vallduvi's (1995) terminology, Shafer states that verb head fronting appears in 'all-focus' and 'focus-tail' sentences **(ii)**. In grammars from the first half of the 20th century, analytic structures are often said to create emphasis, without providing further details on the type of emphasis produced (see for example Leclerc 1986: 63, 2^0; Kervella 1995: §1997). To my knowledge, contemporary speakers of Breton do not use analytic structures in 'do' for emphasis at all. All readings brought by an analytic constructions can be brought by the synthetic ones. The reverse is not true, because of the last-resort dimension of analytic constructions: whenever an element is informationally salient in Breton (topic, focus), it must occupy a place in the clause's left periphery. This element thus automatically satisfies LEIT and cancels the trigger for an analytic construction. Only very high elements in the left periphery that never interfere with V2 orders, like hanging topics (inducing *as for* readings), scene-setting adverbs, question particles, pragmatic connectors (such as 'but'), and all conjunctions associated with prototypical cases of parataxis (*la* in Central Breton, *kar*, 'because' in all dialects, sometimes *ha*…) can precede analytic

constructions in 'do'.[2] The last-resort character of infinitive fronting in analytic constructions is further revealed by its mutual exclusiveness with any other element brought into the preverbal area. Such a case is illustrated here by the negation C head in (16). Any other expletive strategy also logically blocks verb head fronting (17).

(16) Treger Breton, (Stephens 1982: 113)
*__Koll ne reas__ *ket ar martolod* _ *e gasketenn.*
Lose NEG did.3SG NEG DET sailor his cap
'The sailor didn't lose his cap.'

(17) **Bez koll a reas* *ar martolod* _ *e gasketenn.*
EXPL lose R did.3SG DET sailor his cap
'The sailor did lose/lost his cap.'

LEIT last-resort verb head fronting is fully productive, except for the verb 'be' and its compounds **(iii)**. The verb *bezañ/bout*, 'to be', is uniformly rejected, as well as the synthetic verb *kaout*, 'to have', a compound of the verb *bezañ/bout*, 'to be' (Kervella 1995: §245[(bis)]; Jouitteau & Rezac 2006, 2008, 2009) as shown in (18).[3,4]

(18) D.L Quimperlé, S.B Callac
**Kaout a ran* *un oto.*
have R do.1SG a car
'I have a car.'

Ploneis (1983) reports from Berrien another verb that fails to be auxiliated with *ober* 'do', that also contains the stem of *bezañ/bout* 'to be': the verb *gouzout* 'to know'. For de Rostrenen (1795: 97) and Trépos (2001: 438), the restriction extends to all stative verbs. However, ACs are readily found with verbs like *seblantout* 'to seem'; *chom* 'to stay'; *dont da vezañ* 'to become', or *tremen evit* 'to pass for', as in (12). The semantic properties of the dummy auxiliary may have evolved over time, leading to these variations.

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2. See Jouitteau (2005/2010: Chapter 2) for a detailed analysis of the Breton left periphery.

3. Le Roux (1957: 413) cites two cases in Middle Breton, but they can be analyzed as preverbal expletives before an impersonal form of 'to do'.

4. Auxiliations in 'do' appear only in the Gwened dialect that has kept an analytic variety of the verb 'have'. Ernault (1890: 473) mentions an AC with the analytic form of the verb 'have' (x). This Gwened variety of the verb 'have' in Breton is composed of a proclitic oblique argument on the verb 'to be', *bezañ* (cf. Jouitteau et Rezac 2006, 2008, 2009). The 'infinitive' compound is presumably not the verb 'to be', but a small clause.

(x) ***hur bout** e ramb*, [1PL.OBL be R do.1PL]; 'we have',
***hou poud** a ra*, [2PL.OBL be R do.3SG]; 'you have'.

Another LEIT symptom is the locality of verb head movement (Holmberg 2000; Jouitteau 2005, 2010, 2007). No long-distance verb fronting is ever found (19).

(19) ***Livañ*** [$_{\text{FinP}}$ *a soñj da Anna* [$_{\text{FinP}}$ *e lare Paol*
paint.INF R think to Anna R say Paul
[$_{\text{FinP}}$ ***'raio*** *Nina an daol.*
R do.FUT.3SG Nina the table
'Anna thinks that Paol said that Nina will paint the table.'

In (1′), I propose that the site of extraction for the non-tensed verb head is the complex tensed head itself. A competing proposal would be to consider that the infinitive originates from the closest post-Tense position. If this were the case, we should observe all types of intervention effects. Indeed, verb head fronting is for example over-represented in sentences with a pronominal subject. This is noted by Le Roux (1957:408) for Middle Breton and by Le Gléau (1973:45) for Modern Breton. This conclusion however is not very strong, if one considers a larger body of Modern Breton data. First, Le Gléau (1973) draws conclusions from a written corpus study whose sources are not all native. Second, Le Gléau, does not claim that the [Infinitive-*do*-Subject…] order is ungrammatical: verb head fronting with null pronouns is merely a *statistical preference*. Moreover, the occurrence of a given construction with a null subject should be declared 'preferred' only if it could be proved that null subjects would not be preferred anyway for discourse reasons independent of the construction. Finally, testing this prediction on the basis of a correlation with null/incorporated subjects is a rather delicate move, since the respective order of the infinitive head and the subject after tense is unknown: recall that an infinitive verb is never found after the tensed auxiliary in this construction (4).

The excorporation scenario in (1)′, contrasting with the hypothesis of an ultra-local movement from the closest post-Tense position, offers a simple solution for the absence of the ['AUX do'-INF] order in ACs **(vii)**. ACs are never found in the [… AUX – V…] order because the infinitive head never occupies a post-tense position during the derivation: the verb head moves up to the Tense and Fin heads. Excorporation of the lexical verb head in the pre-tense position occurs as a last-resort for LEIT to be satisfied. The surface order [… AUX – V…], though licit in Breton, reveals another 'do' auxiliary that is not dummy tense-Agr support, but a causative semi-auxiliary selecting a small clause as in (20).

(20) Kerne Breton, Trépos (2001:249)
a. *Me a* ***ray*** ***sevel*** *eun ti*
1SG R do.FUT.3SG build a house
*'I will build a house.' *vs.*
'I will have a house built.'

b. ***Sevel*** *a* ***rin*** _ *eun ti.*
build R do.FUT.1SG a house.
'I will build a house.'
*'I will have a house built.'

One might note that this restriction is not universal, since some cases of [Aux V] order are documented for earlier stages of Breton, as well as in closely related languages. In Middle Breton, the auxiliary 'do' could precede its infinitive together with a cliticized object (cf. Hemon 2000: 238 Note 1). In Cornish, the language closest to Breton, […V-AUX…] is the canonical order, but the infinitive can also be found preceding 'do' (Le Roux 1957: 409; Fleuriot 2001: 21). In Northern Welsh, where the tensed element can be clause-initial, [AUX-V…] order is canonical.

There is syntactic evidence that the fronted non-tensed verb is merely a syntactic head **(v)**. Prototypically, verbs move into the first position of the sentence, leaving their DP arguments stranded as in (9) and (10). Oblique arguments also remain IP-internal as in (11) and (12). The lexical verb can however be more important than a unique and simple head. In (21), it hosts a reflexive clitic, and in (22), a proclitic object.

(21) Leon Breton, Le Bozec (1933: 53)
[***En em*** ***blijout***] *a ra o henti al lec'hiou distro.*
REFLEXIVE please R do at haunt DET places solitary
'She likes to haunt the deserted places.'

(22) Gwened Breton, Grégoire de Rostrenen (1795: 179)
a. [***Daz*** ***caret***] *a rañ* _./
2SG.OBL love R do.1SG
'I love you.'
b. [***Da*** ***garet***] *a rañ* _.
2SG.OBL love R do.1SG

Depending on the analysis of clitics that one has, this could be evidence that what fronts is minimally a VP. I disregard this possibility here, and I consider that the fronted elements in (21) and (22) are complex syntactic heads originating from the tensed complex. Excorporation out of a morphologically complex head is not allowed in syntax, and I take it as evidence that the formation of analytic tenses is indeed not performed in syntax **(vi)**.

2.2 Setting aside vP focalisation

We are now equipped with a reasonable set of syntactic tests in order to set aside another construction that also makes use a dummy auxiliary 'do': the *v*P focalization construction, as illustrated in (23), where an entire extended *v*P structure has

been raised to a preverbal focus position in the left periphery ('anaphoric 'do' in Stephens 1982: 99).

(23) Treger Breton, Le Lay 1925, cited in Le Gléau (1973: 45)
[$_{\text{FOC}}$ [$_{vP}$ PRO$_i$ ***Dimeziñ gant ma merc'h***] *ne* *ri*$_i$ *ket* *t*$_{vP}$.
marry with my daughter NEG do.FUT.2SG NEG
'You won't MARRY MY DAUGHTER.'

This focalization construction has characteristic syntactic properties that sharply distinguish it from verb head fronting in (1a).[5]

(24) *vP focalization properties*
i. it is not restricted to the root tensed clauses (26).
ii. it is strictly restricted to focalization readings (sometimes contrastive).
iii. it is fully productive for all *v*Ps.
iv. movement is not local (23), (25).
v. the infinitive head is moved inside a large constituent (23).
vi. no violation of the head movement constraint is involved.
vii. it is not restricted to [VINF-do] order (26).
viii. No instances of verb-doubling.

(25) Treger Breton, Gros (1984: 113)
[$_{vP}$ PRO$_i$ ***Bale***] *ne* *gredan* *ket* ***a*** ***rafe*** *t*$_{vP}$ *ken*.
walk NEG believe.1 SG NEG R do.COND plus
'I don't think he will WALK anymore.'

(26) Standard Breton, Dupuy (2007: 16)
An *eskob*$_i$ *n'* *en* *deveze* *d'**ober**,* *a* *lavare* *an* *teodoù*
DET bishop NEG R.3SG had to do R said DET tongues
flemmus, *nemet* [$_{vP}$ *PRO*$_I$ ***lakaat*** *ur* *vennigadenn* *da*
caustic only put DET benediction to
zivizoù *B*].
words B.
'According to slanderous rumors, all the bishop had to do was to GIVE HIS BENEDICTION TO B'S WORDS.'

The two [VINF-*do*] constructions are distinguished by the size of the displaced element (i.e. head versus phrase), and consequently by the type of movement they undergo (ultra-local LEIT movement vs. XP movement). The motivation for movement is also different: *v*P fronting involves focalization of the fronted element. Such an A-bar movement, which can be understood as feature checking

5. See also Stephens (1982) and Borsley, Rivero & Stephens (1996) for a study of the different 'do' auxiliaries.

under Chomsky's minimalism approach, automatically satisfies LEIT. As a consequence, *v*P focalization is mutually exclusive with verb head fronting, because the former satisfies a rule for which the latter is a last-resort strategy. Finally, because head-fronting resorts to excorporation, and *v*P fronting to XP movement, the latter is found in compound tenses and the former is ungrammatical in such contexts. In (27), the auxiliary 'have' does not contain the lexical verb 'to write' at any point in the derivation, therefore excorporation cannot lead to the fronting of the infinitive of *skrivañ*, 'to write'.

(27) Treger Breton, Leclerc (1986: 80)
Skrivañ (*d' am breur*) *am eus graet* (**d' am breur.*)
write.INF to my brother R.1SG have done to my brother
'I have written to my brother.'

I have shown that AC constructions in 'do' result from a last-resort strategy to satisfy LEIT. This hypothesis accounts for the syntactic properties of verb head fronting **(i–vi)**, and for the contrasts between *v*P focalization movement and last-resort verb head fronting. The assumption that verb head fronting originates from the Fin site (that is the site where the tensed head itself stands) vs. a post-tense IP internal site is justified by the fact that the infinitive head is never found with this auxiliary 'do' after the tensed head **(vii)**. There is a stronger argument in favor of excorporation: the fact that the AC with 'do' has a doubling counterpart **(viii)**.

3. Analytic construction with doubling

3.1 Verb doubling as a subcase of analytic construction

Unlike analytic constructions with the auxiliary 'do', which is already found productively in Middle Breton, analytic constructions with doubling emerged at a later stage in the language (during the 17th century, see Le Roux 1957: 416), and appear to be restricted to certain verbs only. The following examples illustrates verbs that can double in (28). They are: *ober* 'do', *bezañ* 'be', *rankout* and *dleout* 'must', *gallout* 'can', *dont* 'come', *mont* 'go', *gouzout* 'know', *kerzhout* 'walk', *redek* 'run', and *lenn* 'read'.

(28) Quimperlé Breton, (D.L 03/2009)

a. ***Rencout*** *a* ***rencan*** *da vont.*
must.INF R must.1SG to go
'I have to go.'

b. ***Dleout*** *a* ***zlean*** *ober ma gwele.*
must.INF R must.1SG do my bed
'I have to make my bed.'

c. ***Gallout*** *a* ***c'hallfen*** *lako ma avaloù en douar.*
can.INF R can put my apple/potato in.DET soil
'I can plant my potatoes.'

Treger Breton, Schafer (1997)

d. ***Gellout*** *a* ***c'hell*** *goro ho bugale ar saout.*
can.INF R can.3SG milk your children DET cow
'Your children could milk the cow.'

Leon Breton, Troude (1886: 54)

e. ***Dont*** *a* ***zeuio*** *re vraz ha re vihan…*
come.INF R come.FUT.3SG 3PL big and 3PL small
'The big ones and the small ones will come...'

Low-Tréguier, collected by Gros (1911) and cited in Le Roux (1957: 417)

f. ***Mont*** *'ch* ***I*** *d' ar gêr!*
go.INF R go.2SG at DET hous
'Will you go home!'

Kerne Breton, Bijer (2007: 138)

g. *Met* ***gouzout*** *a* ***ouzont*** *kavout an dud*
but know.INF R know.3PL find.INF DET people
en-dro goude-se (…)
again after-that
'But they know how to find people after that...'

Quimperlé, (D.L 03/2009)

h. ***Redek*** *a* ***redan*** *bemdez.*
run.INF R run.1SG every.day
'I run every day.'

Verb doubling is exceptional in corpora, and not all verbs are found with the same frequency in spontaneous speech. *Gouzout* 'know' is by far the most commonly heard in Modern Breton, whereas *redek* 'run', or *lenn* 'read', are fairly rare.

I analyze doubling constructions as a subclass of the analytic constructions. Verb doubling exhibits most of the syntactic properties of *do*-ACs. The contrast lies in their different productivity and their effects on information packaging (italics).

(29) *Verbal head doubling properties*
i. it is restricted to root tensed clauses.
ii. *it is not neutral in terms of information packaging.*
iii. *it is lexically restricted*
iv. verbal movement is ultra-local.
v. the infinitive head is moved alone.
vi. movement violates the syntactic ban on excorporation
vii. it is restricted to the [VINF-*Tense*] order.
viii. *It* (*always*) *has a 'do' counterpart*.

Doubling cases are found exclusively in canonical Tense-second environments. No case of doubling in infinitives or imperatives ever arises **(i)**. Verb head doubling is ultra-local **(iv)**, is hence incompatible with long distance extraction (30).

(30) ****gouzout*** *ne gredan ket a* ***ouzez*** *ken.*
know NEG know.1SG NEG R know.2SG anymore

Doubling does not allow intervening elements like those of clefts (31).

(31) ****gouzout*** *'ni eo a* ***ouzon****.*
know N COP R know.1SG

Doubling can be preceded only by elements following which verb-second orders are not found anyway. I illustrate in (32) with a case of preceding conjunctions *ha*, 'and', *met/hogen*, 'but', in (33) (or Bijer 2007: 136). Examples in multi-clausal sentences boil down to cases of parataxis such as (34).

(32) (Testamant Nevez: lizher Jakez 3, Gwilh Ar C'hoad 1893)[6]
ur wezenn-fiez, ha ***gallout*** *a* ***c'hell*** *reiñ olivez, pe ur winieg fiez?*
DET tree-fig Q can R can give olives or DET vine fig
'Can a fig tree give olives, or a grapevine figs?'

(33) Koatilouri, Barzig
Hogen ***goud'*** ***ouzon*** *ne 'teus ket klasket laza...*
but know R know.1SG NEG has.2SG NEG tried kill
'But I know you didn't mean to kill...'

(34) Breton Kerne, Bijer (2007: 156)
rak ***gouzout*** *e* ***ouie*** *n' eo ket mont a don't* (…) *nemetken*
because know R knew NEG is NEG go and come only
eo a rafe e genitervez.
is R do.COND his cousin
'… Because he knew that his cousin would not only go back and forth.'

Verb doubling concerns syntactic heads (v) and never targets accompanying arguments (35), except incorporated ones (36).

(35) *[***gouzout*** *an doare da vont*] *a* ***ouzez.***
know DET reason for go R know.2SG

(36) Quimperlé, D.L.
[***hen gouzout***] *a* ***ouzon****.* / [***E lenn***] *a* ***lennan***
CL.3SG know R know.1SG CL.3SG read R read
'I know it (well).' 'I do read it.'

6. This translation of the New Testament was written by Gwilh Ar C'hoad in the nineteenth century, with subsequent corrections in Modern Breton by Lukaz Bernikod.

These facts follow in the excorporation scenario: only elements that can ever be part of the synthetic morphologically complex head (clitics) can be excorporated from it.

The sentence in (37) would be a strong counterexample if it could mean: *He will come home walking*, which it can not, as confirmed by the ungrammaticality of 'tomorrow'. This is a case of accidental co-occurrence of two unrelated instances of the verb 'come', rather than copying. A goal argument is topicalized in the pretense area: *He will* ***come*** *walking* [$_{PP}$(*in order to*) ***come*** *home*].[7] Presence of the silent preposition is independently revealed by the *e* variant of the rannig noted R, providing a contrast with examples of doubling which tend to use the *a* variant.

(37) Quimperlé Breton D.L., Callac S.B.
[$_{PP}$ ***Don't d' ar gêr***] *e* ***teuio*** *war droad / *warc'hoazh.*
P come to DET house R come.FUT on feet / tomorrow
'(In order to) come home, he will come (walking/*tomorrow).'

The doubling phenomena is strictly restricted to [VINF-do] orders **(vii)**. No doubling is ever found with the infinitive form following the inflected one. The relevant contrast between analytic constructions in *do* and with doubling thus seems to be due to information packaging.

3.2 Information packaging

Verb doubling triggers a saliency effect on information packaging, which fails to arise with analytic constructions in *do*. This effect is rather delicate to formalize, and even describe. Grammars are at best vague, at worst contradictory, about it. Ernault (1890:470) proposes a gradation in emphasis: the doubling of *rankout*, 'must', would be a "more energetic synonym" of the *do*-AC, itself more emphatic than the synthetic strategy. This rare note is at odds with Le Gléau (1973:46), for whom focalized *do*-ACs with semi-auxiliaries like *rankout* are ungrammatical. The pragmatic development of (38) that Herve ar Bihan comments on for a sentence by his father points toward a *verum focus* effect, a focalization on the truth value of the sentence, suggesting that doubling may even induce different types of readings on the sentence.

(38) Guy ar Bihan, collected by H. ar Bihan
Lenn a lennan!
read R read.1SG
'You see well that I am reading!'
Pragmatic development: 'You see that I know how to read.'

7. Thanks to Denis Pruel for drawing my attention on these structures.

In order to test focus effects in verb doubling ACs, I presented two speakers, D.L and S.B., with the corpus example (39), which seemed to me a good candidate for a neutral reading. The doubling of the verb 'to know' turned out to be grammatical for both speakers. The discourse context ensures that all information in the sentence is new, and pragmatically disfavors a *verum focus* reading. Both speakers, however, noted an emphasis effect (without further comment on what that consisted of). Emphasis in (39) could bear on (i) the lexical content of the verb, (ii) the sentence as a whole, or (iii) the internal argument of the doubled verb.[8]

(39) Kerne Breton, Bijer (2007: 165)

a. *Goude bezañ kimiadet diouzh an daou grennard ha danvez*
after to.be separated from DET 2 adolescent C material
beleg anezho, e kavas d' ar c'harretour en doa gounezet
priest P.3PL R found to DET carter 3SG had won
e verenn.
his lunch
'After he left the two adolescent priests-to-be, the carter found he had won his lunch.'

b. ***Gouzout a ouie*** *e oa e bourk ar Pont un ostaleri ma*
to.know R knew R was in bourg DET Pont DET hostel C
veze selvichet enni sklipoù eus ar c'hentañ. Ha Lorañs
was served in.3SGF tripe of the first & Lorañs
mont e-barzh.
enter in
'He knew there was in the town of Pont a hostel that served first class tripes. Lorañs went in.'

I leave for now the question open of the impact of doubling on information packaging. I just take note that verb-doubling *can* have an impact on information packaging and most probably has to, with possible readings beyond *verum focus*. The focus effect probably comes from doubling itself, and not from excorporation.

Breton indeed can use doubling for intensification, as it independently does in the domain of adjectives (*tomm-tomm*, 'very hot' (lit. 'hot-hot')). However, this can't be the entire story, because Breton reduplication does not always have this particular semantic effect. In (40), the infinitive verb 'to live' is reduplicated, and its second occurrence bears a diminutive marker. The interpretation of the

8. Thanks to Alain Rouveret for pointing out this possibility.

construction is clearly not intensive. In (41), a nominal head or an entire DP has been reduplicated over a deictic marker. The obtained reading is specific-unknown or specific-uncited (Jouitteau 2011). More of the same morphology doesn't have to mean more of the same meaning.[9]

(40) Standard, Denez (1993: 17)
Bevañ-bevaik *a rae…*
live-live.DIM R did.3SG
'He was struggling along.'

(41) *C'hoand am euz da gaoud ar* ***marc'h****-mañ* (*ar*) ***marc'h****.*
wish R.1SG have to have the horse-here (the) horse
'I want to have such and such a horse.'

A much more extensive study, with carefully controlled questionnaires that would take variation into account would be necessary. For the sake of this paper, the important question is to see if doubling constructions are, as I propose, last-resort operations used to avoid Tense-first word orders, or if they are just triggered by a particular semantico-pragmatic effect. In the latter case, the doubling constructions could not be considered to be a subcase of analytic constructions.

The two hypotheses make diverging predictions as to the distribution of verb-doubling: an expletive operation prototypical of analytic constructions would appear only as a last resort in order to avoid Tense-first orders, whereas an operation driven by information packaging would appear in correlation with the salience reading. The distribution of verb doubling shows all prototypical last-resort properties that we already saw in the analytic constructions in *do*. Not only does verb doubling appear only in canonical V2 contexts **(i)**, but any independent satisfaction of LEIT renders doubling ungrammatical. Doubling is forbidden with an embedded C head (42a), a matrix negation C head (42b), or a preverbal expletive (42c). This is also the case for any A or A-bar preverbal XP.

(42) a. **Na larez ket din ma* ***gouzout*** *a* ***oar****…*
NEG.IMP tell.2SG NEG P.1SG if know R know.3SG

b. (**n'*) ***gouzout*** (**n'*) ***ouzon*** *ket.*
NEG know NEG know.1SG NEG

c. (**bez'*) ***gouzout*** (**bez'*) '***ouzon****.*
EXPL know EXPL R know.1SG

The distribution of doubling has to be considered in comparison with another Breton expletive strategy that also can bear on information packaging: the merge

9. See http://makino.linguist.jussieu.fr/ARBRES/index.php/Reduplication_simple for extensive evidence and crossdialectal examples of intensive reduplication.

of expletive *bez*. In (43a), the preverbal expletive *bez* is neutral in an 'out of the blue' sentence, and in (43b), it can bear *verum focus*. *Bez* can be found in Western Brittany before all sorts of verbs, but its paradigm overlaps with verb doubling based on the 'be' stem.[10]

(43) a. ***Bez' omp*** *digemeret en eur zal*
EXPL are.1PL welcomed in DET room
vraz spontuz. (Miossec 1981: 7)
big terrible
'We are welcomed in a very big room.'

b. ***Bez' he-deus*** *da vihanna, tri-ugent metr hed ha tregont*
EXPL R.3SGF has at least 3–20 meter long and 30
metr lehed.
meter large
'(Indeed) It is at least 60m long and 30 meter large.'

Despite its impact on information packaging, verb-doubling thus shows the last-resort properties prototypical of analytic constructions in *do*. The final contrast that remains between *do*-ACs and doubling ACs is the question of productivity. I will show in the next section that doubling is fully idiosyncratic and cannot be reduced to a syntactic operation.

4. Idiosyncracy of verb reiteration

This section is dedicated to showing that Breton verb doubling illustrated in 0b is idiosyncratically restricted, and involves a list of verbs that fail to form a class at the syntactic level. No syntactic account of the paradigm is possible. This will pave the way to proposing that doubling is triggered at the Late Syntax/Morphology Interface and realized in a morphological post-syntactic module. I will proceed by exploring different alternatives for syntactic accounts and point out where they fail to explain the data.

4.1 Variation in doubling verbs

We saw that for Le Roux (1957: 416), the emergence of verb doubling dates back to the 17th century. Kervella (1995: §274) proposes that all Middle Breton verbs

10. The expletive *bez*' is used with all verbs in Standard Breton. Eastern dialects restrict its usage to co-occurrence with the inflected verb 'be', and thus to verb doubling (cf. see documentation on ARBRES, http://makino.linguist.jussieu.fr/ARBRES/index.php/Bezan_preverbal and references therein).

could be inflected by taking their own root as an auxiliary. Ernault (1888: 247) argues on the contrary that the doubling analytic construction was found "only for a small number of verbs, in Modern and Middle Breton". Ernault illustrates this with some corpus data, and produces examples that are quite similar to those later produced by Hemon (2000: 239 Note 4) and Le Roux (1957: 416).

Breton grammars vary with respect to the verbs they claim can double. *Gouzout*, 'to know' is the only doubling verb noted by Kervella (1995: §197), though he dedicates an entire section to conjugations with semi-auxiliaries (§247–253). Gros (1984: 94), an expert on the Treger dialect, has a very detailed chapter on emphasis by doubling but also cites only 'to know' as a doubling verb. However, as reported in Le Roux (1957), Gros had reported a doubling structure with *mont* 'to go' in 1911, in Trédrez. Le Roux (1957: 414), also a Treger Breton speaker, mentions *gouzout* 'to know', but also *gallout* 'can', as does Ernault (1888), which he has consulted. He further mentions that there are « some others » and cites the data collected by J.Gros with *mont* 'to go'. Eugène Chalm, from Cap-Sizun (Kerne diaclect), signals verb doubling with *gouzout* 'to know', *gallout* 'can' and *rankout* 'must' (Chalm 2008: 45). This structure is absent from 38 hours of spontaneous speech recorded from Gwened Breton (*Lorient,* Cheveau 2007). I developed a questionnaire for two native speakers of Breton, D.L from Quimperlé, and S.B. from Callac. The list of verbs they can double is summarized in the table below. The rightmost column summarizes the doubled cases reported in the descriptive literature, found in a corpus, or reported to me as used by native speakers.

(44)

			D.L Quimperlé	S.B Callac	*reported in the literature*
AUXILIARIES	'be' 'do'	*bez*(*añ*) *ober*	√ √	√ √	(10[0]
	'have'	*kaout*	*	*	(18)
SEMI-AUXILIARIES	'know' 'can'	*gouzout* *gallout*	√ √	√ √	(28)
	'must'	*rankout*	√	*	(28)
	'must'	*dleout*	√	*[11]	(28)
	'look for'	*klask*,	*	*	-

11. The speaker hesitates because she thinks she had heard it, but insists she would not use it herself.

LEXICAL VERBS with homophonous semi-auxiliary	'know' 'come'	*gouzout* *dont*	√ √	√ √	(28)
	'go'	*mont*	√	*	(28)
	'look for'	*klask*,	*	*	-
LEXICAL VERBS	'run' 'walk' 'read'	*redek* *kerzhout* *lenn*	√ - -	* - -	[12] Guy ar Bihan (28)
	'laugh' 'walk' 'danse' 'cry' 'cry'	*c'hoarzhiñ* *bale* *dañsal* *leñvañ* *oueleiñ*	* * * * *	* * * * *	- - - - -

The distribution of doubling verbs resists any attempt at syntactic reduction to a homogeneous class of verbs.

Let us first examine carefully the flexibility in ranking possibilities for auxiliaries because some ranking decisions are analysis-dependent. The verb *ober* 'to do' can either resort to doubling or to a *do*-AC (10). The analysis of *bezañ* 'to be', can also vary between verb doubling and expletive insertion (43a). Doubling of *kaout* 'have', partly depends on the analysis of 'to be'. The paradigm of *kaout* is visibly formed from a morphological compound including 'to be', with a more or less synthetic result depending on the dialect (cf. Jouitteau & Rezac 2006, 2008, 2009 and references therein). Though doubling is not grammatical with the *kaout* form of the infinitive (45), some dialects would allow *bez* insertion equally with *kaout* 'have' and *bezañ* 'to be' (43). These cases thus could equally 'count' as verb doubling or expletive insertion. I take these ranking variables into account in the coming discussion.

(45) ***Kaout em eus** un oto/gwelet/riv.*
have.INF R.1SG have.√ a car/seen/cold
'I have a car/I have seen/I am cold.' D.L., S.B.

The generalization on auxiliary-doubling is virtually analysis dependent.

As for semi-auxiliaries, some of them can be doubled, but not all of them (46). The list of doubling verbs also includes some lexical verbs. Herve ar Bihan

12. I found *redek a redan*,'to run I run' for the first time in a written source, which I no longer recall. I am unsure if it was Modern or Middle Breton. This is what gave me the idea of testing this with DL and SB in Quimperlé.

reports his father used to double the verbs *kerzhout* 'to walk' and *lenn*, 'to read' (38). S.B and D.L both double *gouzout* 'to know' and *dont*, 'to come' in their special and thus lexical interpretation. However, verb doubling is far from extending to all lexical verbs: neither of the two speakers can double lexical verbs like *bale*, 'to walk', *c'hoarzhiñ*, 'to laugh', *dañsal*, 'to danse', or finally *leñvañ* (*dourek*)/*oueleiñ*, 'to cry':

(46) ****Klask*** *a* ***glasko****…*
look.for.INF R look.for.3SG
'She will try to…'

(47) ****Bale*** *a* ***vale****.*
walk.INF R walked.3SG.
'He was walking/He walked.'

(48) ****Choarzhiñ*** (*brav*) *a* ***c'hoarzhes***
laugh.INF beautiful R laughs.
'You are laughing (a lot)!'

(49) ****Dañsal*** *a* ***zansan*** *ar jabadao.*
danse.INF R danse.1SG DET jabadao
'I am dansing the jabadao.'

(50) ****Leñvañ*** (*dourek*) *a* ***leñve*** (*dourek*).
cry.INF (water.ADJ) R cried.3SG (water.ADJ)
'He was crying a lot.'

(51) ****Oueleiñ*** *a* ***ouelent*** *gant glac'har.*
cry.INF R cry.3SG by pain
'They cried with pain.'

Variation is dialectal or even idiolectal: D.L from Quimperlé can double the two auxiliaries *rankout* (28b) and *dleout* 'must', and the two lexical verbs *mont* and *redek*, which are ungrammatical to S.B from Callac (80 minutes driving distance away). Reduction to the verb structure seems a hard task: verbs that are semantically similar may still differ in doubling properties for the same speaker: D.L doubles *redek* 'to run', but not *bale*, 'to walk' (47); and S.B doubles *dont* 'to come', but not *mont* 'to go'. Idiolectal variation is a serious obstacle to any attempt at reducing verb doubling to a homogeneous syntactic class.

No morphological particularity emerges either, that would set doubling verbs apart from other verbs. At most, we can note that an infinitival ending such as *-al*, is never present on doubling verbs, but so few verbs do double that it is hardly conclusive. The case of verbs ending in *-out* like *gouzout* 'to know', must however be discussed. *Gouzout* 'to know' is by far the verb that doubles the most frequently in

modern Breton. When one wonders about the link between *gouzout* 'to know' and semi-auxiliaries, one can notice it is a compound containing the verb 'to be' (in its older form *-bout*). No reduction of the data is however possible. In Treger Breton as in Léon, the independent form of 'to be' is not *-bout*, like it is in Gwened Breton and Kerne Breton: it evolved into *bezañ* (Hémon 2000: §139,14). In these dialects, the verb 'to know' is arguably not a compound of 'to be' anymore.

Similarly, no correlation emerges between doubling verbs and those before which the expletive *bez'* can be found. Gros (1984: 110) notes that *bez'* is restricted in Treger Breton to the preverbal area of *bezañ* 'to be', *gouzout* 'to know' and *kaoud* 'to have'. The first two can double in this dialect, but *kaout* 'have' fails to. This hypothesis also would not hold for Standard Breton or Western varieties, where *bez'* can be used before any lexical verb.

I conclude that the difference between doubling verbs and non-doubling verbs is purely idiosyncratic. Knowing the language requires knowing, for each verb, if it used in doubling constructions or not, pretty much in the same way gender is assigned to inanimate nouns. Dialects and speakers vary in the list of verbs they treat as doubling verbs.

4.2 A typologically unique situation

Verb doubling at the sentence level is well-documented in a large set of languages (see Gouget 2008; Kandybowicz 2008 and references therein). Some languages show cases of verb-doubling with two phonologically identical instantiations, as in Nupe, Fongbe, Mandarin Chinese, Haitian (Glaude and Zribi-Hertz this volume) or Gungbe (52). In Yoruba (53), an additional reduplication process takes place and distinguishes the instantiation in focus position from the lower one.

(52) Gungbe, Aboh & Dyakonova (2009)
Đù *wὲ* *Sὲná* *ɖù* *blὲɖὶ* *lɔ́*
eat FOC Sena eat bread DET
'Sena has EATEN bread.'

(53) Yoruba, Tamburri Watt (2003)
Rírà *ni* *mo* ***ra*** *ìwé.*
buy FOC 1SG buy books
'I BOUGHT the books.'

Finally, another set of languages resemble Breton more, with one of the two instantiations appearing with a tense marker, as in Portuguese, Spanish (54), Russian (55), Basque (56), Yiddish (Cable 2003), Classical or Modern Hebrew (57) and (58) (see also 1b in Cohen this volume).

(54) Spanish, Vicente (2007)
***Comprar**, Juan ha **comprador** un libro!*
buy, J. has bought a book
'Juan has bought a book!'

(55) Russian, Abels (2001)
***Citat**, Ivan ee **citaet**.*
read Ivan it read
'Ivan has read it.'

(56) Basque, Hualde & Ortiz de Urbina (2003)
***Hartu** ere **har-tzen** dut erabakia*
take also take-IMPF AUX decision
'As for taking, I TAKE my decision.'

(57) Classical Hebrew, Jeremiah 23:17 cited in Harbour (2007)
*'**omr**- im '**aamoor** li- mna' ṣay.*
say.benoni-3PL say to-despisers.1SG
'They say still unto them that despise me'

(58) Modern Hebrew, Landau (2007)
Liknot** et ha-praxim, hi **kanta
buy ACC DET-flowers, she bought
'She bought the flowers.'

Doubling may be associated with different readings across languages. Kandybowicz (2008: Chapter 3) distinguishes (i) *contrast of topic/focus* in Russian, Hungarian, Korean, Kabiye and Brazilian Sign language, (ii) *emphasis of the 'really V' type* in Haitian and English, and (iii) *polarity effects*, that is, emphasis, contrastive or not, on the veracity of the sentence in Mandarin Chinese, Nupe and European Portuguese. The environment for doubling can be either pragmatic or syntactic (a restriction to negative contexts in Portuguese, a restriction to the perfect in Nupe). They can also be restricted to a given syntactic construction. In French, doubling requires a preposition (and also doubling of the arguments of the verb).

(59) French
*Je peux te dire que pour **l' avoir lu**, elle **l' a lu!***
I can 2SG tell that for 3SG have.INF read, she 3SG has read
'I can tell you that she DID read it!'
litt. : '… that as for reading it, she did indeed read it.'
> pragmatic implication: she showed extensive evidence for this action.

In all the above languages, doubling is fully productive inside the pragmatic and syntactic environment that triggers doubling. The outstanding character of Breton verb doubling is its idiosyncrasy. In Breton, in a doubling configuration, not all verbs can double.

This generalization is of immediate interest to the question of iconicity addressed in this volume. If Breton verb-doubling had anything to do with iconicity, one should expect this iconic doubling principle to be fully productive, or at least reducible to a semantic class of verbs. The idiosyncrasy of verb-doubling shows that in the Breton case at least, the iconic dimension of doubling is null.

4.3 Theoretical analyses for syntactic doubling

Due to some major shifts of theory, doubling has received a number of different formal analyses in the generativist paradigm during the last few decades. The passage from the trace theory of movement, which was dominant in the 80–90's, to copy theory, has opened up a mass of analyses of doubling effects in syntax.[13]

Under Chomsky's trace theory (1973), an item moved in syntax exists under one and only one exemplary, because movement creates new elements in the derivation: phonologically null pronominal traces. The operation of verb doubling in the syntactic component is difficult because each occurrence should then require its own arguments to pass the theta-criterion, contrary to typological evidence. In a trace theory T model, doubling can only be viewed as a post-syntactic (morpho(phono)logic) operation. Copy theory (Chomsky 1955, 1993), reverses the perspective: every position in a movement chain is occupied by the same item (except their (un)interpretable features). At the syntactic level, the presence of multiple copies is no exception, but is merely the symptom of movement, as sometimes revealed by pronunciation of multiple copies by the sensorimotor system. The sensorimotor system generally compels pronunciation of the highest copy, and doubling can be obtained to the extent that one can predict where the sensorimotor interface will be in a situation to send two copies to spell-out. Gouget (2008) for example proposes that the complex movement of the verb copy in Mandarin Chinese is peculiar in that it always results in two copies that count as the highest in the chain. Depending on the respective ordering of movement and cyclic transfer of the derivation to the interface, reduplication or simple movement is obtained. For verb doubling in Nupe, Kandybowicz (2008) proposes that a tonal factitive morpheme calls for a realizational basis, with the result that the realization of multiple verb copies is associated with the factitive reading. Typological evidence for morphophonologically distinct instantiations can also easily be handled: two copies in the same chain are already distinct at the syntactic level thanks to the encoding of the motivation for movement into (the interpretability of) feature specification.

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13. For a clear an detailed presentation of the analysis of doubling verbs/structures, see Gouget (2008: Chapter 3).

Finally, in multidominance theory, two occurrences of the same chain are one and the same syntactic element and can only be differentiated when sent to the interfaces. Pronunciation of a copy/instantiation can be taken care of by a morphological operation such as Morphological Fusion (see Nunes 2004 & Kandybowicz 2006a, b).

The paradigm of verb doubling in Breton has key importance in the debate. This paradigm has no equivalent in the doubling literature because of the lexical restriction imposed on it: only an arbitrary list of verbs can be doubled, irreducible to a homogeneous syntactic class, or to a syntactic operation. This means that whatever mechanism is called upon to account for verb doubling in *gouzout a ouzon*, 'to know I know', this mechanism must be set such as to apply to an arbitrary list of verbs. Idiosyncrasy, however, is a prototypical symptom of lexical or morphological operations, crucially not of syntactic operations.

5. A postsyntactic morphological level

This section investigates and discusses the question of the module of grammar where doubling operates: syntax or morpho(phono)logical interface.

5.1 Not in syntax

Doubling can be obtained inside the syntactic component (by means of copying or double instantiations), if and only if, inside the syntactic level, doubling verbs (A) can be distinguished from non-doubling ones (B) (±auxiliaries/modals/semi-auxiliaries? particular derivation?). If so, and for each derivation, the syntactic output can provide the interface with either verbal type A or B couples leading to different spell-outs. Basque provides the relevant contrast with Breton. Basque verb doubling is restricted to a list of verbs strangely reminiscent of those of Breton: 'to know', 'to take' (56), 'to walk' 'to come', and 'to go' (60).

(60) Biscayan Basque, Zuazo (1998: 207)
Juen doie, *ala* ***etorri dator,*** *ba?*
go.INF go.3SG or come.INF come.3SG then
'Well, is he leaving (right now) or coming?'

Basque doubling verbs happen to also be the only verbs in the language that can show synthetic agreement, which means that doubling can be associated with a particular syntactic derivation leading to synthetic agreement. Verbs that can double are already distinguishable from non-doubling ones at the syntactic level. In Breton however, both doubling verbs and non-doubling ones appear in the same syntactic location and seem undistinguishable at the syntactic level.

Another attempt to locate the doubling operation internally to the syntactic level would be to set a morphological filter after syntax. In this scenario, all verbs are doubling verbs at the syntactic level, but some postsyntactic morphological filter avoids it for most verbs and realizes the AC in 'do' instead. Considering that we already rejected the hypothesis that only certain roots would have an independent spell-out, I can't see what this filter could consist of.

Another argument that ACs are not internal to the syntactic module is that its trigger, LEIT, resists encoding under feature-checking systems. LEIT, under different EPP-related names, has been proposed under different types of uninterpretable features: the phonological [P-] in Holmberg (2000) for Icelandic, the [δ] feature in Rezac (2004) or categorial [*u* CAT] in Jouitteau (2005, 2010) for Breton, the empty φ sets mentioned by Grohmann, Drury and Castillo (2000), the [–Foc] in Holmberg and Nikanne (2002) for Finnish, etc. The advantages of these feature-driven scenarios are that they accurately derive unselective locality (via Relativized Minimality), and blindness to the X/XP distinction. However, LEIT is an operation that does not exactly coincide with what we know about feature checking: **(A)** LEIT satisfaction does not ever seem to be possible at a distance. Instead, it is characterized by an ultralocal domain of impact, **(B)** LEIT effects are characterized by 'the far-sighted effect': in order to obtain unselective locality, feature checking accounts of LEIT need to postulate uninterpretable features that are present on the head itself. Feature-checking scenarios cannot avoid the stipulation that the uninterpretable feature is blind to the interpretable features of its own head (consisting of the inflected head itself or even the potential clitics that crosslinguistically fail to satisfy LEIT); **(C)** Lasnik's (2001) states that EPP cannot be seen as a strong feature, and his argument holds for LEIT: provided that features can be checked by erasure of their satisfier inside an ellipsis (of VP or IP), VP ellipsis should allow for Tense-first orders in V2 languages, which is not the case. The merge of expletives is also a problem **(D)**: Rezac (2004: 481) notes that it would be "the (unique) feature whose Agree results in the Merge component of the Move operation, and in expletive base-generation".

Finally, another argument that LEIT does not operate in syntax is its recurrent violation of the Head Movement Constraint (Stylistic Fronting in Icelandic, Long Head Movement in Breton, excorporation in Breton ACs). If LEIT operates outside of the syntactic component, no such filter as the Head Movement Constraint or any syntactic ban on excorporation is predicted to apply.

5.2 Pre-Tense vs. post-Tense infinitives: Not in the lexicon

There seems to be morphological evidence that preverbal infinitives should be set apart from post-Tense ones. In several dialects, their phonological spell-out may

indeed differ. Ernault points out an asymmetry in Little Tréguier, where the verbal ending is optional in analytic constructions, but obligatory in post-Tense position. Indeed, all the infinitives that Favereau (1997:§347) notes to lack infinitive endings in Treger and Gwened Breton appear in a position preceding a 'do' auxiliary. Similarly, in the Low Kerne dialect, post-Tense infinitives bear the *-o* suffix (62), whereas the infinitive in AC shows up with *-ek* (63a).

(61) a. *gwel*(-***et***) / *zell*(-***ed***) *ë* *rañ*
see look R do.1SG
'I see/I am looking.'

b. *red* *e* *gwel**(-***et***) */zell**(-***ed***)
obligatory COP see /look
'One must see/look.'

(62) Plélanff, Goarec Breton[14]
kānò ***ğwerhò*** ***hœjò***
'to wash', 'to sell', 'to shake'

(63) Saint Mayeux; Ernault (1888: 247)

a. *c'hoarzh****ek*** *a* *ra*
laugh R do.3SG
'He laughs.'

b. *labour****ek*** *a* *zo* *red* _.
work R COP.3SG obligatory
'One must work.'

One could try to push the idea that the above data suggest an asymmetry in Breton between verb roots (preverbal) and regular infinitives (prototypically post-Tense). However, in (63b), the verb *labourek* is not part of an AC, but XP moved across an auxiliary in a preverbal focused position. The prototypically preverbal ending *-ek* appears. The asymmetry thus seems to lie between the preverbal and post-Tense positions, rather than between the roots and infinitives.

This absence of root/infinitive asymmetry is important because it shows that the Breton verb-doubling idiosyncrasy does not originate in the lexicon. One could propose that verb heads are specified in the lexicon as having, or not having, independent spell-outs for their roots. Syntax thus derives an analytic construction composed of sets of abstract features of the sort [… verbal root+tense+AGR], before which the verbal root appears as a LEIT effect in linear order. This assumption would predict that only verbs that do have an independent spell-out for their

14. Leroux (1924–1953) *Atlas Linguistique de Basse Bretagne* point 60, maps 286, 295, 311 – diacritics have been omitted.

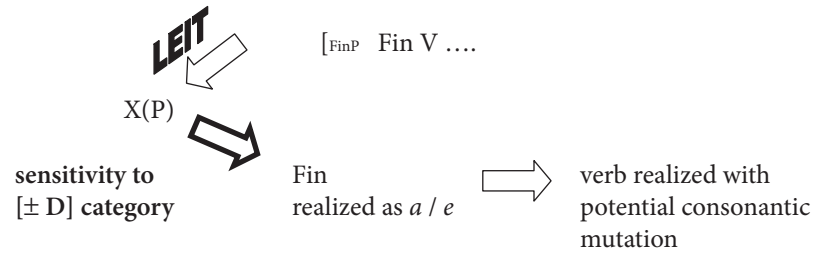
root would be found with doubling, and others not. However, such a hypothesis would have to assume an intrinsic distinction between roots and infinitives, despite the fact they 'happen' to have the same spell-out in Breton, giving rise to a global picture in the language where all verbs do have a spell-out for their infinitives, but not all of them can use this same bundle of morphophonological features in order to spell out the independent root of the verb. I consider such a scenario unlikely, and I stand by the idea that all verbal roots are, uniformly, and by default, spelled-out as infinitives in Breton. In fact, if there is a syntactic location where the spell-out of the infinitive seems to matter less than anywhere, it is the preverbal area.

The key to the preverbal/postverbal asymmetry in the spell-out of verbs is most likely to be found in Breton accentuation rules, and in the fact that preverbal items always have a following vowel available for syllabification: the *rannig* (R).

5.3 Not in phonology

The level where doubling arises can be shown to be sensitive to the [± nominal] distinction. In literary standard Breton and in the Léon dialect, the preverbal particle noted here 'R' in glosses, agrees in category with the ± nominal preverbal element (Rezac 2004; Jouitteau 2005, 2010). This particle is thus sensitive to the categorial identity of the fronted constituent, including LEIT-fronted constituents. The causality chain of LEIT effects is schematized in (64). LEIT triggers last-resort strategies at the end of the derivation, when a tensed head fronts first to fuse with the Fin head, and calls for any head or larger constituent to be Merged or Moved. The ± nominal category of this pre-tense element will decide for the particular spell-out of the Fin head: *a* follows [+ nominal] elements, and *e* follows [– nominal] elements. It is not unusual for the rannig *a/e* itself not to be spelled out, but its syntactic presence is discernable from the consonant mutation it triggers on the following right-adjoined tensed element..

(64)



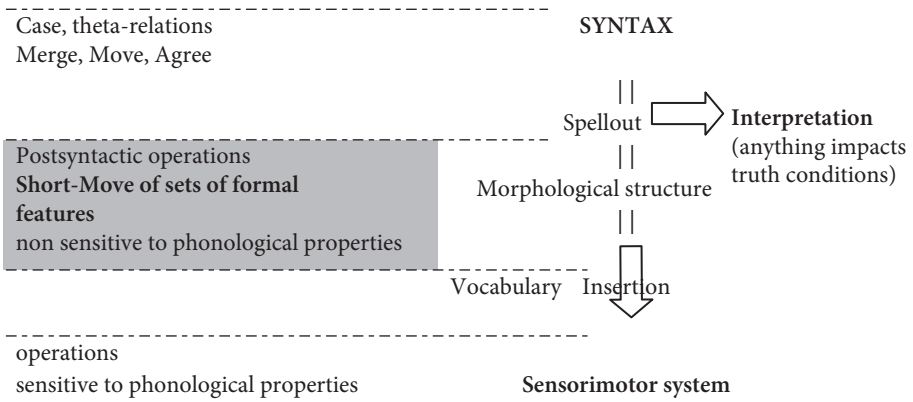
In doubling cases (as in ACs in general), the *rannig* appears under its *a* form that signals a [+nominal] preceding element, which is logical in a language where untensed verb structures show extensive nominal properties. The important point

is that the LEIT last-resort operation is sensitive to the categorial identity of the element serving as an expletive.[15]

5.4 A morphological operation: Obligatory exponence in morphology

I assume a T model of grammar (65), and propose that LEIT is located in a post-syntactic morphological structure. As such, LEIT effects are predicted to be blind to phonological properties, but sensitive to the output of syntax (word order).

(65)



The absence of any impact by analytic structures on the interpretative component, as well as deviant syntactic behavior automatically follows. Sensitivity to categorial features is also easily accounted for: categorial features have independently to be visible in morphological structure. This proposal bears a surprising implication for our theory of Information Packaging. It implies that some discourse effects are never interpreted semantically. If I am right in locating verb doubling in a module of grammar that is independent from the interpretative component, there is a part of information structure manipulation that is separated from Interpretation proper. These effects should never impact on truth-conditions, as is verified for verb-doubling.

The idea suggested here that LEIT effects could be crosslinguistically tied to morphology finds independent cross-linguistic support in some well-documented morphological paradigms that strongly recall the LEIT effects. I will briefly present the case of obligatory exponence in the Basque morphology, where a second position phenomenon is identified at the level of a morphologically complex word.

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15. This argument is convincing, but could not hold in all dialects. All dialects show the *a* variant of the rannig in doubling, but not all dialects follow the [± nominal] distinction for the *rannig*.

Laka (1993) treats a case of obligatory exponence in the Basque verb morphological complex. The obligatory exponent location precedes the agreement complex, and is canonically realized by the absolutive marker, *g-* in (66a) and b. The absolutive argument controls the preceding exponent as long as it is first or second person. In cases where the absolutive argument is third person, a Tense-Mood conditioned morphology fills in the gap as in (66c). These prefixes, *d* (present), *z/Ø* (past), and *l* (irrealis), are last-resort defaults, meaning that they are strictly restricted to contexts lacking any absolutive controller for the prefix.

In certain tenses, however, no prefix is available, and the morphological complex shows ultralocal movement of the ergative marker into the prefix position as in (66d), referred to as 'ergative displacement'. Finally, in these critical contexts where the prefix morphology is exceptionally controlled by the ergative argument, some dialects show doubling of the ergative marker in (two) different locations in the complex as in (66e).

(66)

a. *Berak*$_i$ ***gu***$_j$
He.ERG us.ABS
'He has us.'

?	-TM	SG/PL	√have	ERG 1/2	-past
g$_j$	*-a*	*-it*$_j$	*-u*		
1'		-PL			

ABS = 1/2 > ABS control

b. *Berak*$_i$ ***gu***$_j$
He.ERG us.ABS
'He had us.'

?	-TM	SG/PL	√have	ERG 1/2	-past
g$_j$	*-in*	*-t*$_j$	*-u*		*-en*
1'		-PL			

ABS = 1/2 > ABS control

c. *Guk*$_i$ *hura/haiek*$_j$
we.ERG it/them.ABS
'We have it/them.'

?	-TM	SG/PL	√have	ERG 1/2	-past
d		*-Ø/it*$_j$	*-u*	*-gu*$_i$	
				–1'	

No 1/2 ABS > Tense/Mood-conditioned morphology

d. ***Guk***$_i$ *hura/haiek*$_j$
we.ERG it/them.ABS
'We had it/them.'

?	-TM	SG/PL	√have	ERG 1/2	-past
g$_i$	*-en*	*-Ø/it*$_j$	*-u*		*-en*
1'					

In some tenses…..
ABS = 3 > ERG 1/2 control ("displacement")

e. ***Guk***$_i$ *hura/haiek*$_j$
we.ERG it/them.ABS
'We had it/them.'

?	-TM	SG/PL	√have	ERG 1/2	-past
g$_i$	*-en*	*-Ø/it*$_j$	*-u*	***-gu***$_i$	*-n*
1'				–1'	

In these tenses in some dialects…. ABS = 3 > ERG 1/2 doubling

The parallel with Breton LEIT effect is striking. Breton preverbal position is canonically filled in by some XP, in a manner prototypical of V2. LEIT last-resort dimension is evidenced when no such XP is fronted. Merge of the Basque Tense-Mood conditioned prefixes strongly recalls the Breton *bez*/*bet* expletive strategy, where the expletive used is prototypically verbal (it is realized as a morphological shortening of the verb 'to be', and contains a [± past] encoding). Ergative displacement mimics LEIT ultralocal movement, and ergative doubling seems to recall verb-doubling.

The surprising, but, unavoidable conclusion from Breton is that an edge-sensitive morphological process, similar to the second position phenomena exemplified above in Basque, is active at the level of the sentence, and leads to a generalization concerning word order (linear V2).[16]

The remaining section provides a cross-linguistic comparison. Breton is not alone in presenting a paradigm of verb-doubling that reflects obligatory exponence. I present an identical pattern in a genetically unrelated language: Gungbe. The Gungbe paradigm provides an interesting contrast with Breton because obligatory exponence is not relative to the tensed element of the sentence. A comparison suggests therefore that there is no cross-linguistic rule that would intrinsically avoid the left-edge appearance of Tense morphology. The Gungbe obligatory exponence paradigm is also located at the left-edge of an IP-internal aspectual structure, which suggests that the left-edge position of the sentence is not intrinsically responsible for theseobligatory exponence effects themselves.

6. LEIT-reduplication in Gungbe

Gungbe provides a case of an obligatorily exponence in the preverbal position, inside a nominalized small clause structure. This small clause is selected by an aspectual control verb (e.g. *refuse*, *begin*) and could be headed by a purpose marker (in purpose constructions) or a final low-tone (in the case of the progressive) noted 'NR'. In (67b), I present the derivation proposed by Aboh (2009) for these structures, with the internal argument of the purpose marker that fronts into its specifier. The position of obligatory exponence is at the left edge of this moved constituent. The element canonically in preverbal position is the internal

16. See also Foley (1991) and Phillips (1994) for a similar ABS displacement paradigm showing morphological obligatory exponence in Yimas (Papua New Guinea).

argument (here in bold), whose preverbal movement is neither case-related (Aboh 2005: 158), nor related to information packaging (Aboh p.c.).[17]

(67) a. *Àsíbá wá* [A_{SPP} ***lésì*** *ɖù*] *gbé* _. (Gungbe, Aboh 2009: 14–15)
Asiba come rice eat PRT
'Asiba came in order to eat rice.'

b. [AspP *wá* [FP [F *gbé* t_{AspP}

[A_{SPP} ***lésì*** [Asp *ɖù* [*v*P $t_{Àsíbá}$ [v_{EXT} $t_{ɖù}$ [*v*P [VP $t_{ɖù}$ $t_{lésì}$]]]]]]]]

LEIT signature is a full battery of last-resort strategies, some of which syntactically bad behaved, with mutual exclusive distribution of heads and XPs. Indeed, when the verb is intransitive, or when the object is absent, being either a pronominalized clitic or *A′*-extracted, another element has to 'take its place' and front preverbally. This element can be a locative PP (68), a reduplicated adverb like *dɛ́dɛ́*, 'slowly' (69), a goal argument of a double object constructions (70).

(68) *Àsíbá tò* [***àxì*** ***mɛ̀*** *yì*] ˋ. (Gungbe, Aboh 2005: 157)
Asiba PROG market in go-NR
'Asiba is going to the market.'

(69) *Àsíbá tò* [***dɛ̀dɛ́*** *zɔ̀n*] ˋ.
Asiba PROG slowly walk.PRT
'Asiba is walking slowly.'

(70) *Étɛ́ wɛ̀ à tò* [***Kòfí*** *kpl ɔ́n*] ˋ*?* (Gungbe, Aboh 2009: 12)
What FOC 2SG PROG Kofi teach. PRT
'What are you teaching Kofi?'

A reduplication process of the verb is also a last-resort strategy (71). This means that like the verb excorporation process in Breton, sub-extraction of the verbal root is an available option that obeys the same trigger as a full preverbal XP does. Moreover, as in Breton, the presence of a preverbal functional head, the prospective marker *ná*, satisfies LEIT as illustrated in (72). When the numeration conforms to LEIT in this way, no fronting operation is required and the sentence is licit.

17. In Aboh's terms, FP which embeds the AspP and VP is a predicate, and [spec AspP] functions as the subject of that predicate. He labels the preverbal position the 'subject position' (Aboh 2005), but the term is merely induced by his analysis that preverbal movement is EPP-triggered. Aboh (2009) clearly shows that no subject ever stops in AspP where it would fail to receive Case. The Tense marker, when realized, is the [+future] morpheme *ná*. It distributes Direct Case and is located higher in the structure (Aboh 2005: Example 11). The fully developed structure can be found in Aboh and Smith this volume.

(71) a. *Étɛ́ wɛ̀ Àsíbá wá*
what FOC Asiba come
[t_{wh} ***ɖùɖù***] *gbé?* (Gungbe, Aboh 2009: 14–15)
eat.eat PRT
'What did Asiba come to eat (it)?'

b. *Kòfí ná ná tò* [***ɖùɖù-i***] `. (Gungbe, Aboh 2005: 158)
Kofi FUT HAB PROG eat.eat-3SG NR
'Kofi will be habitually eating it.'

(72) *Kòfí ná nɔ̀ tò* [***ná*** *ɖù-i*] `. (Gungbe, Aboh 2005: 158)
Kofi FUT HAB PROG PROSP eat-3SG NR
'Kofi will be habitually about to eat it.'

Contrary to the generalization that I propose above, Aboh (2005) and Aboh & Smith (this volume) assume that neither the reduplicated verb nor the prospective marker fill in the preverbal gap itself. They propose instead that both heads license a null expletive *via* the Spec/head relation. The problem I can see with an expletive hypothesis is that a phonologically null placeholder would easily vanish under XP fronting. On the contrary, as we will see in the next section, *ná* in (72) blocks any further XP movement or reduplication process.

6.1 Last-resort

As both the XP object and the prospective *ná* are imposed by the numeration, they can both appear preverbally (73). In contrast, preverbal movement for LEIT satisfaction is a last-resort operation. As such, any independent satisfaction of LEIT renders it ungrammatical. Consequently, the prospective aspect marker blocks reduplication in all contexts (74) (see also Aboh 2005: 158–159).

(73) *Dáwè lɔ̀ tò* [***kɛ̀kɛ́*** ***nà*** *xɔ́*] `. (Gungbe, Aboh 2005: 143)
man DET PROG bicycle PROSP buy-NR
'The man is about to buy a bicycle.'

(74) a. *Jíkù tò* ***ná*** (**jì*)*jàn* `. (Gungbe, Aboh 2009: 13)
rain PROG PROSP fall.PRT
'It is just about to rain.'

b. *Súrù tò* ***ná*** (**sì*)*sà ɛ̀ ná mìn* `.
Suru PROG PROSP sell 3SG PREP me.PRT
'Suru is just about to sell it for/to me.'

c. *Étɛ́$_i$ wɛ̀ Súrù tò* ***ná*** (**sì*)*sà* t_i *ná mìn* `.*?*
what FOC Suru PROG PROSP sell PREP me. PRT
'What is Suru just about to sell for/to me?'

Adverb movement in itself is not banned, as illustrated by the extraposed adverb *dɛ́dɛ́* 'slowly' in (75). However, preverbal adverb fronting is ungrammatical

with either reduplication (77), PP fronting (78), or the prospective marker *ná* (75), (76).

(75) *Étɛ́ wɛ̀ Àsíbá wá* (***??dɛ̀dɛ́***) ***ná*** (****dɛ̀dɛ́***) ***ɖù*** (***?dɛ̀dɛ́***)
What FOC Asiba come slowly PROSP slowly eat slowly
gbé (*,**dɛ̀dɛ́**)?*
PRT slowly
'What did Asiba come to be about to eat (slowly)?'

(76) *Kòfí ná nɔ̀ tò* (****dɛ̀dɛ́***) ***ná*** (****dɛ̀dɛ́***) *ɖù-ì* (***dɛ̀dɛ́***)) `.
Kofi FUT HAB PROG slowly PROSP slowly eat-3SG slowly NR
'Kofi will be habitually about to eat it (slowly).'

(77) *Étɛ́ wɛ̀ Àsíbá wá* (****dɛ̀dɛ́***) ***ɖùɖù***
What FOC Asiba come slowly eat.eat
(***?dɛ̀dɛ***) *gbé?* (Gungbe, Aboh p.c.)
slowly PRT
'What did Asiba come to eat (it) (slowly)?'

(78) *Àsíbá tò* (****dɛ̀dɛ́***) ***àxì*** ***mɛ̀*** (****dɛ̀dɛ́***) *yì* (***dɛ̀dɛ́***) `.
Asiba PROG slowly market in slowly go- slowly NR
'Asiba is (slowly) going to the market.'

Not all elements are eligible targets for LEIT fronting. As is the case with Icelandic Stylistic Fronting paradigms, and in Breton as well, phonologically null elements seem invisible to this operation (Holmberg 2000; Jouitteau 2005, 2010). Traces or intermediate copies also are unavailable targets. We can deduce likewise that A-bar traces of object extraction are invisible for LEIT, because they never block further LEIT effects. The A-trace of the subject also never satisfies LEIT by accident, on its way to SpecTP. Aboh (2009) proposes that EPP positions are 'frozen' in the sense of Rizzi and Shlonsky (2007). As such, "the extracted constituent cannot check the EPP feature under Asp on its way to the left periphery because Spec, AspP is a freezing position." If I am right about LEIT effects being at the Late Syntax/Morphology Interface, this just follows from the invisibility of traces/copies in this component. The subject itself is never LEIT-attracted because it needs Case higher up in the sentence (Aboh 2009: 13).

6.2 Hierarchical scale

The ultralocality of LEIT last-resort effects suggests a hierarchical scale as illustrated in (79) for LEIT satisfying strategies.

(79) Object fronting > reduplication > reduplicated adverb fronting / (except non reduplicated elements)

Object fronting is always chosen over reduplication. Speakers vary as to allowing for verb reduplication to take place with a postverbal object (Aboh 2005: Footnote 12). An object also fronts over the adverb (80). We also find data showing that reduplication can take place over the fronting of some PPs (81) (to be compared with (68)).

(80) *Kòfí tò lésì ɖù* ***dèdé***. (Gungbe, Aboh 2005: 147)
**Kofi tò dèdè ɖù lésì*
'Kofi is eating rice slowly.'

(81) a. *Súrù tò* [***sìsà*** *è ná mì*] ˋ. (Gungbe, Aboh 2009: 12)
Suru PROG sell.sell 3SG PREP me.PRT
'Suru is selling it for/to me.'

b. *Été*$_i$ *wè Súrù tò* [***sìsà*** t_i *ná mì*] ˋ*.?*
what FOC Suru PROG sell.sell PREP me.PRT
'What is Suru selling for/to me?'

In Gungbe, it is likely that the reduplication option takes place before the fronting of some postverbal elements, hence creating unavailable postverbal targets. A sharp contrast between the Breton and Icelandic paradigms emerges: any closest postverbal element is an eligible target for preverbal last-resort movement in Icelandic or Breton. However, Gungbe has a class of elements that can show up postverbally, but still are not selected for LEIT fronting. For example, low non-reduplicated adverbs like *bléún*, 'quickly' can appear post-verbally but not fronted to satisfy LEIT.

(82) a. *Àsíbá tò* (****bléún***) *lésì ɖù* (***bléún***). (Gungbe, Aboh p.c)

b. *Àsíbá tò lésì* (*bléún) *ná* (*bléún) *ɖù* (*bléún*)
'Asiba is (about to) eat rice *quickly*.'

The respective postverbal order of indirect object, non-reduplicated adverb and adverbial PPs is [IO-PP-ADV] or [IO-ADV-PP] (83). The assumption that ultra-local movement applies as a last resort predicts that in (84), the indirect object, and only the indirect object, being the closest target for fronting, will front. But it doesn't (84).

(83) a. *Métrù lɔ́ tò wémà lɔ́* ***ná*** *zé* [***xlán ví lɛ́***] [*tò flɛ̀n*] [*hàɖòkpólɔ́*]ˊ.
teacher DET PROG book DET PROSP take P child PL P there immediately

b. *Métrù lɔ́ tò wémà lɔ́* ***ná*** *zé* [*xlán ví lɛ́ hàɖòkpólɔ́*] [*tò flɛ̀n*].
Immediately P there
'The teacher was about to immediately send the book to the children right there.'

(84) a. **Métrù lɔ́ tò **xlán ví lɛ́** zé è _ tò*
teacher DET PROG P child PL take 3SG P
flɛ̀n hàɖòkpólɔ́.
there immediately

b. **Métrù lɔ́ tò **tò flɛ́n** zé è xlán ví*
teacher DET PROG P there take 3SG P child
lɛ _ hàɖòkpólɔ́.
PL immediately

c. **Métrù lɔ́ tò hàɖòkpólɔ́ zé è xlán ví lɛ́ _*
teacher DET PROG immediately take 3SG P child PL
tò flɛ̀n.
P there
'The teacher was sending it immediately to the children right there.'

In view of this resistance to fronting, it is rather unclear what postverbal reduplicated adverbs have that make them eligible targets for LEIT fronting over verb reduplication. I also note, following Aboh, that VP and *v*P are never eligible targets either, and leave these mysteries for further investigation. For the purposes of this article, it is sufficient that I remark that in (79), like in the Breton cases, obligatory exponence is satisfied by mixed strategies that vary from XP-fronting to morphological doubling operations, characteristic of LEIT effects.

The Gungbe syntactic environment for LEIT effects is also interesting because of its differences from the Breton context: first, the obligatorily filled position is not sentence initial. Gungbe LEIT effects arguably arise at the left edge of an aspectual verb structure. The obligatorily filled gap, as is the case in Breton, can be preverbal, but this parallel is not clear cut: LEIT effects in Breton are relative to the head that bears both tense and subject agreement markers. In Gungbe, no V-to-I movement takes place and the verb lands lower, in an internal IP position (V-to-AsP).

7. Conclusions

Breton analytic structures obey LEIT

The choice between synthetic structures and analytic structures in Breton depends on the need for an expletive insertion trigger to be satisfied. This *Late Expletive Insertion Trigger* that leads to verb-second orders is responsible for all sorts of last-resort strategies, one of them being excorporation of the verbal root, and the consequent pronunciation of the lexical content of the verb in the preverbal area. The default spell-out of the excorporated verb is an infinitive, with the morphological properties attached to all verbs in the pre-tense area. The mysterious restriction of analytic structures to the relative […V-Aux…] order follows.

The tensed auxiliary is either realized as a dummy 'do' auxiliary, or, for an idiosyncratic list of verbs, as the tensed reiteration of the excorporated verb itself (doubling).

Breton analytic structures result from a morphological operation
The very existence of doubling structures is one of the arguments that excorporation happens in a post-syntactic morphological component. The list of doubling verbs is an arbitrary set and does not form a homogeneous syntactic class or classes: nothing distinguishes doubling verbs from non-doubling ones at the syntactic level. Non-doubling verbs resort uniformly to the AC in 'do'.

It follows that no scenario involing doubling in syntax is possible for Breton. Theoretically, the hypothesis that doubling arises in a post-syntactic morphological component implies strongly that it exists cross-linguistically, independently of either the copy theory of movement or multidominance.

The rule leading to V2 orders operates in a morphophonological module
On the one hand, we know of obligatory exponence cases in morphology (cf. Basque ergative displacement, Yimas morphological EPP), and on the other hand, we know of second position phenomena at the level of the sentence, for example V2 languages (Old Irish, Middle Welsh, Cornic, Breton, Medieval dialects of Northern Italian, Old French, Old Spanish, Rhaetoromance, Sorbian, Estonian, Kashmiri, Karitiana, Hebrew, Papago and almost all Germanic languages), but also clitic-second languages (Warlpiri, Tagalog, most Slavic languages, etc.). The present analysis of the Breton analytic structures and Gungbe reduplication structures leads to the major conclusion that mixed systems exist, in which obligatory exponence operates at a level where a subject or an object with a potentially long relative embedded structure 'counts' the same as the excorporated subcomponent of a head for word order. This of course opens interesting perspectives for a unified understanding of second position effects across languages. Among other things, the cross-linguistic violations of the Head Movement Constraint in these languages (Stylistic Fronting, Long Head Movement, verb fronting, etc.) would follow if word order is indeed finalized in a post-syntactic component.

Information Packaging and iconicity
The Breton paradigm of analytic tenses is of great interest for the study of the limits of iconicity in doubling. At first sight, In modern Breton varieties, verb-doubling structures obtain some sort of salience effect on the verb. Doubling thus intuitively seems to iconically obtain 'more of the same', here a salience effect on the doubled item. However, the Breton data presents two major challenges for an

iconicity theory of doubling: variation and idiosyncrasy. First, iconicity cannot explain the variation of the salience effect in either synchrony or diachrony. In modern Breton, a rare doubling case like *lenn*, 'to read', induces a clear contrastive focus reading, whereas the commonly doubled verb *gouzout*, 'to know', can have a rather mild salience effect, not restricted to a contrastive reading. It is more likely that salience results from a new/known contrast. Likewise, the analytic construction with 'do' is reported in Breton Grammars, to have been used for a salience effect on the verb for varieties at the beginning of the 20th century. This salience effect has completely disappeared from the modern varieties, suggesting a probable erosion of the effect over time. My analysis is that *LEIT* last-resort strategies are invisible to the grammar because they arise in a post-syntactic component. Indeed, LEIT operations never impact the truth-conditions of the sentence. My proposal implies that some discourse effects are interpreted in a pragmatic component, distinct from semantic interpretation proper. Finally, the idiosyncratic restriction of Breton verb-doubling presents the greatest challenge for an iconicity scenario: an iconicity dimension of doubling should indeed trigger full productivity, contrary to facts. I conclude that if the iconic dimension of doubling at the sentence level plays a role in how one language creates strategies to express salience, as a sort of free tool available for a speaker's creativity, the iconic dimension disappears as soon as the construction is installed in the language. In that sense, the iconic dimension is fully disconnected from the language's grammar.

References

Abels, Klaus. 2001. The predicate cleft construction in Russian. In *Formal Approaches to Slavic Linguistics,* Steven Franks, Tracy Holloway King & Michael Yadroff (eds), 1–19. Ann Arbor MI: Michigan Slavic Publications.

Aboh, Enoch. 2005. Object-shift, verb-movement and verb reduplication. In *The Oxford Handbook in Comparative Syntax*, Ch. 4, Guglielmo Cinque & Richard S. Kayne (eds), Oxford: OUP.

Aboh, Enoch. 2009. Clause structure and verb series. *Linguistic Inquiry* 40(1): 1–33.

Aboh, Enoch & Dyakonova, Marina. 2008. Predicate doubling and parallel chains. *Lingua* 119: 1035–1065.

ARBRES, research website on the syntax of Breton dialects: ⟨http://makino.linguist.jussieu.fr/ARBRES/index.php/Accueil⟩

Al Lay, Fañch. 1925. *Bilzig*. Quimper: Buhez Breiz.

Ar C'hoad, Gwilh [= Guillaume Le Coat] 1893, *Testamant nevez, Lizher Jakez 3*, Société Biblique Trinitaire pour la Bretagne. Manuscrit révisé, mis en langue bretonne moderne par Luc Bernicot, en 2004 (Société Biblique d'Anjou éd.). version KOAD 21.

Ar C'hog, Y.V. 1983. Notennoù gramadeg a-ziwar skridoù Ivon Krog. *Hor Yezh* 148–149: 3–14.

Barzig, Ernest, *Koatilouri.* ⟨http://embann.an.hirwaz.online.fr/⟩
Bijer, Yann. 2007. *Avel gornôg.* Brest: Al Liamm.
Borsley, Robert. D. & Kathol, Andreas. 2000. Breton as a V2 language. *Linguistics* 38: 665–710.
Borsley, Robert. D, Rivero, Maria Luisa & Stephens, Janig. 1996. Long head movement in Breton. In *The Syntax of the Celtic Languages: A Comparative Perspective*, Robert D. Borsley & Ian Roberts (eds), 53–74. Cambridge: CUP.
Cable, Seth. 2003. The Yiddish predicate cleft: A base-generation analysis. Ms, MIT.
Chalm, Eugène. 2008. *La Grammaire bretonne pour tous*. An Alac'h embannadurioù.
Cheveau, Loig. 2007. Approche phonologique, morphologique et syntaxique du breton du grand Lorient, Ph.D. dissertation, MIT.
Chomsky, Noam. 1955. *The Logical Structure of Linguistic Theory*. Ms, MIT/Harvard University. (Partly published in 1975, New York NY: Plenum).
Chomsky, Noam. 1973. Conditions on transformations. In *A Festschrift for Morris Halle*. Stephen R. Anderson & Paul Kiparsky (eds), 232–286. New York NY: Holt, Rinehart and Winston.
Chomsky, Noam. 1993. A minimalist program for linguistic theory. *The View from Building 20. Essays in Linguistics in honor of Sylvain Bromberger,* Kenneth Hale & Samuel J. Keyser (eds), 1–52. Cambridge MA: The MIT Press.
Denez, Per. 1993. rakskrid Kervella, F. 1993. *Skridoù Frañcez Kervella, dastumet ha kinniget gant Per Denez*. Brest: Al Liamm.
Dupuy, Yann Fulub. 2007. *Ar gariadez vaen.* An Alarc'h Embannadurioù.
Ernault, Emile. 1890. Etudes bretonnes, VII. Sur l'analogie dans la conjugaison. *Revue Celtique* XIL: 458–487.
Ernault, Emile. 1888. Etudes bretonnes. VI. La conjugaison personnelle et le verbe avoir. *Revue Celtique* IX: 245–266.
Favereau, Francis. 1997. *Grammaire du breton contemporain*. Morlaix: Skol Vreizh.
Fleuriot, Léon. 2001. Skouerioù emdroadurioù e morfologiezh hag ereadur ar brezhoneg, class Léon Fleuriot translated by Herve Bihan in *Hor Yezh* 228.
Foley, William A. 1991. *The Yimas language of New Guinea*. Standford CA: Stanford University Press.
Gouget, Jules. 2008. La réduplication syntaxique et la structure du groupe verbal en mandarin, en anglais et en d'autres langues. Manuscrit de thèse, Paris 7.
Grégoire de Rostrenen, 1795. *Grammaire française-celtique ou française-bretonne,* An III; nouvelle édition. Brest: Alain Le Fournier.
Gros, Jules. 1984. *Le trésor du breton parlé III. Le style populaire*. Brest: Emgleo Breiz–Nevez: Brud.
Harbour, Daniel. 2007. Against PersonP. *Syntax* 10(3): 223–242.
Harbour, Daniel. 2008. Klivaj predik, or predicate clefts in Haitian. *Lingua* 118: 853–871.
Hemon, Roparzh. 2000. *Yezhadur istorel ar brezhoneg*. Translation A. Dipode. *Hor Yezh* 227.
Holmberg, Anders. 2000. Scandinavian stylistic fronting: How any category can become an expletive. *Linguistic Inquiry* 31(3): 445–483.
Holmberg, Anders & Nikanne, Urpo. 2002. Expletives, subjects and topics in Finnish. In *Subjects, Expletives and the EPP*, Peter Svenonius (ed.), 71–105. Oxford: OUP.
Etxepare, Ricardo & Ortiz de Urbina, Jon. 2003. Event focalization. In *A Grammar of Basque,* Jose Ignacio Hualde & Jon Ortiz de Urbina (eds), 459–516. Berlin: Mouton de Gruyter.
Jouitteau, Mélanie. 2005[2010]. *La syntaxe comparée du Breton: Une enquête sur la périphérie gauche de la phrase bretonne.* Thesis published by Éditions universitaires européennes.

Jouitteau, Mélanie. 2007. The Brythonic reconciliation: From V1 to generalized V2. *Linguistic Variation Yearbook* 7: 163–200.

Jouitteau, Mélanie. 2009. A typology of V2 with regard to V1 and second position phenomena: An introduction to the V1/V2 volume. *Lingua* 120(2): 197–209 (Special issue: *Verb-First, Verb-Second*.

Jouitteau, Mélanie. 2011. Doing the work of free choice determiners without 'any'. Presentation at *Workshop on Languages With*(*out*) *Articles*, Paris, March 3–4.

Jouitteau, Mélanie & Rezac, Milan. 2006. Deriving the complementarity effect: Relativized minimality in Breton agreement. *Lingua* 116: 1915–1945. (Special issue: Celtic Languages).

Jouitteau, Mélanie & Rezac, Milan. 2008. From mihi est to have across Breton dialects. In *Proceedings of the 34th Incontro di Grammatica Generativa*, Paola Benincà, Federico Damonte & Nicoletta Penello (eds). *Rivista di Grammatica Generativa* 32: 161–178.

Jouitteau, Mélanie & Rezac, Milan. 2009. Le verbe 'avoir' à travers les dialectes du breton. *La Bretagne Linguistique* 14. Brest: CRBC.

Kandybowicz, Jason. 2008. *The Grammar of Repetition. Nupe Grammar at the Syntax-Phonology Interface* [Linguistik Aktuell/Linguistics Today 136]. Amsterdam: John Benjamins.

Kandybowicz, Jason. 2006a. Conditions on Multiple Copy Spell-Out and the Syntax-Phonology Interface. Ph.D. dissertation, UCLA.

Kandybowicz, Jason. 2006b. On fusion and multiple copy spell-out: The case of verbal repetition. In *The Copy Theory of Movement* [Linguistik Aktuell/Linguistics Today 107], Norbert Corver & Jairo Nunes (eds), 119–150. Amsterdam: John Benjamins.

Kervella, Frañsez. 1995 1947. *Yezhadur bras ar brezhoneg*, 1947 éd. Skridoù Breizh, La Baule; 1995 (éd.), Al Liamm, Brest.

Konan, Jakez. 1981. *Ur marc'hadour a Vontroulez*. Brest: Al Liamm.

Krog, Ivon. 1924. *Ur zac'had marvailhou*. Quimper: Ur Buhez Breiz.

Inizan, Lan. 1879 1902. *Emgann Kergidu*, new edn. Brest: Lefournier.

Landau, Ilan. 2007. Partial VP-fronting. *Syntax* 10(2): 127–164.

Lasnik, Howard. 2001. A note on the EPP. *Linguistic Inquiry* 3(2): 2.

Le Bozec. 1933. Le français par le breton, méthode bilingue, cours préparatoire. Guingamp: Thomas edition.

Leclerc, Louis. 1986. *Grammaire bretonne du dialecte de Tréguier*. Nevez: Brud. (Réédition de 1908 et 1911, Saint-Brieuc: Prud'homme).

Le Roux, Pierre. 1924–1953. *Atlas linguistique de la Basse-Bretagne*, 6 vols. grouping 100 maps each, Rennes/Paris. Reprinted 1977, Brest: Éditions Armoricaines; last edition Nevez: Brud.

Le Roux, Pierre. 1957. *Le Verbe breton* (*morphologie, syntaxe*). Rennes: Librairie Plihon/Paris: Librairie Champion.

Maï-Ewen, 2004. *Hanvezhioù*. Laz: Keit Vimp Bev.

Miossec, Yves. 1981. *Dreist ar mor bras*. Nevez: Brud.

Nunes, Jairo. 2004. *Linearization of Chains and Sideward Movement*. Cambridge MA: The MIT Press.

Phillips, Colin. 1994. On the nature of polysynthetic inflection. In *Proceedings of CONSOLE 2*. Leiden: SOLE.

Ploneis, Jean-Marie. 1983. Au carrefour des dialectes bretons – Le parler de Berrien: Essai de description phonématique et morphologique. Paris: Société d'études linguistiques et anthropologiques de France (SELAF).

Quéré, Jean. 1906. *Sarmoniou an Aotrou Quere*, Christophe Jézégou (ed.), ⟨http://www.gutenberg.org/files/23685/23685-8.txt⟩

Red an Amzer 11.01.2009. France 3 programme text. ⟨http://ouest.france3.fr/emissions/2367205-fr.php⟩ (unavailable).

Rezac, Milan. 2008. Building and interpreting a non-thematic A-position: A-resumption in English and Breton. In *Resumptive Pronouns at the Interfaces* [Language Faculty and Beyond 5], Alain Rouveret (ed.), Amsterdam: John Benjamins.

Schafer, Robin. 1997. Long head movement and information packaging in Breton. *Canadian Journal of Linguistics* 42(1–2): 169–203.

Skragn, Jan-Mari. 2002. *Ma buhez e Kêr ar Vinaoued*. Brest: Emgleo Breiz.

Stephens, Janig. 1982. Word Order in Breton. Ph.D. dissertation, School of Oriental and African Studies, University of London.

Tamburri Watt, Linda. 2003. What marks Squamish focus? In *Actes: Interfaces Prosodiques*, Amina Mettouchi & Gaëlle Ferré (eds), Nantes. ⟨http://www.lling.fr/ip2003/actes-ip2003.pdf⟩

Taraldsen, Tarald. 2002. The 'Que/Qui' alternation and the distribution of expletives. In *Subjects, Expletives, and the EPP*, Peter Svenonius (ed.), Oxford: OUP.

Trépos, Pierre. 2001 [1968, 1980, 1996]. *Grammaire bretonne*. Brest: Brud Nevez. (1968 édition Simon, Rennes; 1980 édition Ouest France, Rennes; 1996, 2001 édition Brud Nevez, Brest).

Troude, Amable-Emmanuel. 1886. *Nouveau dictionnaire pratique Français et Breton du dialecte de Leon*, 3 (éd.), Brest: Lefournier.

Vallduvi, Enric. 1995. Structural properties of information packaging in Catalan. In *Discourse Configurational Languages*, É. Katalin Kiss (ed.), 122–152. Oxford: OUP.

Vicente, Luis. 2007. *The Syntax of Heads and Phrases. A Study of Verb-*(*phrase*) *Fronting*. Utrecht: LOT.

Zuazo, Koldo. 1998. Euskalkiak gaur. *Fontes Linguae Vasconum* 30: 191–233.