French Denominal Verbs: from countability to aspect

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1   Aim of the study

This paper focuses on French denominal verbs (henceforth dNVs) with the affixes *a-* (*aborder* 'approach, address' < *bord* 'edge'), *dé-* (*défricher* 'clear' < *friche* 'wasteland'), *é-* (*écrémer* 'skim' < *crème* 'cream'), *en/em-* (*embouteiller* 'bottle' < *bouteille* 'bottle'), *-ifier* (*glorifier* 'glorify' < *gloire* 'glory'), and *-iser* (*étatiser* 'nationalise' < *état* 'state'). Our aim is to empirically analyze the mass/count properties of the base nouns (bNs) and the aspectual properties of the derived verbs. To our knowledge, there has been no work on that topic in French. In English, most denominal verbs are converted verbs (*saddle, kennel*), and they have been studied in quite some depth (Clark and Clark 1979, Hale and Keyser 1993, Plag 1999, Harley 1999 and others). French has also quite a few converted denominal verbs (*tapisser* 'cover', *saler* 'salt'), which have been studied in detail (Hirschbühler & Labelle 2008, Tribout 2011 and references therein). As in English, most studies focus on the Locatum/Location distinction and on manner incorporation. Note that French *-ifier* and *-iser* denominal verbs (Willems 1979, Dal & Namer 2000, Sagot & Fort 2009, Namer 2013) are often studied together with deadjectival verbs.

In her analysis of English converted verbs, Harley (2005) shows that denominal verbs formed from count bNs are telic while those formed from mass bNs are compatible with an atelic interpretation, although they can also be given a telic interpretation (e.g. *butter the bread* can be atelic, because *butter* is mass, or telic if the bread is interpreted as a bounded/count incremental theme) (see also Rimell 2012). Our goal in this paper will be to examine whether this relationship can also be observed in the case of French affixed dNVs. Our hypothesis is that there is a relationship between the mass/count properties of the bNs and the aspectual properties of the dNVs: as Harley (1999: 4) puts it (after Talmy 1978, Bach 1986, among others): "the mass/count distinction in the spatial dimension, as exhibited by things, is analogous to the bounded/unbounded distinction in the temporal dimension, as exhibited by events".

2   Data collection and annotation

The corpus comprises of dNVs listed in the TLFi entries of the affixes *a-, dé-, é-, en/em-, -ifier* and *-iser;* this set was supplemented by verbs identified as denominal in TreeLex (Kupść 2009). A total of 313 verbs have been collected: 48 [*a*-N]$_V$, 40 [*dé*-N]$_V$, 41 [*é*-N]$_V$, 81 [*en/em*-N]$_V$, 26 [N-*ifier*]$_V$, 77 [N-*iser*]$_V$. The semi-automatic retrieval of dNVs was followed by a manual filtering. The lexemes which have been deleted fall in the following categories:

- bases corresponding to proper nouns (*enversailler* 'to put in Versailles' < *Versailles, américaniser*), including lexicalised dNVs (*pasteuriser* 'pasteurize' < *Pasteur*), as the N-*iser* construction can take almost any proper noun as a base;
- dNVs whose use is rare today or belongs to specialised vocabulary (*affruitier, déliter*);
- [N-*aliser*]$_V$ most probably built on an adjectival base (*familiariser* 'familiarize', *finaliser* 'complete', *libéraliser* 'liberalize'). See also Lignon (2010) and Namer (2013) who point out the high number of ambiguous *-iser* lexemes.

The derived verbs have been annotated according to lexical aspect and their corresponding base nouns according to countability.

2.1 Verbal aspect

From an aspectual point of view, verbs have been traditionally described as states (STATE), activities (ACT), accomplishments (ACC) or achievements (ACH) (Vendler 1967). States and activities are atelic, i.e. unbounded situations, while accomplishments and achievements are telic, i.e. bounded situations. For this study, the annotation consisted in a double manual annotation made by two experts followed by manual adjudication. The annotators, who had to choose between four tags corresponding to the four Vendlerian classes, agreed in 80.45% of cases. Tags were given after the usual tests presented in the literature on verb lexical aspect (see Garey 1957, Kenny 1963/[1994], Vendler 1967, Dowty 1979, Rothstein 2004, among others): progressive form; duration complements *in x time* and *for x time*, etc.

State	Activity	Accomplishment	Achievement
11 (3.5%)	38 (12.1%)	112 (35.8%)	152 (48.5%)
Atelic		Telic	
49 (15.6%)		264 (84.4%)	

Table 1. Aspectual properties of the derived verbs

As can be seen, telic verbs are much more frequent than atelic ones: 84.4% vs. 15.6%. Other studies (cf. Balvet et al. 2018) also show that telic verbs are more frequent than atelic ones, but not to such a large extent: 72.4% vs. 27.6%. In our corpus, the achievement class is the most represented lexical aspect for all affixation patterns, then come accomplishments, activities and states.

2.2 Count/mass distinction

The count/mass distinction is primarily a grammatical distinction, yet it does to a certain extent have ontological properties. It is complex and gradable (Joosten 2003, Chierchia 2010, Rothstein 2010, Kleiber 2014, Timotheus & Lauwers 2015 among others). Modification by a numeral is generally taken to be a diagnosis for countability (1), while *un peu de* N 'a little bit of N' is a diagnosis for non-countability in French (2):

(1) *deux fourrages/laits/butanes/mousses
(2) un peu de fourrage/lait/butane/mousse

The two tests have been used for this study. The annotation for the count/mass distinction comprised of two steps: (i), annotation of the bN regardless of the context (in order to take into account cases of polysemy); (ii) annotation of the base N as a base for a deverbal noun.

From a total number of 313 bNs, 227 (72.5%) are count, while 86 (27.5%) are mass nouns. All affixation patterns have more count bNs than mass bNs (always more than 70%), although the [N-*iser*]$_V$ pattern has only 55.8% of count bNs.

3 Analysis

The results obtained from the annotation task verify to a large extent our initial hypothesis, since there is a clear correlation between the aspectual denotation of dNVs and the

countability properties of the corresponding bNs: telic dNVs mostly derive from count bNs, while atelic dNVs mostly derive from mass dNVs. However, as shown in Table 2, these results are clearer for telic dNVs than for atelic dNVs: the former are built on count nouns in 77% of cases, while the latter are built on count nouns in 46% of cases. In other words, the countability/aspect relationship seems stronger in the case of a bounded (count/telic) semantics than in the case of an unbounded (mass/atelic) semantics.

	Telic	Atelic
Count	204 (77%)	23 (46%)
Mass	60 (23%)	26 (54%)
Total	264	49

Table 2. Aspect and countability

According to our hypothesis, based on Harley's, which states that dNVs formed from mass bNs are compatible with both an atelic and a telic interpretation, the only counter-examples found in our results are, strictly speaking, atelic dNVs formed from count bNs. As we will show in depth, most of these 23 cases, should be treated as marginal cases for different reasons: (i) the semantic relation between the dNV and the bN is very weak, as in *s'adonner* (< *don*); (ii) the (count) bN must be interpreted as plural, as in *embrasser* (< *bras*).

Nonetheless, we find some true counter-examples, as *dériver* (< *rive*) or *favoriser* (< *faveur*), although they are very rare and thus cannot be used to deny the strong correlation we have found between aspect and countability. In the case of converted verbs, Rimell (2012: 114) also found some counter-examples of count nouns that allow the formation of atelic verbs, as *braid*. On the other hand, the relationship between the countability of the bN and the aspect of the dNV and type of affix is illustrated by Table 3.

	Telic		Atelic	
	Count	Mass	Count	Mass
a-	32 (84%)	6 (16%)	5 (45%)	5 (55%)
dé-	31 (82%)	7 (18%)	2 (100%)	0 (0%)
é-	29 (85%)	5 (15%)	4 (57%)	3 (43%)
en-	56 (81%)	13 (19%)	6 (50%)	6 (50%)
-ifier	18 (75%)	5 (25%)	1 (33%)	2 (67%)
-iser	38 (61%)	24 (29%)	5 (33%)	10 (67%)
total	204	60	23	26

Table 3. Countability-aspect relationship and affixation pattern

In the case of telic verbs, the four prefixed dNVs show a very similar behavior: they are always built on count nouns in a range between 81% and 85%. Suffixed dNVs are slightly different: they are built on count nouns in a range between 61% (*-iser*) and 75% (*-ifier*). As for atelic verbs, we do not have enough cases of any affix to draw clear conclusions. In any case, there is a difference between prefixed and suffixed dNVs that should be explained.

4   Conclusions and perspectives

The hypothesis presented in the introduction is by and large confirmed by our data: most telic dNVs are built on a count bN and most atelic dNVs are built on a mass bNs – yet some dNVs do not behave this way, as is the case for English converted verbs.

This study is part of a broader line of research dealing with the transmission and inheritance of semantic features across parts of speech. We assume that cross-categorial derivation is an ideal testing ground for the investigation of the semantic and conceptual features of grammatical categories and that it gives us more insight into the ontology of natural language.

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