Morpho-semantics of the French diminutive suffix *-et(te)*

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1 Background

French assigns grammatical gender (**M**asculine or **F**eminine) to nominals and is endowed with a quite productive "diminutive" suffix *-et/-ette*.

(1) a. maison$_F$ → maisonn**ette**$_F$
'house' → 'small (cute) house'

b. balcon$_M$ → balconn**et**$_M$
'balcony' → 'small (cute) balcony'

Because M-bases are often affixed with the M-variant of the diminutive (*-et*) and F-bases with the F-variant (*-ette*), traditional grammars implicitly assumed that *-et* and *-ette* were allomorphs dependent on the gender features of the base, and were linked to the same diminutive semantics. Milner (1989) however observed that *-ette* may attach to M-bases and *-et* to F-bases – a phenomenon we dub ***gender-mismatch*** – leading to a looser semantic relationship between the base and the derived form.

(2) char$_M$ ⟶ char**ette**$_F$
char$_M$ *→ char**et**$_M$
'chariot' ⟶ 'cart'

(3) a. boule$_F$ ⟶ boul**et**$_M$
'ball' ⟶ 'cannonball'

b. boule$_F$ ⟶ boul**ette**$_F$
'ball' ⟶ 'small ball'

These pairs would be unexpected if the suffix simply agreed in gender with the base: rather, it seems that in at least certain cases, the suffix introduces its own gender (a phenomenon documented in other languages, cf. Kramer 2015).

2 Contribution

In this work, we bring support to a refinement of Milner's observation *via* a more systematic analysis of the French lexicon. More specifically, we argue that frequency differences between (i) *-et* and *-ette* suffixation (ii) M-to-F *vs* F-to-M gender-mismatches (iii) the number of "true" diminutives in the *-et* and *-ette* data (w/o a mismatch) can be explained if we assume that (1) *-ette* is ambiguous between an allomorph of the (non-purely diminutive) suffix *-et* and another very productive and purely diminutive suffix *-ette*; (2) gender-mismatching forms results from a root-level operation, unlike most gender-matching ones.

2.1 Data analysis.

From a list of French words (346,200 entries), we extracted and filtered nouns ending in *-et* and *-ette*. Filtering involved (1) finding the base from which the word is derived using online resources (Larousse online dictionary, Wiktionary) and introspection; (2) verifying that the base is a nominal. The dataset was supplemented by pairs generated *via* pure introspection (not all of them being documented in dictionaries) – for a total of 262 nouns in *-ette* and 146

nouns in *-et*. Further statistics are compiled in Tab. 1 below. In this table, the green, blue and read cells refer to gender-preserving suffixation, F-to-M mismatches and M-to-F mismatches respectively. The single numbers in parentheses in columns 2 and 3 correspond to the number of true diminutives, for each count. Finally, for bases with both a *-ette* and a *-et* form (column 4), the numbers in parentheses follow the format (# true *-ette* diminutives/ # true *-et* diminutives).

Three observations can be extracted from these lexicographic data. **The first observation is that *-ette* suffixation is around 1.8 times more frequent than *-et* suffixation.** Generating *-ette*-forms by introspection also appeared easier, suggesting that *-ette* is overall more productive than *-et*.

Derived → Base ↓	*-ette* only	*-et* only	Both	Total
Feminine	186 (138)	15 (5)	32 (23/7)	233
Masculine	34 (12)	89 (54)	10 (3/6)	133
Total	220	104	42	366

Table 1: Dataset statistics.

The second observation is that the proportion of gender-mismatches is higher for M-bases (M-to-F mismatch) than F-bases (F-to-M mismatch): $\hat{\mathbb{P}}$[*-et*-form|F-base] $= {}^{47}/_{233} \sim 20\% <$ $\hat{\mathbb{P}}$[*-ette*-form|M-base] $= {}^{44}/_{133} \sim 33\%$ ($p = .006$). The amplitude of this discrepancy is approximately the same as the one recorded for *-et/-ette* forms in general (33/20∼1.8). It also seems that F-to-M mismatching forms are very likely to cooccur with a non-mismatching form derived from the same base (${}^{32}/_{32+15} \sim 68\%$); while the opposite seems to hold for M-to-F forms (only ${}^{10}/_{10+34} \sim 22\%$ of them appear in "triplets").

The third and last observation is that 70% **of the non gender-mismatching forms appear to have a true diminutive semantics; while only** 30% **of the mismatching forms do**, in line with Milner's observation about the semantic effects of gender-mismatch. **However, a gender asymmetry arises in both "match" and "mismatch" cases**: non-mismatching F-forms in *-ette* are more likely to be diminutive than non-mismatching forms in *-et*: $\hat{\mathbb{P}}$[DIM|F-base-*ette*] $= {}^{138+23}/_{186+32} \sim 74\% >$ $\hat{\mathbb{P}}$[DIM|M-base-*et*] $= {}^{54+6}/_{89+10} \sim 60\%$ ($p = .02$). The same pattern holds for mismatching forms, although non-significant, potentially due to small sample sizes: $\hat{\mathbb{P}}$[DIM|M-base-*ette*] $= {}^{12+3}/_{34+10} \sim 34\% >$ $\hat{\mathbb{P}}$[DIM|F-base-*et*] $= {}^{5+7}/_{15+32} \sim 26\%$.

In brief, *-ette* appears more productive than *-et* and also more likely to lead to a diminutive semantics, and interestingly those two facts somewhat extend to mismatching forms (which were previously thought to be plain lexicalizations). We take this as evidence that *-ette* is (sometimes, at least) distinct from the allomorph of *-et*.

2.2 Formal analysis.

Contra previous accounts, we claim that ***-ette* is ambiguous between an allomorph of *-et* and a separate suffix *-ette*, which we assume is the pure French diminutive suffix DIM**, indicating relative smallness, cuteness, or affection towards the object. We take that *-et* has a looser semantics, which only involves a similarity with the base w.r.t. a salient feature, usually shape (so we write *-et* = SHAPE for brevity). This had been already noted by Milner (1989) and Delhay (1999), but mostly for gender-mismatch cases. Yet, pairs like those in (4) and (5) exemplify the same kind of loose semantic relationship in matching-gender cases, *for both genders* – in line with our ambiguity hypothesis. *-et* being the realization of SHAPE and *-ette* being that of either SHAPE + AGREE or DIM also explains why *-ette* is more frequent than *-et* across the board, and more likely to yield a diminutive semantics.

(4) a. oeil$_M$ → oeill**et**$_M$
'eye' → 'eyelet'

b. arc$_M$ → arch**et**$_M$
'bow (archery)' → 'bow (music)'

(5) a. barre$_F$ → barr**ette**$_F$ ‘bar (construction)’ → ‘hair-clip’

b. coquille$_F$ → coquill**ette**$_F$ ‘shell’ → ‘elbow pasta’

Our second claim, which builds on the Lexical Decomposition hypothesis (Marantz 1997, 2001; Arad, 2003, 2005), is that **gender-mismatching forms result from a merger of the DIM/SHAPE suffix at the root-level, unlike gender-matching forms, whose suffix is merged above the nominalizing-head *n* (which we assume hosts gender features)**. In the “mismatch” case, the suffix *is* the categorizing head and therefore imposes its own gender on the root; in the “match” case, the suffix follows (and agrees with) the gender already introduced by *n*. Following Arad (2003), we also argue that the root-level derivation generating gender-mismatching forms introduces additional semantic noise, due to the uncategorized root having an underspecified meaning. This explains why gender-mismatching forms are less likely to be diminutive, *while still exhibiting a gender-related asymmetry* (M-to-F *vs* F-to-M). In particular, we predict M-to-F forms in *-ette* to exhibit a diminutive semantics (contributed by *-ette*, which is unambiguously DIM in that case), but not on the “right” entity (due to root-underspecification). This might be the case for the pairs in (6) below.

(6) a. cigare$_M$ → cigar**ette**$_F$ ‘cigar’ → ‘cigarette’

b. disque$_M$ → disqu**ette**$_F$ ‘CD/hard disk’ → ‘floppy disk’

3 Conclusion, and a remaining puzzle

We argued that the difference in productivity and transparency between *-ette* and *-et* was due to *-ette* being ambiguous between an allomorph of *-et* (not purely diminutive) and DIM. We showed the discrepancy was modulated by gender-mismatches, which we argued were the result of root-level derivation and therefore linked to extra semantic noise. The full set of predictions is summarized in Tab. 2.

Crucially, our account provided a morphosyntactic explanation as to why gender-mismatches correlate with some form of *semantic* mismatch. Previous accounts positing lexicalization did not really address this issue.

Base	Suffix	Level	Form	Semantics
M	SHAPE	1/2	*-et*	loose on (noisy) root
	DIM	1	*-ette*	dim. on noisy root
F	SHAPE	1	*-et*	loose on noisy root
	SHAPE + AGR	2	*-ette*	loose on exact root
	DIM	1/2		dim. on (noisy) root

Table 2: Summary of the predictions. ‘1’ = root-level derivation; ‘2’ = above *n*

A remaining puzzle is the following: why are 60/99 M-forms in *-et* diminutive, given that we predict the more general SHAPE relationship to hold in that case? We think this may be due to some form of morphological reanalysis targeting a specific subset of the *-et*-forms. Indeed, a DIM-meaning is more likely to arise for bases ending in *in/on/eau* (38/41), which already have a fossilized diminutive flavor:[1] Such endings were also the preferred targets for applying *-et* productively. This suggests that they were perhaps re-analyzed as proper morphemes (contributing the DIM semantics) by the action of *-et* suffixation.

[1]We use this denomination because most of the nominals from the dataset with such endings (*e.g. cochon*, ‘pig’, *champignon*, ‘mushroom’) were morphologically simplex; yet, the same endings are common in proper names (*Antoine* → *Antonin*; *Marie* → *Marion*; *Boucher* → *Bouchereau*...) and appear consistently diminutive.

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