The lexicon beyond lexemes

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1   Introduction

This submission aims to clarify the relationship between the lexicon and the concept of lexical entry on the one hand, and the latter and lexeme-formation morphology (i.e. derivation or compounding) on the other. It is argued that (i) the notion of lexical item/entry must be distinguished from that of lexeme; (ii) lexical entries are not entities relevant for morphology; (iii) the fact that lexical entries include both lexemes and polylexematic units does not undermine the argument that derivational morphology is lexeme-based.

2   Statement 1

Two units which share the same inflectional paradigm but denote distinct meanings must be be considered distinct lexemes. An example is provided by the French nouns FILLE$_1$ 'girl' and FILLE$_2$ 'daughter'. The fact that their meaning is different can be ascertained on the basis of the contrasts shown in examples (1)-(3). Bonami & Crysmann (2018) capture the differences in question, in an HPSG framework, using features LID and PID. The feature LID (LEXEME IDENTIFIER) identifies the lexical unit that is the head at the phrase level, and its value corresponds to the main predicate associated with the lexeme (Sag, 2012). The feature PID (PARADIGM IDENTIFIER), on the other hand, specifies the inflectional paradigm that the lexeme in question instantiates. In the present case, both FILLE$_1$ and FILLE$_2$ follow the same pattern of inflection (same PID) but carry two distinct meanings and, thereby, constitute two distinct lexemes.

(1)   *garçons et (filles$_1$ | *filles$_2$)*
      'boys and (girls | *daughters)'

(2)   *vêtements de (filles$_1$ | *filles$_2$)* 'girls' clothing'
      *vêtements de (garçons | *fils)* 'boys' clothing'

(3)   *telle mère, telle (filles$_2$ | *filles$_1$)* 'like mother, like daughter'
      *tel père, tel (fils | *garçon)* 'like father, like son'

As is well-known (Goddard, 2000, 133), only FILLE$_1$ can be correlated with the diminutive FILLETTE 'little girl' (cf. Bonami & Crysmann (2018, 186) for an account). This shows that derivational morphology is selective: derivational processes apply to certain lexemes and not to others in function of their semantics. This conclusion is long-etablished (Kerleroux, 2004) and is even more pronounced with verbs, insofar as verbs frequently head several distinct constructions. This is illustrated with FONDRE, where constructions (4)-(7) are given with the derived lexemes allowed for each verb. Except for FONTE$_1$, the ranges of derived lexemes clearly do not overlap.

(4)   X[PAT] FONDRE$_1$ *fonte$_1$* 'melting'
      Dehors, la glace fond. 'Outside, ice is melting'

(5)   X[ACT] FONDRE$_2$ Y[PAT]   *fusion$_2$* 'fusion'
      On fond le mélange à une température élevée.
      'The mixture is melted at high temperature'

(6)   X[AGT] FONDRE$_3$ Y[PAT] (en Z)   *fonte$_1$* , *fonte$_3$* 'cast iron', *fondeur$_3$* 'foundryman',
      fonderie$_3$ 'foundry, smelter'
      Ils fondaient le bronze en lingots. 'They smelted bronze into ingots'

(7)   X[PAT, FIG] FONDRE$_4$ dans Y[GRND]   *fonte$_4$* 'dissolving'
      Le sucre fond dans l'eau. 'Sugar dissolves in water'

3   Statement 2

If we compare the various items FONDRE mentioned in §2 with true homonyms such as the English *bank$_1$* 'the land alongside a river' and *bank$_2$* 'financial establishment (…)' , we can hypothetize that they are somehow correlated. How can we account for this correlation? A classical answer is to consider them as instances of 'lexical readings' subsumed by a unique lexical entry (Katz, 1972, 70), a view which reflects the way dictionaries deal with this issue. This view is still endorsed in recent works, which consider the various constructions listed under (4)-(7) as "lexical variants" of a polysemous lexical item (Gamerschlag et al., 2014). But if we contend that the domain of application of derivation is the lexeme (Aronoff, 1994), then it is more coherent to say that the various instances of FILLE or FONDRE constitute distinct lexemes.

    As for the correlations themselves, the approaches that exist do not address exactly the same issues. Among them, we find Lakoff's Idealized Conceptual Models (Lakoff, 1987)(Jurafsky, 1996); the approaches dealing with lexical alternations in different frameworks (Rappaport Hovav & Levin (2010); Davis (2001); Ackerman & Moore (2001)); and frame semantics (Gamerschlag et al., 2014), (Plag et al., 2018). Describing the correlations observed between lexemes that form configurations such as those illustrated by FILLE and FONDRE is an issue which concerns lexical theory but not morphology, and all the more so as lexical entries are not a relevant object to lexeme formation morphology. Only lexemes are. However, in lexical frameworks where lexeme formation rules are a direct extension of the lexicon's hierarchic organization (Koenig, 1999), the way the relations between lexemes are established becomes crucial and has a bearing upon the capacities of derivational morphology. Moreover, the inheritance relations based on the hierarchic organization of the lexicon involves lexemes, not lexical entries.

4   Statement 3

In §1, the idea that lexeme formation patterns selectively apply to lexemes even when the latter (arguably) belong to the same lexical configuration has been put forward. However, data exist that show that derivational rules may apply unselectively in precisely this situation. Fradin & Kerleroux (2009, 87) already pointed this out about the French adjective RARE 'rare'. The verb OUVRIR 'open' is another case. It exhibits more than thirty constructions if reflexive constructions are taken into account (TLFi). Nevertheless, OUVERTURE 'opening' is the only eventuality denoting noun correlated with the various lexemes OUVRIR. This example is an exception however because OUVERTURE was never derived from OUVRIR: it corresponds to a form inherited from Late Latin (*opertura* < Classical Latin *apertura*), which has been correlated with the major meanings of the verb from the Old French. The high frequency of the word may have prevented people from coining derived lexemes with another exponent as new verbal meanings arose.

    If we choose a less suspicious case, we see that non-selectivity generally limits itself to a subpart of the lexemes included in a lexical entry. For instance, the verb ENFILER displays three

main constructions, given in (8)-(10)(base-N = *fil* 'thread').

(8)   X[AGT] ENFILER$_1$ Y[PAT, FIG, thread] (dans Z[GRND])
      'X thread Y (onto Z)
      enfiler une corde dans une poulie 'thread a rope onto a pulley'

(9)   X[AGT] ENFILER$_2$ Y[PAT, FIG] (sur Z[GRND, thread])
      'X thread Y (on Z)
      enfiler des pièces d'or sur un fil 'thread gold coins on a thread'

(10) X[AGT, FIG] ENFILER$_3$ Y[street, GRND]
      Ils enfilaient des rues sombres. 'They took dark streets'

ENFILER$_1$ and ENFILER$_2$ are conceptually very close to each other. What makes them distinct is the spatial argument that denotes the thread: the figure or the ground. ENFILER$_3$ on the other hand, involves a metaphorical extension of the schema involved by ENFILER$_2$: there is no thread but a path and the figure is the agent. The derived nominals that are attested reflect this conceptual shift, as shown in examples (11)-(13).

(11) ENFILER$_1$
      l'enfilage d'une barre sur toute sa longueur (TLFi)
      l'enfilement du fil dans le chas de l'aiguille (Web, 3.2019)
      les enfileurs de soie dentaire (Web, 3.2019) = INS

(12) ENFILER$_2$
      l'enfilage des chaussettes (Web, 4.2019)
      l'enfilement d'un vêtement sur un bébé rétif (Web, 3.2019)
      les enfileurs de perles, de mots (Web, 4.2019) = AGT

(13) ENFILER$_3$
      Ø

No nominalization corresponds to ENFILER$_3$; *enfilade* 'row' is correlated with the stative use of ENFILER$_2$, since this N denotes 'une suite de choses enfilées' 'a sequence of things forming a string' e.g. *une enfilade de quais* 'a succession of docks'. What this example suggests is that lexemes heading constructions which share an identical conceptual setting (here: (i) thread-like object, element with a hole, agent) tend to have the same set of derived nominals. The emerging hypothesis is that selective derivations, such as those in §2, are more likely to take place when the lexically related lexemes in question do not share the same conceptual structure or when the latter is parametrized differently. For instance, ENFILER$_3$ does not share conceptual setting (i); as for FONDRE, the initial setting involves a change of state, which is parametrized along the agentivity dimension (patient, agent / actor), the spatial dimension (FONDRE$_4$ vs. others), and the nature of the change (solid > liquid FONDRE$_1$, FONDRE$_2$, FONDRE$_4$; solid > liquid > solid FONDRE$_3$). Changing the parameters changes the nature of the verb: FONDRE$_3$ is a creation verb and, as such, introduces a new set of arguments (agent, result, instrument, location).

This abstract investigates the way lexemes that belong to a lexical entry can be lexically related on the basis of small set of French verbs, the description of which is reliable (*fondre, doubler, hausser, enfiler,* etc.). It attempts to see whether several types of correlation exist. In particular, it aims to shed light on the role of conceptual settings that are idiosyncratic and inherent compared with those that result from the instantiation of general parameters that appear all over the grammar (agentivity, change of state). I propose that the derivational capacities of each lexeme included in a lexical unit and their distribution will provide us with clues about the links these lexemes have with one another and, consequently, about the organization of the lexicon above the lexematic level.

5   Statement 4

The lexicon also includes polylexematic units of category N, V or predicative PP. Since these almost never have competing units with the same PID value, situations discussed in §§1-3 never occur for them. Some are lexemes and constitute separate lexical entries. They are dealt with as such by derivation e.g. N: *fil-de-fer* 'wire' → *fil-de-fériste* 'tightrope walker', *long cours* 'long range' → *long-courrier* 'long-haul'. Those that are lexicalized phrases appear under their head constituent in the lexicon. Crucially, whereas the derived meaning is built on the meaning of the whole phrase, the derivational exponent is put on the more discriminant lexeme of the phrase, which is not always the head e.g. PP *en vrac* 'in bulk' → *vraquier* 'bulk carrier', V *mettre en scène* 'to stage' → *mise en scène* 'staging', N *camp de concentration* 'concentration camp' → *concentrationaire* 'concentration N'.

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