# On the polysemy of derivational exponents

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## 1 Typical cases

Haspelmath (2002) mentions a well-known fact about French language, namely that suffixing *-ier* to the stem of nouns that denote a fruit allows one to derive the name of the plant which yields this fruit. Examples (1) illustrate this possibility and (2) expresses the meaning it involves in the form of an inference.

(1) *pomm-ier* 'apple-tree', *cocot-ier* 'coconut palm', *cassiss-ier* 'blackcurrant bush'

(2) **Fruit tree** If N denotes a kind of fruit, then N-ier denotes the plant that produces that fruit e.g. *poire* 'pear' / *poirier* 'pear-tree'.

However many other nouns suffixed by *-ier* exist and have a completely different meaning:

(3) a. **Producer / trader** *bijout-ier* 'jeweller', *céréal-ier* 'cereal farmer', *chemis-ier* 'shirt maker'
b. **Hunter** *renard-ier* 'fox-hunter', *canard-ier* 'duck hunter', *loutr-ier* 'otter hunter'
c. **Container** *sucr-ier* 'sugar bowl', *chèqu-ier* 'checkbook', *plum-ier* 'pencil box'

An inferential account can be devised for these nouns too, as long as the base supplies us with the information needed to specify the meaning associated with these derived lexemes.

(4) **Producer/trader** If N denotes a kind of artefact, then N-ier denotes the person who produces, sells or uses that artefact e.g. *clou* 'nail' / *cloutier* 'nail maker'

(5) **Hunter** If N denotes a wild animal species, then N-ier denotes the agent who hunts that species e.g. *renard* 'fox' / *renardier* 'fox-hunter'

(6) **Container** If N denotes a substance or an object having a specific use, then N-ier denotes the container where that substance or object is kept e.g. *sucre* 'sugar' / *sucrier* 'sugar bowl'

This state of affairs corresponds to the situation where one exponent is connected with multiple meanings (1 form ⟷ n meanings). This situation seems to support the idea that the affix is polysemic. However, it is far from easy to make explicit the various meanings *-ier* would be associated with. Even though this suffix can be used to form nouns that denote agents, trees, containers, etc. it is impossible to say that *-ier* is intrinsically associated with the contents 'agent', 'tree', 'container' etc. without giving the conditions that trigger these respective readings. This is exactly what the inferential approach sketched above does. But this approach clearly shows that the formulation of the appropriate derived meaning depends on two elements: the meaning of the base and the presence of the derivational exponent in question. The contribution of the latter to the derived meaning seems rather tenuous however, compared with that of the base; so tenuous that it eludes any formulation. What is certain is that the derivational exponents in question are not associated with any fixed actual meaning. As a result, these affixes cannot be morphemes and have to be analyzed as morphs (Crysmann & Bonami,

2015; Haspelmath, 2020). They cannot be polysemous insofar as they cannot and need not be correlated with any identifiable meaning. They reveal a meaning without positively bringing with themselves a part of that meaning.

Many affixes behave like *-ier*: they form lexemes associated with meanings that can be formulated through an inference which takes advantage of the meaning of the base:

(7) **Place of living** If N denotes a domestic animal, N-erie denotes the place where the animal is raised or kept e.g. *chêvre* 'goat' / *chêvrerie* 'goat farm'.

(8) **Place of manufacturing** If N denotes an agent who exercises an activity, N-erie denotes this activity or the place where it takes place e.g. *coutelier* 'cutler' / *coutellerie* 'cutlery industry'; 'cutlery shop, works'.

## 2 On the origin of derived meaning

The meaning of the derived nouns mentioned up to now cannot be obtained through the combination of the meaning of their parts insofar as the derivational exponent lacks any identifiable meaning. I assume that the derived meaning comes from the lexical networks the derived lexemes (words) belong to. If we take seriously the word and paradigm approach, then the inferential approach of derivational meaning is self-evident. Blevins (2016, 170) claims that "Paradigmatic relations (...) operate over larger sets of words (...) It is the affiliation with these larger sets of forms that principally constrains uncertainty in the association between individual word-forms and grammatical properties". In derivation, the uncertainty is constrained by the fact that a given word, or more appropriately lexeme, belongs to a given morphological (or lexical) series. The inferences expressing the derivational meaning are rooted in morphological derivational series and the items forming a series have distinct syntactic distributions. For instance the word *sucriers* has different meanings in (9a) and (9b), respectively 'sugar bowl' and 'sugar manufacturer', because it is correlated with a lexeme that belongs either to derivational series (10a) or (10b).

(9) a. L'analyse des possibilités de l'éthanol (...) fait clairement apparaître que les **sucriers** et les distillateurs ne contribueraient que modestement à ce dessein national. (www.persee.fr > doc > rei 0154-3229 1981)

b. (...) verres de couleur pour les vitraux d'églises et un verre ressemblant à une porcelaine demi-transparente pour les **sucriers** et les compotiers (www.racinescomtoises.net > histoire de malbouans)

(10) a. *houblon* 'hop' / *houblonnier* 'hop farmer', *betterave* 'beetroot' / *betteravier* 'beet-grover', *céréale* 'cereal' / *céréalier* 'grain farmer', *pétrole* 'oil' / *pétrolier* 'oil man'

b. *cendre* 'ash' / *cendrier* 'ash tray', *plume* 'nib' / *plumier* 'pencil box', *légume* 'vegetable' / *légumier* 'vegetable dish', *chèque* 'check' / *chéquier* 'checkbook'

The meaning is built in discourse through sentences such as (9a) and (9b) and the semantic inferences they involve; it comes from outside the word/lexeme, and affix *-ier* only plays a role of trigger, if any, in this process. Sentences (9) illustrate how the syntactic distribution of the relevant items in each series is different.

Two points emerge: (i) the main semantic source of the derived meaning is the base; (ii) this base is supposed to have a sufficiently rich ontology for derived meanings to be specified without problem. It has been argued that nouns are categories of this type (Vicente, 2018; Millikan, 2000): they denote kinds, which means objects endowed with a rich ontology, and

can aggregate content through their use in discourses. "We can draw lots of inferences based on our kind-concepts because they store lots of information. In contrast, concepts of properties or events are informationally 'flat'" (Vicente, 2018). Verbs would be typical examples of these 'informationally flat' categories. They denote eventualities (events or states) of various types, that is basically relations involving variables the role of which in the relation is usually specified through semantic roles (AGT, PAT, INS, etc.). Events are generally associated with a scale (e.g. change-of-state, motion, etc.), which allows us to describe the aspectual properties of the verbal relation, notably its degree of telicity and affectedness (Krifka, 1998; Beavers, 2011, 2013). It should be noted that theses properties can only be identified at the phrase or sentence level (Dowty, 1979; Verkuyl, 1993; Rothstein, 2007), when the constructions that the verb heads are unfolded. However rough, this presentation allows us to address two important issues: can the analysis proposed in §1 be extended to derivations from a verbal base? Can the affixes used in these derivations be polysemous?

## 3 Extension of the account

The semantics of nouns derived from verbs is directly correlated with the variables appearing in the semantic representation of the verb. For instance, *-eur* builds agent denoting nouns that are anchored to the agent variable *x* of agentive verbs, whereas a subset of derived nouns in *-oir* is linked with a variable which corresponds to the landmark of a spatial (inessive) relationship, as illustrated in (11) with *nageur* 'swimmer' and *lavoir* 'wash-house' respectively.

(11) a. *nageur'* = $\lambda x \exists e.[\textbf{swim'}(x, e) \wedge \text{AGT}(x)]$
b. *lavoir'* = $\lambda z \exists x y \exists e.[\textbf{wash'}(x,y,e) \wedge \text{AGT}(x) \wedge \text{PAT}(y) \wedge \text{LOC}(e, \textbf{in'}(z))]$

With these exponents the meaning depends on the role assigned to the variable in the verbal construction. It is impossible to adopt an inferential approach to the meaning of the derived N, as we did for *-ier*, inasmuch as there is no element endowed with a rich ontology in the semantic representation of the base V. Besides, there is no need for that.

Contrary to what we saw with *-ier*, affixes *-eur*, *-oir* do not limit themselves to reveal the derived noun's meaning taking advantage of the content of a base N. They have a proper meaning given by the property captured by the lambda formula headed by the variable that has been selected; it reads 'X such as she has the property to swim' for *nageur*, and 'Z which is a place where X washes Y' for *lavoir*. This meaning is all the more strongly associated with the affix as it can reliably be correlated with the same type of verbs and the same type of verbal variable. Obviously, morphological derivational series e.g. *chanter* 'sing' / *chanteur* 'singer', *élaguer* 'trim' / *élagueur* 'trimer', etc. also contribute to support the soundness of the meanings in question.

It is well-known that derived nouns suffixed with *-eur* and *-oir* may also denote instruments e.g. *tondeuse* 'clippers, shears', *sarcloir* 'hoe'. In this case too, the functional meaning of the derived N is correlated with the variable selected in the semantic representation of the base V. The definition of what an instrument (or an agent) is can be discussed at length (Koenig et al., 2008; Huyghe & Tribout, 2015); here I will assume that it is an object that an agent has to use to complete a given action and that this object exists before and after the action. This idea is embodied in the sketchy representation given for *tondeuse* in (12).

(12) *tondeuse'* = $\lambda z \exists x y \exists e^1 \exists e^2.[\textbf{shear'}(x,y,e^1) \wedge \text{AGT}(x) \wedge \text{PAT}(y) \rightarrow \textbf{use'}(x,z,e^2)]$

Facts such as (11)-(12) lead us to positively answer to the second question raised above: some affixes do have several meanings, among which those used to derived nouns from verbs. The

cases discussed in §1 are then of limited extension. The next step will be to assess to what extent this limitation is tied with the nature of the base (N vs. V). The presentation will show that the ontological issue unexpectedly arises anew.

Indeed the type of action that a verb denotes may affect the selection of the noun's meaning derived from this verb. For instance, the action of washing (something) does not impose to use an object dedicated to this task, which makes it implausible to derive a N denoting an instrument from this verbal meaning. On the contrary, ground-hoeing or sheep-shearing cannot be completed with bare hands, which supports the existence of derivations such as (12) (Namer & Villoing, 2008). As for meanings based on nominal ontological content, the latter generally refers to scenarios e.g. 'game∼hunter' that activate verbal contents such as '**hunt**'(x,y,e) ∧ AGT(x)...' or to Pustejovskian qualia e.g. Origin, Users for artefacts, which provide variables to cling to. The hypothesis would be that the behavior of derivational exponents seems to strongly depend on accessibility of their base's meaning: immediate (for Vs) vs. mediate (for Ns).

As a counterpoint, the communication will also address the issue of derived nouns with a special meaning that belong to derivational series with very few attestations e.g. *chat-ière* 'catflap', of which many examples are given in Corbin & Corbin (1991).

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