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Encoding reflexivity: The syntax and semantics of natural reflexives

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Abstract. This paper suggests that reflexivity of natural reflexives is encoded through a universal reflexive element, *Refl(exive)*. The function of Refl is to (i) take two open predicates of type ⟨e,st⟩, (ii) associate the unsaturated variables of the predicates with each other, and (iii) return another predicate of type ⟨e,st⟩ (cf. Labelle 2008). Crosslinguistic differences regarding the reflexive (Reinhart & Siloni 2005) are attributed to the different selectional properties of Refl in different languages. The proposed analysis offers an account of the typology of the reflexive in purely syntactic terms, extending Pylkkänen's (2008) analysis of causatives to the reflexive.

Keywords. reflexivity; naturally reflexive verb; argument; French; English

1. Introduction. In many languages, a certain class of verbs may be used reflexively without a reflexive anaphor ('oneself') or a reflexivizing affix ('self-'). For instance, an example like *John washed* in English has the reflexive interpretation, without having *himself* as an object, where the activity denoted by the verb is applied to agent of the activity itself. The naturally reflexive construction as such has been traditionally analyzed in terms of a lexical operation, according to which the reflexive is derived through the operation of "reflexivization" in the lexicon that takes a transitive verb and turns it into an intransitive one whose sole argument is interpreted to have two θ-roles along the lines of (1) (Grimshaw 1982; Wehrli 1986; Chierchia 2004).

(1) $\lambda y \lambda x[V(y)(x)] \rightarrow \lambda x[V(x)(x)]$

One of the problems of the lexicalist account noted in the literature is that there are cases where the two θ-roles that the sole argument is interpreted to bear are not from a single lexical item. For instance, Marantz (1984) points out that Icelandic allows reflexivization of an ECM verb as in (2).

(2) Icelandic (Marantz 1984:164)
Hann tel-st vera sterkur.
he believe-REFL to.be strong
'He believes himself to be strong.'

In (2), the surface subject *Hann* 'he' bears two θ-roles, one from *tel* 'believe' and the other from *sterkur* 'strong'. If reflexivization were a lexical operation, an example like (2) would not be allowed given the common assumption that lexical operations cannot target more than one lexical item at a time. That is, a lexical operation like (1) can hardly derive an ECM reflexive like (2).

The movement account of the reflexive may give a straightforward account of (2), which takes reflexivization to involve an A-movement operation (Marantz 1984; Pesetsky 1995; Sportiche 1998). According to the movement account, a reflexive morpheme like Icelandic *-st* absorbs the external θ-role, and the internal argument moves to the surface subject position. The reflexive interpretation then is attained through the binding relation between the surface subject and the

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reflexive morpheme. An example like (2), therefore, can be analyzed as in (3), where movement is indicated by Arabic numerals, and coindexation by lowercase alphabets.

(3) $\text{Hann}_{1/i}$ tel-st_i t_1 vera sterkur.

One problem of the movement account is that there is much evidence that indicates that the surface subject of the reflexive is an external, rather than an internal, argument (Alboiu, Barrie & Frigen 2004; Reinhart & Siloni 2004, 2005; Labelle 2008; Alexiadou & Schäfer 2014; Marelj & Reuland 2016). Also, it is not entirely clear under this approach why reflexivization of an ECM verb is not allowed in certain languages like English, Hebrew, Hungarian, Russian, etc. regardless of whether or not they employ a reflexive morpheme like *-st* in Icelandic (Reinhart & Siloni 2005).

These problems have motivated the split-lexicalist account, which states that reflexivization takes place in the lexicon in some cases, while it takes place in the syntax in others. The distinction between lexical and syntactic reflexivizations may be due to a parameter setting (Reinhart & Siloni 2005) or due to the presence or absence of a [ϕ]-deficient clitic (Marelj & Reuland 2016). Under this approach, ECM reflexives are not allowed in a language like English, because reflexivization in this language is a lexical operation and thus cannot target more than one lexical item simultaneously; whereas, they are allowed in a language like Icelandic, because reflexivization is a syntactic operation in this language and hence is not subject to such a restriction. The problem of the split-lexicalist account is that English still allows reflexivization of a phrase as in (4).

(4) a. Mary *put makeup on* at the wedding.
b. Bill *threw some clothes on* and started to make coffee.
c. Alice did not want to *stick eyelashes on*.

According to the split-lexicalist account, reflexivization is a lexical operation in English either because the lexicon-syntax parameter is set to 'lexicon' (Reinhart & Siloni 2005) or because it lacks a reflexive clitic (Marelj & Reuland 2016). If reflexivization were a lexical operation in English, however, phrases would not be allowed to reflexivize, for the same reason that ECM verbs are not allowed to reflexivize. Examples in (4) show that this is simply not the case.

Apparently, the previous approaches to the reflexive are not without their problems. In this paper, I suggest an alternative account along the lines of Labelle (2008) and Pylkkänen (2008), which I believe can overcome the problems of the previous approaches just reviewed.

2. Proposal. In particular, I suggest that reflexivity of natural reflexives is encoded in the syntax through a universal reflexive element in (5).

(5) *Refl(exive)* = $\lambda P_{\langle e,st\rangle} \lambda Q_{\langle e,st\rangle} \lambda x \lambda e[P(e,x) \,\&\, Q(e,x)]$

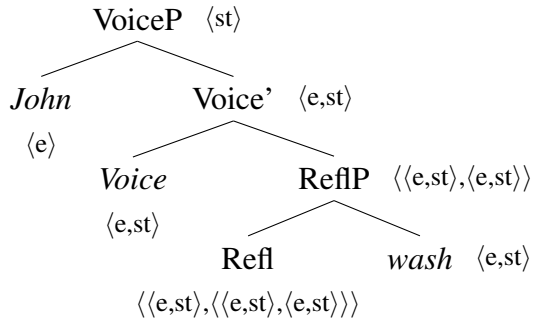
The function of Refl is to take two open predicates of type ⟨e,st⟩ and return a predicate of the same type, while associating the two open variables with each other. The reflexive head basically does the same work with Labelle's (2008) reflexive Voice, with the essential difference being that it projects its own phrase and has its own syntactic and semantic requirements independent of Voice.

Based on this idea, I further suggest that the crosslinguistic variation arises because Refl has different selectional requirements across languages analogous to Pylkkänen's (2008) approach to causatives. Specifically, in a language like English, the reflexive head is claimed to have the c-selectional feature [V], and accordingly takes V or VP as its complement. Notice here that Refl

combines with (the projection of) a predicate directly. What this means is that the reflexive head may be sensitive to the semantic content of the predicate. I suggest that this is in fact the case and that Refl in these languages s-selects grooming predicates.[1]

In this view, an example like *John washed* is derived as in (6). Here, the reflexive head takes an element of category V as its complement, satisfying its c-selectional requirement. Semantically, it is composed with the unsaturated verb *wash* and active Voice in turn, associating the open variables of *wash* and Voice with each other. When *John* is composed with the resulting predicate of type ⟨e,st⟩, it saturates both the agent and theme variables, giving the reflexive interpretation.

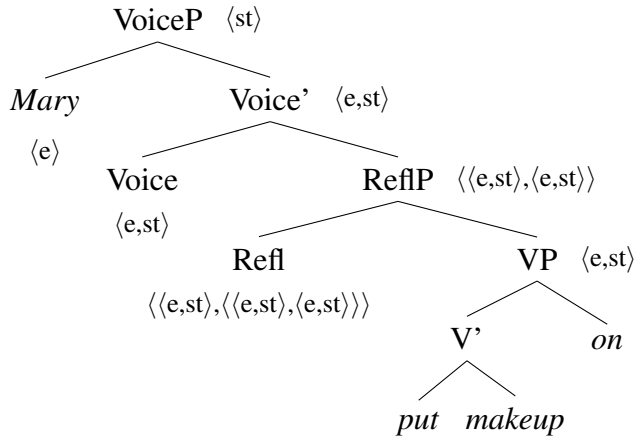
(6)



a. ⟦**wash**⟧ = λxλe'[wash(e',x)]
b. ⟦**Refl**⟧ = λPλQλyλe[P(e,y) & Q(e,y)]
c. ⟦**ReflP**⟧ = λQλyλe[wash(e,y) & Q(e,y)]
d. ⟦**Voice**⟧ = λzλe"[agent(e",z)]
e. ⟦**Voice'**⟧ = λyλe[wash(e,y) & agent(e,y)]
f. ⟦**VoiceP**⟧ = λe[wash(e,John) & agent(e,John)]

Note that Refl can combine with *wash* in (6) because *wash* is a grooming predicate and thus satisfies the s-selectional requirement of the head. The s-selectional requirement of Refl may be met compositionally as well. This is the case of phrasal reflexivization noted in (4). So, an example like *Mary put makeup on* can be derived as in (7).

(7)



[1]The term "grooming predicate" is used only for labeling purposes. In English, for instance, not all grooming predicates can be used reflexively (e.g., *comb*); and the reflexive does not always have to involve a grooming predicate (e.g., *pose*, *camouflage*).

a. ⟦**VP**⟧ = λxλe'[put(e',makeup) & location(e',x)]
b. ⟦**Refl**⟧ = λPλQλyλe[P(e,y) & Q(e,y)]
c. ⟦**ReflP**⟧ = λQλyλe[put(e,makeup) & location(e,y) & P(e,y)]
d. ⟦**Voice**⟧ = λzλe"[agent(e",z)]
e. ⟦**Voice'**⟧ = λyλe[put(e,makeup) & location(e,y) & agent(e,y)]
f. ⟦**VoiceP**⟧ = λe[put(e,makeup) & location(e,Mary) & agent(e,Mary)]

In (7), I'm assuming that the verb *put* syntactically selects the elements of category N (*makeup*) and P (*on*) in turn, and that the unsaturated preposition *on* and V' are semantically combined by identifying eventualities. This way, the unsaturated variable of *on* percolates up to VP, which then is taken by Refl. The rest of the derivation proceeds as before, and in the end, the location variable of VP and the agent variable of Voice are saturated by the single NP *Mary*, again giving the expected interpretation.

The current view can also provide simple and straightforward accounts of ungrammatical cases like (8a) and (8b), whose structures are shown in (9a) and (9b), respectively

(8) a. *John gave a bath. (*Int*. 'John gave himself a bath.')
b. *John put the blame on. (*Int*. 'John put the blame on himself.')

(9) a. [$_{\text{VoiceP}}$ *John* [$_{\text{ReflP}}$ Refl **[$_{\textbf{ApplP}}$ Appl** [$_{\text{VP}}$ *gave a bath*] **]**]]
b. [$_{\text{VoiceP}}$ *John* [$_{\text{ReflP}}$ Refl **[$_{\textbf{VP}}$ *put the blame on*]**]]

According to the current view, example (8a) is ungrammatical because as shown in (9a), the c-selectional requirement of Refl is not satisfied due to the intervening ApplP (Marantz 1993; Bruening 2010, 2018a); and example (8b) is ungrammatical because the complement VP is not a grooming predicate, and therefore, the s-selectional requirement of Refl is not satisfied.

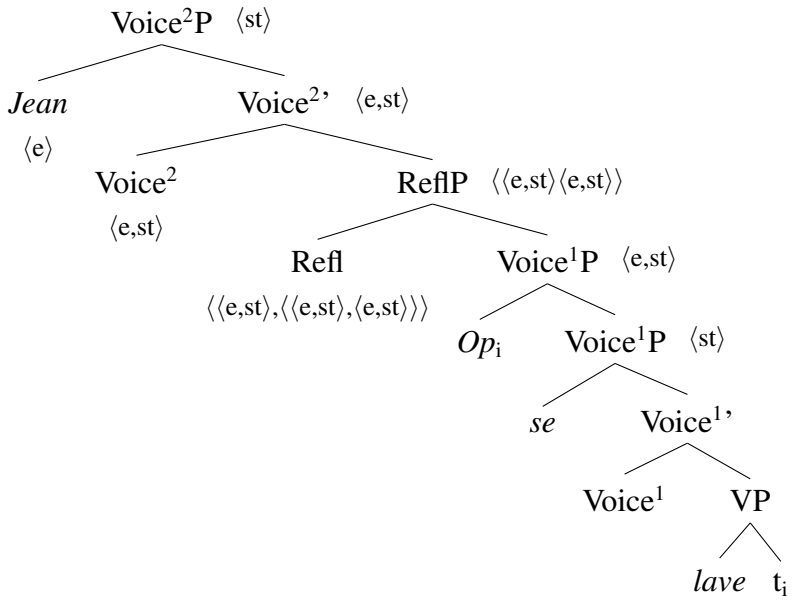
Refl in a language like French has different selectional properties from its counterpart in English-type languages discussed above. Specifically, the reflexive head in these languages, I propose, has the selectional feature [Voice] and accordingly takes VoiceP as its complement. I am assuming in this paper that the second functional argument of Refl is active Voice across languages. What this means is that the complement of Refl has to be nonactive VoiceP for semantic reasons: if Refl takes active VoiceP as its complement, the derivation will end up having two agents for a single event, leading to the violation of the θ-Criterion. Notice also that in these languages, the reflexive head does not take a predicate directly, which means that it cannot see the semantic content of the predicate buried below VoiceP, contrary to the case of English-type languages. This amounts to saying that no s-selectional requirement can be imposed on Refl in these languages; consequently, reflexivization can be productive. Lastly, due to the semantic type of the reflexive head, the complement VoiceP must be of type ⟨e,st⟩, rather than ⟨st⟩. I suggest the semantically open nonactive VoiceP is "prepared" by Op abstracting over VoiceP that has been introduced in an argument position (cf. Bruening 2006; Labelle 2008).

Based on this view, I propose the analysis of the reflexive in French-type languages as exemplified in (10) and (11).

(10) French
Jean se lave.
Jean SE washes

'Jean is washing himself.'

(11)



a. $[\![$**(lower) Voice^{1}P**$]\!] = \lambda$e'[wash(e',t_i)]
b. $[\![$**(higher) Voice^{1}P**$]\!] = \lambda x \lambda$e'[wash(e',x)]
c. $[\![$**Refl**$]\!] = \lambda P \lambda Q \lambda y \lambda$e[P(e,y) & Q(e,y)]
d. $[\![$**ReflP**$]\!] = \lambda Q \lambda y \lambda$e[wash(e,y) & Q(e,y)]
e. $[\![$**Voice^2**$]\!] = \lambda z \lambda$e"[agent(e",z)]
f. $[\![$**Voice^2'**$]\!] = \lambda y \lambda$e[wash(e,y) & agent(e,y)]
g. $[\![$**Voice^{2}P**$]\!] = \lambda$e[wash(e,Jean) & agent(e,Jean)]

In (11), the (lower) Voice^{1}P is abstracted over by Op initially merged as the complement of *lave* 'washes'. The abstracted-over Voice^{1}P then is taken by Refl, satisfying both the type and c-selectional requirements of the head. As semantic composition proceeds, the reflexive head associates the theme variable of *lave* and the agent variable of Voice^2 with each other; and when *Jean* is introduced, it saturates both the theme and agent variables at the same time. Note that I'm assuming in this structure that the clitic *se* in French is generated in the specifier position of nonactive VoiceP (cf. Bošković 1997, 2002), marking unaccusativity of the verbal expression with which it appears.

3. The crosslinguistic variation. Natural reflexives have been reported to show different patterns across languages with respect to productivity, the possibilities of ECM and dative reflexivization, reflexive nominalization, and proxy interpretation. For the remainder of the paper, I provide analyses of the crosslinguistic variation based on the proposal presented in Section 2.

3.1 PRODUCTIVITY. Non-grooming verbs like 'love' or 'draw' cannot be used reflexively in a language like English, but they can in a language like French as shown below.

(12) a. *John loves.
b. *John draws.

(13) French (Reinhart & Siloni 2005:410)

a. Jean s'aime.
Jean SE loves
'Jean loves himself.'

b. Jean se dessine.
Jean SE draws
'Jean draws himself.'

As briefly noted above, this can be attributed to the simple fact that in English-type languages, Refl takes a predicate directly, and consequently is sensitive to the semantics of the predicate[2]; while, in French-type languages, the reflexive head takes VoiceP, and so cannot be sensitive to the semantic content of the predicate buried below VoiceP. In short, the difference in the productivity of reflexivization between languages arises because of the structural configuration of the reflexive that each type of languages derives, which, crucially, is driven by the different selectional properties of Refl between these languages.

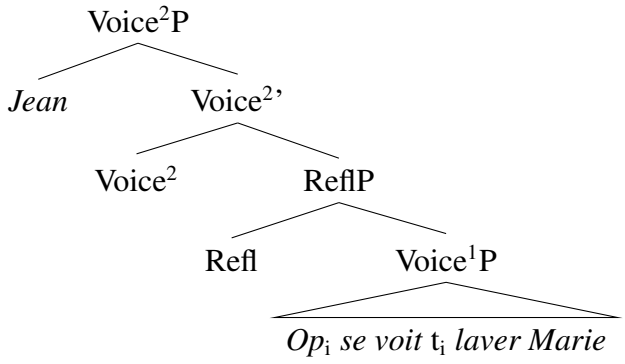
3.2 ECM REFLEXIVIZATION. Reflexivization of an ECM verb is impossible in English as in (14), but it is possible in French as in (15).

(14) *John sees wash Mary. (*Int.* 'John sees himself wash Mary.')

(15) French (Reinhart & Siloni 2005:405)
Jean se voit laver Marie.
Jean SE sees wash Marie
'Jean sees himself wash Marie.'

The impossibility of ECM reflexivization shown in (14) can be given a straightforward account: ECM verbs are not grooming predicates and thus cannot be selected by Refl. In a language like French, on the other hand, movement of Op is involved in the reflexive. This means that ECM reflexives like (15) can be derived in such a way that Op is generated in the embedded subject position and then moves to adjoin to the matrix VoiceP as illustrated below.

(16)



[2]Logically, this does not necessarily have to be the case, and there might be languages whose Refl takes a predicate directly without any s-selectional requirement at all. But the general tendency appears to be that if the syntactic head representing a core conceptual notion (e.g., Caus(e), Refl(exive), etc.) combines with a predicate directly (or at least, if the head is closer to the predicate in the structure), the productivity is (more) restricted in one way or another (e.g., zero causativization in English and *-sase* causativization in Japanese assuming that both involve the causative head).

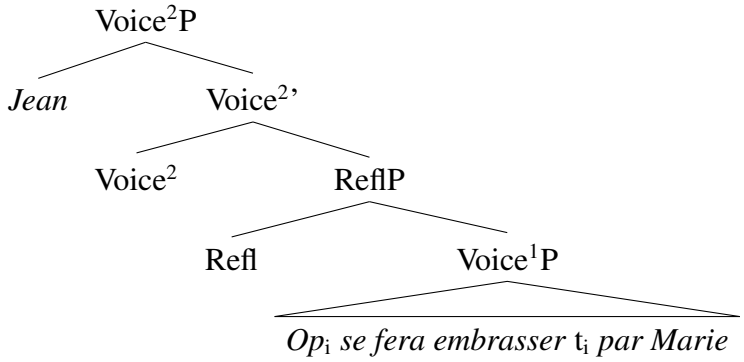
a. $[\![\textbf{Voice}^{\textbf{1}}\textbf{P}]\!] = \lambda x \lambda e' \exists e''[\text{wash}(e'',\text{Marie}) \& \text{agent}(e'',x) \& \text{see}(e',e'')]$
b. $[\![\textbf{Refl}]\!] = \lambda P \lambda Q \lambda y \lambda e[P(e,y) \& Q(e,y)]$
c. $[\![\textbf{ReflP}]\!] = \lambda Q \lambda y \lambda e \exists e''[\text{wash}(e'',\text{Marie}) \& \text{agent}(e'',y) \& \text{see}(e,e'') \& Q(e,y)]$
d. $[\![\textbf{Voice}^{\textbf{2}}]\!] = \lambda z \lambda e'''[\text{agent}(e''',z)]$
e. $[\![\textbf{Voice}^{\textbf{2}}\textbf{'}]\!] = \lambda y \lambda e \exists e''[\text{wash}(e'',\text{Marie}) \& \text{agent}(e'',y) \& \text{see}(e,e'') \& \text{agent}(e,y)]$
f. $[\![\textbf{Voice}^{\textbf{2}}\textbf{P}]\!] = \lambda e \exists e''[\text{wash}(e'',\text{Marie}) \& \text{agent}(e'',\text{Jean}) \& \text{see}(e,e'') \& \text{agent}(e,\text{Jean})]$

In (16), the agent trace is abstracted over by Op at Voice^{1}P. And Refl associates the variable with the agent variable of Voice^2. When *Jean* fills in both the agent variable associated with *laver* 'wash' and the agent variable of Voice^2 (which is associated with *voit* 'sees') later in the derivation, it becomes the agent of both the washing event and the seeing event.

Reflexivization of a causative verb in French, exemplified in (17), can be analyzed in a similar way: the only difference is that Op now is generated as the direct object of the main verb. The derivation of (17) is illustrated in (18).

(17) French (Reinhart & Siloni 2005:407)
Jean se fera embrasser par Marie.
Jean SE make.FUT kiss by Marie
'Jean will make himself be kissed by Marie.'

(18)



a. $[\![\textbf{Voice}^{\textbf{1}}\textbf{P}]\!] = \lambda x \lambda e' \exists e''[\text{kiss}(e'',x) \& \text{agent}(e'',\text{Marie}) \& \text{cause}(e',e'')]$
b. $[\![\textbf{Refl}]\!] = \lambda P \lambda Q \lambda y \lambda e[P(e,y) \& Q(e,y)]$
c. $[\![\textbf{ReflP}]\!] = \lambda Q \lambda y \lambda e \exists e''[\text{kiss}(e'',y) \& \text{agent}(e'',\text{Marie}) \& \text{cause}(e,e'') \& Q(e,y)]$
d. $[\![\textbf{Voice}^{\textbf{2}}]\!] = \lambda z \lambda e'''[\text{agent}(e''',z)]$
e. $[\![\textbf{Voice}^{\textbf{2}}\textbf{'}]\!] = \lambda y \lambda e \exists e''[\text{kiss}(e'',y) \& \text{agent}(e'',\text{Marie}) \& \text{cause}(e,e'') \& \text{agent}(e,y)]$
f. $[\![\textbf{Voice}^{\textbf{2}}\textbf{P}]\!] = \lambda e \exists e''[\text{kiss}(e'',\text{Jean}) \& \text{agent}(e'',\text{Marie}) \& \text{cause}(e,e'') \& \text{agent}(e,\text{Jean})]$

In the case of (18), *Jean* saturates the theme variable of *embrasser* 'kiss' (which has been abstracted over by Op at the level of Voice^{1}P) and the agent variable of Voice^2, giving the reflexive interpretation where Jean is both theme of the kissing event and agent of the causing event.

3.3 DATIVE REFLEXIVIZATION. The contrast in the possibility of dative reflexivization shown in (19) and (20) can be accounted for basically in the same way with ECM reflexivization.

(19) *John sent a letter. (*Int.* 'John sent a letter to himself.')

(20) French (Reinhart & Siloni 2005:411)

Jean s'est envoyé une lettre.
Jean SE is sent a letter
'Jean sent a letter to himself.'

That is, dative reflexivization is impossible in English simply because ditransitive verbs are not grooming predicates that Refl can select for; and it is possible in French because Op can be generated in the goal argument position and then moves to VoiceP as illustrated in (21).

(21) $[_{\text{Voice}^2\text{P}}$ *Jean* $[_{\text{Voice}^2}$ Voice^2 $[_{\text{ReflP}}$ Refl $[_{\text{Voice}^1\text{P}}$ *Op*$_i$ *se envoyé une lettre* t_i]]]]

a. $[\![\textbf{Voice}^{\textbf{1}}\textbf{P}]\!] = \lambda x \lambda e'[\text{send}(e',\text{a letter}) \,\&\, \text{goal}(e',x)]$
b. $[\![\textbf{Refl}]\!] = \lambda P \lambda Q \lambda y \lambda e[P(e,y) \,\&\, Q(e,y)]$
c. $[\![\textbf{ReflP}]\!] = \lambda Q \lambda y \lambda e[\text{send}(e,\text{a letter}) \,\&\, \text{goal}(e,y) \,\&\, Q(e,y)]$
d. $[\![\textbf{Voice}^{\textbf{2}}]\!] = \lambda z \lambda e''[\text{agent}(e'',z)]$
e. $[\![\textbf{Voice}^{\textbf{2'}}]\!] = \lambda y \lambda e[\text{send}(e,\text{a letter}) \,\&\, \text{goal}(e,y) \,\&\, \text{agent}(e,y)]$
f. $[\![\textbf{Voice}^{\textbf{2}}\textbf{P}]\!] = \lambda e[\text{send}(e,\text{a letter}) \,\&\, \text{goal}(e,\text{Jean}) \,\&\, \text{agent}(e,\text{Jean})]$

The impossibility of dative-theme reflexivization shown in (22) follows from the assumption made earlier that Refl must take active Voice as its second functional argument across languages.

(22) French (Reinhart & Siloni 2005:412)
Jean s'est montré l'enfant.
Jean SE is shown the child
a. Jean$_i$ showed the child to himself$_i$.
b. *Jean showed the child$_i$ to himself$_i$.

That is, in (22), *Jean* can have two θ-roles as in (22a) because as an agent argument, it is introduced by active Voice that can be taken by Refl as the second argument; but *l'enfant* 'the child' cannot have two θ-roles as in (22b) because as a goal argument, it is not introduced by active Voice. The assumption that Refl must combine with active Voice as its second argument is to capture the generalization that reflexivization is subject-oriented crosslinguistically. Reinhart & Siloni (2005) capture the generalization by assuming that (i) when reflexivization applies in the syntax, its application is triggered by the merger of an external argument; and (ii) when it applies in the lexicon, it only targets a subset of agent-theme verbs.

At this point, it is worth noting that unlike ECM reflexivization, the impossibility of dative reflexivization in English-type languages does not follow from the lexicon-syntax distinction. This is because the target arguments of dative reflexivization belong to a single lexical item, namely, a ditransitive verb, and thus can in principle be targeted by a lexical operation. This may be one of the reasons why the split-lexicalist approach has to assume that reflexivization (or the "bundling operation" according to Reinhart & Siloni 2005 and Marelj & Reuland 2016) only targets a subset of agent-theme verbs when it applies in the lexicon. But the same can be said if reflexivization takes place in the syntax across languages: all that needs to be said is that reflexivization involves different verbs in different languages. This amounts to saying that even under the split-lexicalist approach, the distinction between the lexicon and the syntax may not be necessary for the analysis of dative reflexivization. Under the approach advocated in this paper, the descriptive generalization is stated in terms of s-selection.

3.4 REFLEXIVE NOMINALIZATION. Turning to reflexive nominalization, deverbal nominals can have a reflexive interpretation in English but not in French as shown in (23) and (24), respectively.

(23) She dresses slowly because she is an elegant dresser.

(24) French (Reinhart & Siloni 2005:410)
Jean est un excellent habilleur/maquilleur.
Jean is an excellent dresser/"makeup-er" (of others only)

Reinhart & Siloni (2005:409) note that the clitic *se* in French is incompatible with nominal morphology. It appears that not only this alone can account for the variation without the lexicon-syntax distinction, but also it can do so more adequately.

First, in English, no clitic is required for the reflexive; naturally, no morphological incompatibility arises in the nominal environment. A reflexive nominal like *dresser*, therefore, can be derived along the lines of (25).

(25) $[_{NP}$ *-er* $[_{VoiceP}$ Voice $[_{ReflP}$ Refl *dress*]]]
a. $[\![\textbf{dress}]\!] = \lambda x \lambda e'[\text{dress}(e',x)]$
b. $[\![\textbf{Refl}]\!] = \lambda P \lambda Q \lambda y \lambda e[P(e,y) \,\&\, Q(e,y)]$
c. $[\![\textbf{ReflP}]\!] = \lambda Q \lambda y \lambda e[\text{dress}(e,y) \,\&\, Q(e,y)]$
d. $[\![\textbf{VoiceP}]\!] = \lambda y \lambda e[\text{dress}(e,y) \,\&\, \text{agent}(e,y)]$

Refl, as before, associates the theme variable of *dress* and the agent variable of Voice with each other. When the referential argument introduced by *-er* binds the associated variable y of VoiceP (Alexiadou & Schäfer 2008, 2010; see also Williams 1981, Grimshaw 1990), the reflexive semantics of *dresser* is derived.

In French, on the other hand, reflexivization must be accompanied by the clitic *se*, because the complement that Refl takes is nonactive VoiceP, and the nonactive VoiceP comes with *se* in its specifier position. This means that in order for an expression to have a reflexive interpretation, it must be compatible with *se*. The impossibility of reflexive nominalization in French, then, can be attributed to the simple fact that French *se* is not compatible with nominal morphology. That is, if a nominal expression is not accompanied by *se* as in (24), it cannot have a reflexive interpretation because the absence of *se* indicates that Refl is not involved in the structure; and if a nominal expression is accompanied by *se*, the expression is simply ill-formed as in **s'habilleur* because of the clitic's incompatibility with nominal morphology.

The motivation for the split-lexicalist analysis of reflexive nominalization is that nominalization of unaccusative or subject-experiencer verbs is still possible without *se* in French.

(26) French (Reinhart & Siloni 2005:409)
a. le rétrécissement du pantalon au lavage
the shrinking of.the pants in.the washing
'the pants' shrinking in the wash'
b. l'intérêt de Marie pour ce livre
the interest of Marie for this book
'Marie's interest in this book'

According to Reinhart & Siloni (2005), the above examples show that the lexicon-syntax distinc-

tion is needed for arity operations, because then it can be said that (i) in English, reflexivization is a lexical operation and so can feed nominalization as in (23), and (ii) in French, reflexivization is a syntactic operation, so cannot feed nominalization as in (24), but crucially, (iii) decausativization is a lexical operation in any language because it involves removal of a θ-role from the θ-grid of a verb (as compared to reflexivization which simply bundles two θ-roles), therefore, it can feed nominalization in any language including French as in (26).

But, again, this does not have to be the case. Unlike the case of reflexives, the unaccusative and subject-experiencer interpretations do not require the presence of nonactive VoiceP. This is because no independent head is involved in the derivation of the unaccusatives/subject-experiencer constructions that is responsible for their interpretations and requires nonactive VoiceP. What this means is that the nominalizer may take VP directly to nominalize unaccusative/subject-experiencer verbs while maintaining their interpretations. Therefore, unaccusative/subject-experiencer nominalization is possible without *se*, namely, without the nonactive VoiceP layer involved in the derivation. In this view, nonactive Voice (and *se*) can be assumed to be present only in the verbal environment for case reasons along the lines of Marelj & Reuland (2016).

Note that the possibility of reflexive nominalization is not due to the way in which the structure of the reflexive is assembled in each language; it is due to morphology. Therefore, it is expected that reflexive nominalization does not always pattern together with the other variations discussed above. Czech demonstrates one such case: the language allows reflexive nominalization as in (27), even though it shows the properties of French-type languages with respect to productivity (28a), ECM reflexivization (28b), and dative reflexivization (28c).[3]

(27) Czech (Hron 2005:6)
zabití se
killing SE
'self-killing'

(28) Czech (Hron 2005:5)
a. zabil se ('he killed himself')
b. Marie se viděla tančit (v zrcadle).
Marie SE saw dance (in mirror)
'Marie saw herself dance (in a mirror).'
c. napsal si dopis ('he wrote a letter to himself')

The above pattern can easily be accounted for if *se* in Czech is compatible with nominal morphology unlike its counterpart in French (cf. Reinhart & Siloni 2005:410, fn. 16). The case of Czech, therefore, shows that the morphological account of reflexive nominalization is not only a possible analysis but also a correct one.

3.5 PROXY INTERPRETATION. Finally, the reflexive in English does not allow a proxy interpretation unless there is a reflexive pronoun syntactically bound by an antecedent (Jackendoff 1992).

(29) a. *Ringo washed at the Tussaud Museum. (*Int*. 'Ringo washed a statue of himself.')

[3]See also Bruening (2006) for the case of reciprocals in Passamaquoddy, and Papangeli (2004) for the case where morphology plays a role in the possibility of dative reflexivization.

b. Ringo washed himself at the Tussaud Museum. (*Int*. 'Ringo washed a statue of himself.')

The same is reported to be the case in languages like Russian and Hebrew.

(30) Russian (Reuland & Winter 2009:77)
*Nedavno, posetivšij muzej, Ringo pomyl-s'a.
recently having.visited museum Ringo washed-REFL
Int. 'Ringo washed a statue of himself.'

(31) Hebrew
*Dan hitraxec.
Dan washed.REFL
Int. 'Dan washed a statue of himself.'

In contrast, languages like French, Serbo-Croatian, Czech, etc. are reported to allow a proxy interpretation in the reflexive.

(32) French (Labelle 2008:856)
Luc a pu s'admirer au Musée Tussaud.
Luc AUX can SE admire at-the Museum Tussaud
Int. 'Luc was able to admire a statue of himself.'

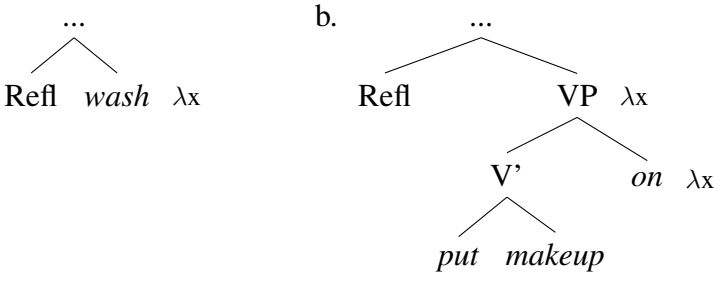
(33) Serbo-Croatian (Marelj & Reuland 2013:77)
Marko se pokrio na fotografiji.
Marko SE covered on photograph
Int. 'Marko covered the image of himself.'

(34) Czech (Reuland & Winter 2009:77)
Ringo se začal prohlížet.
Ringo SE started view
Int. 'Ringo started to look at a statue of himself.'

Interestingly, Reuland & Winter (2009) claim, assuming the split-lexicalist approach, that if the reflexive is derived through a lexical operation, it does not allow a proxy interpretation; whereas, if it is derived in the syntax, it does. If Reuland and Winter's claim is empirically correct, such a difference can be accounted for under the current approach in terms of the different strategies that the two types of languages employ to prepare a semantically open complement for Refl.

Specifically, in a language like English, the unsaturated variable is of the predicate itself or a percolated one.

(35) a. b.



In these cases, there is no possibility of any semantic alteration at all. What is not saturated at some lower level of a projection is exactly the same with that at its maximal level. Therefore, when the unsaturated variable is associated with that of active Voice by Refl, and an entity-denoting NP saturates both variables at the same time, only the strict identity should be allowed. The derivation involves a single NP that saturates both the variables.

In a language like French, on the other hand, the variable of the verb is associated with the external argument by Refl *through the mediation of Op*. So, something might affect the interpretation of the variable according to the properties of Op. In fact, it is reported that proxy readings occur with bound pronominals (Safir 2004; Reuland & Winter 2009). In the following examples, for instance, the bold-faced pronominals *he* and *she* in (36) and *he* in (37) can refer to a statue of their antecedent, i.e., *Fidel*, *Marlene*, or *every pop icon*.

(36) As they strolled through the wax museum, Fidel could not help thinking that **he** would have looked better in a uniform, and Marlene could not help thinking that **she** would have looked better without one. (Safir 2004:113)

(37) All of a sudden, every pop icon started taking off the shirt **he** was wearing. (Reuland & Winter 2009:73)

Importantly, the same appears to be the case for Op. For instance, in an example like (38), what Mary saw yesterday can be a statue of the former president that John ran into.

(38) (*Context*: Yesterday, Mary went to a wax museum and saw the statue of a former president. Today, John ran into the former president in the street.)
John ran into the former president Op_i that Mary saw t_i yesterday.

Given this, the possibility of a proxy interpretation in French-type languages is expected under the current approach. The reflexive in these languages involves Op, just as the *that*-relative in (38) does (Chomsky 1982, 1986; Chomsky & Lasnik 1993). In both cases, the possibility of a proxy interpretation can be attributed to the pronominal properties of Op that links between the abstracted-over variable and the original one.

4. Conclusion. In this paper, I have suggested that reflexivity of the naturally reflexive construction is encoded in the syntax through a universal reflexive element, Refl. The crosslinguistic variation of the reflexive then has been attributed to the different selectional properties of Refl in different languages. In particular, it has been claimed that a language like English has verb-selecting Refl, while a language like French has Voice-selecting Refl, and such a difference brings about the different patterns of the reflexive with respect to the productivity of reflexivization and the possibilities of ECM and dative reflexivization. I have also suggested that the possibilities of reflexive nominalization and a proxy interpretation are due to independent factors in grammar, i.e., the compatibility of a clitic with nominal morphology and the involvement of Op in the derivation of the reflexive, respectively.

Throughout the paper, it has been shown that the lexicon-syntax distinction is not only unnecessary but also inadequate for the analysis of the reflexive and its crosslinguistic variation. The current study, therefore, supports the view that the Lexicalist Hypothesis (Chomsky 1970) can and must be dispensed with in the theory of grammar suggested by Sadock (1980), Baker (1988),

Lieber (1992), Marantz (1997), Borer (2005), Ramchand (2008), and Bruening (2014, 2018b,c), among many others.

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