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The Self as Other
A Minimalist approach to *zich* and *zichzelf* in Dutch

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1. Identity in disguise: *zich* vs. *zichzelf* *

It has long been recognized that simplex and complex anaphors involve different syntactic configurations (Faltz 1977, Pica 1984, 1985, 1987, Everaert 1986, Reinhart & Reuland 1993). Such approaches nevertheless assume that e.g. the simplex anaphor *zich* 'self' and the complex anaphor *zichzelf* 'him/herself' in Dutch have a similar range of meanings as regards coreference with their antecedent. This is illustrated by the sentences in (1), where both anaphors appear to be in free variation. In these cases, the person washed or defended is the same as the washer or the defender, and this identity is indicated by coindexing *zich* and *zichzelf* with the subject.

- (1) a Sally_i waste zich(zelf)_i b Jan_i verdedigde zich(zelf)_i
 'Sally washed herself' 'Jan defended himself'

However, Voskuil & Wehrmann (1990a,b) observed that in sentences such as (2), the use of the complex or the simplex anaphor triggers a difference in interpretation. When *zich* is selected, the sentence means that Münchhausen pulled himself out of the swamp by holding on to a branch or a rope. Selection of *zichzelf* corresponds to Münchhausen's own, improbable, story, according to which he got himself out of the swamp by pulling at his hair. This interpretation results from a 'duplication' or 'Doppelgänger' effect where Münchhausen is at once the puller (*the self*) and the pullee (*the other*).

- (2) Münchhausen trok zich(zelf) uit het moeras. (Voskuil & Wehrmann 1990a,b)
 'Münchhausen pulled himself out of the swamp.'

Similar such effects can be sharpened in other cases, suggesting that it is far from idiosyncratic. The sentence in (3a) below, where only *zichzelf* is appropriate, should be understood against a 'Doppelgänger' background in which Sally and Freddy went to the

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identity, as ‘duplication’ effects seem to suggest, identity and (co)reference need to be viewed as decomposable, nonmonadic notions (cf. also Pica & Snyder 1997). Such a view involves an ‘internalist’ conception of identity and (co)reference (cf. Chomsky 1976, 1996). In this paper, we would like to make a modest contribution to this goal.

2. Identity as sliceability

We claim that the difference between *zich* and *zichzelf* can be derived from the linguistic representation of animate entities in terms of time-slices. In the philosophical and semantic literature, it is often assumed that individuals are to be viewed as spatio-temporal regions or ‘sausages’, composed of stages or time-slices (cf. Goodman 1951, Quine 1960, Carlson 1977, Hinrichs 1985). We will argue that the ‘duplication’ effects discussed above are the result of differences in the way *zich* and *zichzelf* are temporally identified with respect to the slices that their animate antecedents are composed of.

In order to achieve this goal, we need to elaborate on the spatio-temporal view on individuals. More specifically, we would like to argue that language encodes a difference between animate and inanimate NPs as regards the representation of time-slices. A strong argument in favor of this view can be found in the behavior of animate and inanimate DPs in subject positions. Subject positions reveal an interpretive difference between animate and inanimate NPs, as shown in (7) (due to Hoekstra 1991) and (8):

- (7) a John (just) stated that empty categories must be properly governed.
 b The ECP (*just) stated that empty categories must be properly governed.
 (8) a Nixon (just) gave Mailer a book. (Nixon = ‘animate’ Agent) (Oehrle 1976)
 b Nixon (*just) gave Mailer a book. (Nixon = ‘inanimate’ Cause)
 c The book (*just) gave Nixon an ulcer.

The contrast between the a-sentences and the b- and c-sentences shows that animate DPs can function as agentive subjects associated with punctual tense of the predicate, while ‘inanimate’ causal subjects in the same position seem to stativize the predicate. This contrast can be explained in terms of temporal slices (Hoekstra p.c), if we assume a difference in the linguistic representation of the time-slices (henceforth T-slices) of animates and inanimates which is operative at the level of TP. Subject positions are syntactically characterized by the feature [person] in AGR_S/T, absent in e.g. AGR_{OP}. The feature [person] is uniquely related to animacy. Hoekstra (in prep.) and Rooryck (1997) argue that only animate DPs possess a [person] feature. The apparent [3p] agreement of inanimate NPs is in fact default agreement triggered by the absence of [person].

We assume that the feature [person] is the morphosyntactic realization of the set of animate T-slices, informally represented as $\{t_1 \dots t_2 \dots t_n\}$. One might wonder how time-slices of animate and inanimate DPs differ in referential terms. In the ‘real world’, there does not seem to be any objective difference in the passing of time for animate and inanimate entities. Both cognitively and linguistically, however, such a distinction exists: thus if John states A today and not-A tomorrow, I still assume he is the same person. If the ECP stated A today and not-A in 6 months’ time, I would assume either of two things: (i) there are really two different conditions, ECP-I and ECP-II, or (ii) the ECP is an animate being, sliceable just like John (see Hoekstra 1991). Concerning (ii), the grammar routinely treats one and the same NP as either animate or inanimate, depending on the context. Thus the process of animisation may view inanimate NPs as sliceable (see the examples (14) through (17) below for discussion and illustration). The converse process can be observed in (8b), where an animate NP is treated as nonsliceable. Similarly, animate subjects of individual level predicates are presented as if the factor time, in the sense of internal temporal progression or sliceability, is inapplicable to them.

The above assumptions allow us to derive the difference between animate and inanimate DPs in (7) and (8). In Minimalist terms, the T-slices of animate DPs can be

checked by the feature [person] in AGR_S/T , while the T-slices of inanimate DPs cannot. Via checking, the T-slice of an animate DP that is simultaneous with sentential T ‘hooks up’ with that sentential T, allowing for punctual tense, and for the interpretation of the subject as an Agent at the interface. In the absence of such checking, T cannot be made punctual, and the predicate is stativized, resulting in an interpretation of the subject as a Cause. Thematic notions such as Agent and Cause are thus seen to derive to some extent from the analysis of the notion person in terms of T-slices. The concept of animacy or sliceability is thus, at least in part, responsible for certain properties usually associated with the thematic role of Agent (cf. Dowty’s 1991 Proto-agent properties, such as volition, agency, awareness, etc.). The latter is in fact a complex of properties, in part reducible to person, in part to properties of the structure, in particular the external argument position (see below for discussion of the relevance of this factor). The present approach is an attempt at decomposing the notion of Agent, thus eliminating it as a grammatical primitive, in accordance with the general precepts of the Minimalist program.

How does this approach apply to the difference between *zich* and *zichzelf*? We assume that anaphoric identity operates over animate T-slices. This allows for several forms of identity. We will argue that *zich* represents a simultaneous time-slice of its animate antecedent, while *zichzelf* involves identification with a set of time-slices of the antecedent. The latter type of temporal identification will be shown to derive the ‘duplication’ effects described in terms of spatial or temporal dissociation, with the Self appearing as Other.

3. Time slices and *zich*

We shall now proceed to establish a configurational representation of the interpretation of *zich*. We follow Everaert (1986) and Kayne (1988), who represent Dutch *zich* and Romance *se/si*, respectively, as clitic heads in an unaccusative configuration. Reinterpreting slightly, we propose that *zich* is an unaccusative head in T establishing a relation of identity between a time-slice of an animate DP in Spec AGR_S/TP , and a time-slice of the situation expressed in V. Featurewise, *zich* only has an interpretable [person] feature, representing an animate time-slice simultaneous with its host T. Reflexive *zich* is represented as in (10b), where the index T on *zich* should not be taken as an anaphoric index, but as an indication of the checking of simultaneity:

- (10) a Jan wast zich (scheert zich/kleedt zich aan/...)
 ‘John washes (shaves/dresses/...)’
 b NP [XP V [TP zich_T [tv t_{NP}]]
 |
 {t₁...t₂...t_T...t_n}

Convincing evidence for the status of *zich/ se/ si* as an unaccusative head comes from impersonals such as (9) in French:

- (9) a Il s’est lavé plusieurs personnes ici. b Plusieurs personnes se sont lavés ici.
 There SE is washed several persons here ‘Several persons washed themselves
 ‘Several persons washed themselves here.’ here’
 ‘Several persons were washed here’

The sentence (9a) can not only be interpreted as an impersonal passive (second translation), but also as an impersonal reflexive, parallel to (9b), which confirms an unaccusative source for the reflexive readings of (9).

This analysis has a variety of consequences. First, the locality of *zich* derives from the locality of Tense with respect to its subject. As a result, *zich* need not be subject to Principle A of the Binding theory, but to principles determining the locality of tense.

Secondly, the unaccusative structure accounts for the decreased agentivity of subjects with *zich* reflexives, exemplified in (11) through (13) (cf. also Ruwet 1972).

- | | | | | | |
|--------|-----------------------------------|---------------|---|--------------------------|---------------|
| (11) a | Freddy sneed zich. | [-volitional] | b | Freddy sneed zichzelf. | [+volitional] |
| | ‘Freddy cut himself.’ | | | ‘Freddy cut himself.’ | |
| (12) a | Sally amuseert zich. | [-volitional] | b | Sally amuseert zichzelf. | [+volitional] |
| | ‘Sally amuses herself.’ | | | ‘Sally amuses herself.’ | |
| (13) | Loes danste zich naar de top. | | | | [-volitional] |
| | Loes danste zichzelf naar de top. | | | | [+volitional] |
| | ‘Loes danced herself to the top.’ | | | | |

We adopt the conventional wisdom that internal arguments necessarily receive a nonagentive interpretation, whereas external arguments of transitive VPs can be interpreted as agentive (although they need not be, as (8b) shows). The configurational difference we postulate between *zich* reflexive predicates (unaccusative) and *zichzelf* configurations (transitive) accounts for the agentivity differences observed between them.¹ Volitionality is entirely absent in cases like (11a) and (12a), which feature a ‘happenstance’ and a psych-verb reading, respectively, since the reflexive predicate can come about ‘accidentally’. Likewise, (13) with *zich* presents the reaching of the top as an accidental by-product of the dancing, whereas *zichzelf* appears to imply that this was a deliberate plan on the part of the subject.² By contrast, washing oneself or defending oneself are activities that cannot come about accidentally, so that a volitional reading is forced, as in (1). Still, there continue to be subtle meaning differences between the *zich* and the *zichzelf* variants of (1) and related cases. Considering (1a) with *zich*, the washing experience is viewed as ‘holistic’, and the sentence can describe an event of passively undergoing a washing experience, e.g. in the case of an emperor routinely washed by his servants; in such a situation, *zichzelf* is ruled out. It seems that the difference in English between the presence and absence of a reflexive with *wash* points in the direction of a similar contrast. Summarizing, the construal of agentivity with reflexive predicates has to be negotiated at the interface as a function of the structure, the presence or absence of *zich*, and the meaning of the predicate itself.

This view has more general consequences for configurations involving movement of an internal argument to subject position.³ In passive structures such as *John is washed*, an identification similar to that of *zich*, and its resulting construal of (decreased) agency, must be prevented, since the subject of passives is never interpreted with any agentive property. This forces us to assume that in passive structures, the [person] feature in AGR_S/T is deactivated or absent. In view of our assumptions on the feature [person] (cf. supra), this does not appear as an unnatural move. We speculate that internal arguments never possess a person feature. Unaccusatives and passives represent the normal case, i.e. movement to the subject position does not affect this fact. By contrast, *zich* unaccusatives permit (in fact, require) an interpretation of a derived subject as ‘animate’. In a way, *zich* ‘opens up’ the time slices of the internal argument DP which is moved to subject position, thereby construing the potential for an agentive interpretation at the interface. Because of the fact that the subject of the reflexive originates as an internal argument, the thematic relation

¹ Kayne (1988) suggests that the agency of the subject of reflexive verbs arises from the fact that the subject controls an agentive PRO in SpecVP. This predicts that the subject of reflexive verbs should be as agentive as the subject of its transitive counterpart, contrary to fact.

² We are grateful to Rint Sybesma for pointing this out to us.

³ The unaccusative analysis also has implications for so-called ‘inherent’ reflexives, which never show up without their reflexive marker such as **(zich) schamen* ‘be ashamed’, **(zich) vergissen* ‘be mistaken’. Interestingly, these predicates always feature animate subjects in all of the languages we have been able to survey. They also involve a nonvolitional but nevertheless somewhat agentive, i.e. conscious, subject. We submit that these predicates are the result of a syntactic operation, and are not simply listed in the lexicon. As T. Hoekstra (p.c.) points out, the absence of *zich* in nominalisations (e.g. **de zich-schaamte* ‘the self-shame’) supports this point of view.

between the subject DP and the reflexive predicate will nevertheless be as ‘nonagentive’ as possible.

A further consequence of the analysis is that reflexive *zich* in T is only compatible with subjects possessing T-slices. These include animate DPs, but also any DP which can be interpreted at the interface as possessing animate-like T-slices. This leads to contrasts such as the following:⁴

- (14) a Er kondigt zich een storm/slecht weer aan.
 ‘A storm/bad weather announces itself.’
 b ?*Er kondigt zich een lagere dollarkoers aan.
 ‘A lower exchange rate of the dollar announces itself.’
- (15) a Het slechte nieuws/de nieuwe leer/de rook/het vuur verspreidde zich razendsnel.
 ‘The bad news/the new teaching/the smoke/the fire spread quickly.’
 b ?* Het zand/de rijstkorrels verspreidde(n) zich over de tafel
 ‘The sand/the rice spread across the table.’
- (16) a Het rode stipje verplaatste zich over het beeldscherm.
 ‘The little red dot moved across the screen.’
 b ?* Het glas verplaatste zich over de tafel .
 ‘The glass moved across the table.’
- (17) Mijn auto/??fiets/*mes gedraagt zich vreemd vandaag.
 ‘My car/bicycle/knife behaves strangely today.’

Significantly, the starred variants of (14) through (17) are acceptable to varying degrees under an interpretation of the subject as a living entity, e.g. in (14b) by construing the exchange rate of the dollar as an autonomously existing (i.e. ‘living’) thing with internal temporal progression.

Furthermore, the analysis proposed here predicts that the temporal structure of predicates interacts with the temporal properties of *zich* and *zichzelf*. More in particular, we expect the identifiable, simultaneous time-slice *zich* to be incompatible with predicates which are generally assumed to be devoid of differentiated time-slices, such as stative or individual level predicates. This prediction is borne out, as shown in (18).

- (18) a Freddy vindt zichzelf/*zich fantastisch. (individual level/ state)
 ‘Freddy considers himself fantastic’
 b Freddy kent zichzelf/*zich niet. (individual level/ state)
 ‘Freddy does not know himself.’
 c Suzy haat/apprecieert zichzelf/*zich. (individual level/ state)
 ‘Suzy hates/appreciates herself.’
 d Jan stelt zich/ zichzelf beschikbaar (stage level)
 ‘John makes himself available’

⁴ For reasons of space, we will leave the discussion of so-called ‘neuters’ or medio-passives as in (i-ii) (Ruwet 1972, Labelle 1992) for an expanded version of this article.

i. La dune se forme *sous l’effet du vent*. (‘neuter’, Ruwet 1972)
 ‘The dune is formed under the influence of the wind.’

ii. Il vit le mouchoir se rougir soudain. (Labelle 1992)
 ‘He saw the handkerchief become red suddenly.’

Ruwet’s (1972) ‘neuter’ predicates as in (i) involve a situation which arises from the intervention of an (explicit or implicit) ‘external’ force, italicized in (i). This ‘external force’ can be compared to the subjects in the a-sentences of (14) through (17). Translating this insight in our terms, the animate time-slices appear to be realized in an Instrumental adjunct. Labelle’s observation concerning (ii) is that it requires a reading where the reddening of the handkerchief is viewed as an autonomous, internally driven process, as is the case with the subjects in the a-examples of (14) through (17).

In some cases, the use of *zich* or *zichzelf* influences the aspectual interpretation of a predicate. In (19a), *bewonderen* 'admire' is a state, and consequently requires *zichzelf*. In (19b), the progressive forces an activity reading, and *zich* becomes possible.

- (19) a Richard bewondert Marie/zichzelf/*zich. (state)
 'Richard admires Mary/himself.'
 b Richard is zich(zelf) aan het bewonderen (voor de spiegel). (activity)
 'Richard is admiring himself (in front of the mirror).'

Viewing *zich* as a simultaneous time-slice influencing the aspectual reading of predicates also allows for an explanation of what are usually thought to be lexical idiosyncrasies. The verb *bedenken* 'think up' is a combination of the particle *be-* and the stative verb *denken* 'think' (Mulder 1992). It can be aspectually classified as an accomplishment, and carries the meaning 'create by thinking' as in (20ab). The meaning of the achievement verb *zich bedenken* 'to change one's mind' in (20c) is usually considered a lexical idiosyncrasy.

- (20) a Vanochtend heeft Teun iets schitterends bedacht. (accomplishment)
 'This morning Teun thought up something brilliant.'
 b David Bowie bedenkt zichzelf elk jaar weer opnieuw. (accomplishment)
 'David Bowie reinvents himself every year.'
 c Teun bedacht zich. (achievement)
 'Teun changed his mind.'

However, if *zich* is an unaccusative head referring to a simultaneous time-slice, the meaning of (27c) need not be idiosyncratic. Taken quite literally, it leads to the interpretation that at a particular point indicated by the simultaneous slice *zich*, Teun was recreated by his thinking. This meaning comes pretty close to the achievement meaning of *change one's mind*, which indicates a transition from one state of mind to another.

A further consequence of the analysis is that it comes close to an explanation for the observation that, crosslinguistically, 1st and 2nd person clitic pronouns often function both as anaphors and pronouns (21-23, 24ab), while 3rd person clitics do not (23, 24c). This discrepancy can be derived in the following way. 1st and 2nd person pronouns have deictic force, and are always interpreted with respect to the moment of speech. This is not the case for 3rd person pronouns which can remain stable in reference independent of the moment of speech. In that sense, 1st and 2nd person pronouns are very close to *zich*, which refers to a time-slice simultaneous with T. We would like to propose that when 1st and 2nd person pronouns are clitic, they are heads in T, which enables them to function in the same way unaccusative *zich* does. 3rd person pronouns are not able to function this way, since they do not share the property of referring to a simultaneous time-slice.⁵

- | | | |
|--------------------------------|----------------------------------|---|
| (21) a Ik was me /*mij. | (22) a Jij wast je /*jou. | (23) a Hij wast zich(zelf)/ *hem . |
| 'I wash myself.' | 'You wash yourself.' | 'He washes (him)(self).' |
| b Zij wast me /mij. | b Zij wast je /jou. | b Zij wast zich(zelf)/ hem . |
| 'She washes me.' | 'She washes you.' | 'She washes (her)self/him.' |
| (24) a Je me lave | b Tu te laves | c Il *le/se lave |
| 'I wash myself' | 'You wash yourself' | 'He washes (him)(self)' |

A final issue concerns the presence of *zich* inside PPs. The sentence in (25) shows that *zich* in PPs has the same interpretive effects with respect to 'duplication' as in unaccusative structures. The *zich* variant of (25) is only compatible with a situation in which Jan sees a snake beside his actual watching self, while the *zichzelf* variant is also compatible with a 'duplication' context in which Jan realizes that the video depicts him beside a snake:

⁵ Admittedly, this leaves unexplained the existence of those Germanic dialects in which 3rd person clitic *hem* 'him' does function as a reflexive. We have no explanation to offer at this point.

- (25) Toen Jan naar zijn vakantievideo keek, zag hij plots een slang naast zich(zelf).
 'When John watched his holiday video, he suddenly saw a snake beside himself'

Recall now that the configuration for reflexive *zich* in (10b) involves *zich* as a head in T. How can this representation be reconciled with the overt presence of *zich* inside a PP? We argue that *zich* in PPs covertly moves to T. This view is supported by facts of preposition stranding in Dutch. Zwarts (1998) observes that preposition stranding in Dutch is restricted, and makes a distinction between Type A prepositions (e.g. *naast/neven* 'beside', *achter* 'behind', *bij* 'with'); and Type B prepositions (e.g. *aangaande* 'concerning', *namens* 'on behalf of', *volgens* 'according to'). Type A prepositions allow stranding with an R-pronoun (*er/daar* 'there' *waar* 'where'), while Type B prepositions cannot be stranded. Interestingly, the restrictions on preposition stranding correlate with the possibility of having *zich*: Type A prepositions allow the presence of *zich*, while Type B prepositions require the use of *zichzelf*. This is illustrated in (26) with three semantically identical prepositions belonging to different Dutch dialects: the prepositions *naast*, *neven* 'beside' in (26) are Type A, while *benevens* 'beside' is Type B.

- (26) a Jan zag er een slang naast/neven/ *benevens.
 John saw there a snake beside ('John saw a snake beside it.')
- b Jan zag een slang naast/ neven/ *benevens zich.
 'John saw a snake beside himself'
- c Jan zag een slang naast/neven/benevens zichzelf.
 'John saw a snake beside himself'

We take this correlation to mean that Type A prepositions are transparent for covert movement of *zich* to T, while Type B prepositions are not.⁶

4. *Zichzelf* = *zich* + Focus marker *zelf*

4.1 Focus markers: *zelf* 'self' vs *alleen* 'only'

We propose that the interpretive 'duplication' effects of *zichzelf* are derivable from its morphological complexity. Morphologically, the anaphor *zichzelf* consists of *zich* and an element *zelf* which functions as a Focus-marker in the same way as English *himself* in a DP such as *Max himself*. These focus properties can be illustrated by comparing focus-related *zelf/ himself* with focus markers such as *alleen/ only*. Both *alleen/ only* and *zelf/ himself* resist indefinite DPs, as illustrated in (27) (cf. Moravcsik 1972):

- (27) a Alleen Sally /*niemand/*vele mensen leest/lezen *The Nation*.
 'Only Sally /*nobody/*many people read(s) *The Nation*.'
- b Sally /*niemand/*vele mensen zelf leest/lezen *The Nation*.
 'Sally /*nobody/*many people herself/ himself/themselves read(s) *The Nation*.'

In addition, both *alleen/ only* and *zelf/ himself* semantically involve a notion of scalarity with respect to the expectations of the speaker (Edmondson & Planck 1978). The second sentence of (28a) presupposes a hierarchical ranking within a set of people with the headmaster higher on the scale than the assistant. *Only* expresses the fact that the person who received you is lower on the scale than the one you expected. By contrast, *himself* in

⁶ This analysis offers no explanation for the fact that covert movement of *zich* does not trigger the presence of an R-pronoun, as is the case for overtly stranded prepositions. It is, however, plausible that covert movement out of PP is not subject to the same requirements as overt stranding of P in Dutch.

(28b) expresses the fact that the person receiving you is higher on the scale than the one you expected.⁷

- (28) a Did you see the headmaster? -- No, only the assistant received me.
 b I went to school today and guess what: the headmaster himself received me.

The focus behavior of *only* has been formalized by Bonomi & Casalegno (1994) and Szabolsci (1994) in terms of exhaustive identification of sets of events, as in (30):

- (29) a Only John did the dishes.
 b *Only-Focus as exhaustive identification of sets of events:*
 'Every event of x doing the dishes is identified with an event where John did the dishes.'

The formalization in (29b) derives the exclusion effect present in the interpretation of (29a) ('John, and not the others who were also expected to do the dishes') and of (28a) ('the assistant, and not the headmaster I expected to see') as a pragmatic effect, i.e. exhaustive identification of sets in (29b) yields exclusion of the (expected) complement set.

Let us now compare a case of *only*-focus and a case of *zelf*-focus. In (30a), *only* requires a focus-set of several dishwashing events involving several people who might do their own dishes. The fact that only John did the dishes is less than expected. In (30b), there is a single dishwashing event involving several expected dishwashers, and the fact that John did the dishes was more than expected.

- (30) a Only John did the dishes. (several dishwashing events)
 b John himself did the dishes. (several dishwashers)

The difference between focus-markers *alleen/only* on the one hand, and *zelf/himself* on the other, reduces to a difference in their scope over events and DPs, respectively.

Expressing this insight about the focal scope of *zelf* in terms of exhaustive identification of sets of DPs, we arrive at the following characterization of *zelf*-focus.

- (31) *Zelf-Focus as exhaustive identification of sets of DPs:*
 'Every x doing the dishes is identified with John'

Again, exhaustive identification yields pragmatic exclusion of the expected complement set: the interpretation 'John, and not the expected people lower on the scale' for (30b), and the interpretation 'the headmaster, and not the expected people lower on the scale' for (28b).

To conclude, this analysis views *only* as a marker of identification over events, and *zelf* is a marker of identification over animate DPs.⁸ The latter definition of *zelf* as a marker of identification over animate DPs amounts to viewing *zelf* as the nominal counterpart of the predicate *be*. The identificational role of *zelf* is well in line with other meanings of *zelf/self* as an NP in some Germanic and Romance languages, where *the self/le même* can refer

⁷ Similar observations were made by König (1991) for the behavior of Focus marker *even* vs. the use of *himself* as a Focus marker. *Even* and *himself* share the property of marking a higher level on the scale than what was expected. Interestingly, *even* in Dutch is expressed as a genitive-marked form of *zelf*: *zelfs*, while in French Focus marker *himself* and *even* are expressed by the same element: *même*.

⁸ Observe the curious fact that *zelf* as a marker of identification is restricted to animate DPs: *Het kopje (*zelf) is gevallen* 'The cup (itself) fell'. Similar restrictions apply to the Focus-marker *même* 'even/himself' in French: *La directrice (elle-) même est tombée* 'The director (herself) fell' vs. *La tasse (*elle-)même est tombée* 'The cup (itself) fell'. We have no explanation for this fact besides Postma's (1997) observation that *zelf* diachronically derives from a DP with inalienable possession (*zelf* = *se* + *lf* 'his body'). This still does not explain French *même*.

to that by which animate entities are identified. Importantly, this observation sheds light on the often noted and unexplained fact that, crosslinguistically, reflexive markers originate diachronically as NPs expressing inalienable possession such as body parts (Faltz 1977, Pica 1984, Postma 1997). If the primary synchronic function of *zelf* is to be a formal marker of identification over sets, it is not surprising that languages should grammaticalize NPs referring to body parts into formal grammatical markers of identity in Focus and Binding contexts. It is important not to misconstrue this conclusion: the fact that body parts identify a person ‘in the world’ does not in any way explain identification ‘in language’. The point is quite different: the linguistic representation of identification shares important formal properties in the domain of NPs expressing inalienable possession, Focus-markers, and Binding.

4.2 The focus marker *zelf* in the DP and the VP domains

Before going into the relationship between Focus *zelf* and the complex anaphor *zichzelf* (section 4.3.) we need to illustrate the unselective nature of *zelf* in Dutch. *Zelf* does not only occur as a (Focus) marker of exhaustive identification in the domain of DP, but also in the domains of VP and CP. It is important to establish the configurational representation of these cases. First, we will take a look at the behavior of *zelf* in the DP domain. A DP containing Focus *zelf* can occur in subject or object position as shown in (32ab). The representation in (32c) reflects the idea that *zelf* is the nominal counterpart of BE: it identifies its Spec (*Jan*) with its complement *pro*.

- (32) a Jan zelf heeft de afwas (met Sally) gedaan
 ‘Jan himself did the dishes (with Sally)’
 (i.e. Jan, and no one else)
- b Ik heb Jan zelf gezien
 ‘I saw John himself (and no one else)’
- c
-
- ```

graph TD
 Zelf-P --- DP1[DP]
 Zelf-P --- Zelf
 DP1 --- Jan
 DP1 --- Zelf-degree[Zelf°]
 Zelf-degree --- pro
 Zelf-degree --- Zelf-degree-t[Zelf°tpro]

```

In this structure, *pro* ranges over the set of people that can be predicated of the event, unlike *only*, which ranges over sets of events. Identification of *pro* with *Jan* is realized through agreement. Since *zelf* does not bear morphological markers for person, gender, and number, it cannot check the  $\phi$ -features of its Spec.<sup>9</sup> In order to achieve agreement with *Jan* in SpecZelf-P, *pro* adjoins to *zelf*. *pro* is overtly realized in English *himself*, French *lui-même*, where the pronouns do display person, number, and gender agreement with the DP in [Spec,Zelf<sub>i</sub>].

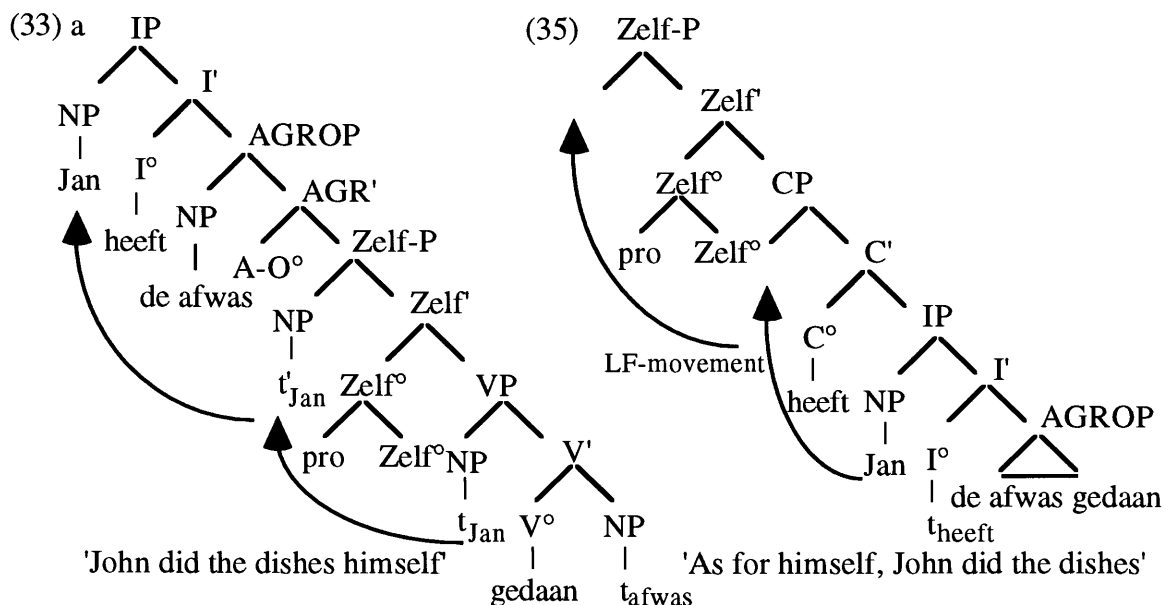
In the VP domain, *zelf* sits in a position below AGR<sub>OP</sub>. The sentences in (33a) show that this use of *zelf* does not resist indefinite DPs, as does DP-contained *zelf* in (27).<sup>10</sup> When modifying VP, *zelf* is in complementary distribution with a Comitative adjunct, as (33b) illustrates. The sentence (34a) shows that verbs which do not allow for Comitatives exclude *zelf*, as opposed to DP-contained *zelf* in (34b). The comitative use of *zelf* exhaustively identifies the VP as being predicated of Jan, thus pragmatically excluding other potential helpers. The sentence (35) shows that *zelf* can also occur in the CP domain, triggering V2. In this case, *zelf* does not range over DPs, but over a set of alternative events involving other people, as indicated.

<sup>9</sup> In English, and not in Dutch, *self* does bear agreement, but only in number (*himself/ themselves*).

<sup>10</sup> Again, a comparison with the event Focus-marker *alleen* ‘only’ is instructive. Unlike English *only*, the Dutch Focus marker *alleen* is unselective with respect to its domain, and can occur in DP and VP contexts: *Alleen Jan heeft de afwas gedaan* ‘Only John did the dishes’ vs. *Jan heeft de afwas alleen gedaan* ‘John did the dishes alone’.

- (33) a Jan heeft / niemand heeft / vele mensen hebben de afwas zelf gedaan.  
 'Jan did / nobody did / many people did the dishes (by) himself/ themselves.'  
 (i.e. without the help of anyone)  
 b \*Jan heeft de afwas zelf met Sally gedaan.  
 'Jan did the dishes himself with Sally.'
- (34) a Jan houdt (\*? zelf/ \*?met Piet) van Marie.      b Jan zelf houdt van Marie.  
 'Jan loves Marie (himself/ with Piet).                      'Jan himself loves Mary.'
- (35) Zelf heeft Jan de afwas (met Sally) gedaan.  
 'Independently of what anyone else did, John did the dishes (with Sally).'  
 'As for himself, John did the dishes with Sally'

For these instances of *zelf*, configurations fairly similar to that of (32c) can be adopted:



In both the VP and the CP domain, we assume that the subject passes through the Specifier of Zelf-P, achieving agreement with *pro* in the process. In the VP domain, movement through SpecZelfP is overt as in the representation of (33a): there is no particular cost associated with it, because movement to SpecIP is independently required for case and agreement. In the CP domain (cf. (35)) no such independent trigger for movement exists, and movement to SpecZelfP will be covert.

### 4.3 *Zichzelf* as an instance of *zelf* in the DP domain

We would now like to argue that the complex anaphor *zichzelf* should be analyzed as an instance of focus-marker *zelf* in the DP domain. Such an analysis is highly desirable from a theoretical perspective, since a morphosyntactic correlation between Focus-markers and (heavy) reflexives is crosslinguistically widely attested in languages ranging from French to Tamil (Moravcsik 1972, Levinson 1991). Recall our analysis of the extended DP structure *Jan zelf* as in (36).

- (36) a Jan zelf heeft de afwas gedaan      b [ZelfP [DP Jan] [[*pro*] zelf]<sub>t<sub>pro</sub></sub>]  
 ‘Jan himself did the dishes’  
 c *Zelf-Focus ranges over DPs (pro)*:  
*zelf* exhaustively identifies any potential animate DP doing the dishes  
 (represented by *pro*) with *Jan*

We assume an almost identical analysis for *zichzelf* as in (37b), with some differences.

- (37) a Jan heeft zichzelf gewassen  
 ‘Jan washed himself’  
 b [TP Jan [T<sub>i</sub> heeft] [AGROP [ZelfP [zelf<sub>i</sub>[*zich*] zelf] t<sub>zich</sub>] AGRO<sub>i</sub> gewassen]]  
 ▲ covert movement of *zich* to T ▲

A first difference with (36b) is that *zich* in (37b) takes the place of *pro* incorporating into *zelf*. Secondly, SpecZelfP is empty in *zichzelf*. In order to ensure identification as a time-slice, nominal time-slice *zich* covertly moves to T<sub>i</sub>. In a way, there is a complementary distribution between the emptiness of SpecZelfP and movement of *zich* in *zichzelf*. Let us briefly see how. Recall that *zelf* requires identification between its complement and something else. In (36b), this requirement on identification is satisfied through identification of complement *pro* with *Jan* in SpecZelfP. In (37b), *zelf*'s requirement on identification cannot be satisfied through identification of *zich* with an element in SpecZelfP as it is empty. However, since *zich* moves to T<sub>i</sub> for independent reasons (checking of its time-slice feature), the chain thus created makes another element available for the identification requirement of *zelf*, more precisely the DP *Jan* in SpecTP.

We can conclude that syntactic identification of *pro* and *zich* with their antecedent in the configurations (36b) and (37b) comes about in essentially the same way. The semantic interpretation of *zichzelf* in (37a) must also be derived in the same way as the semantic interpretation of Focus marker *zelf* in (36c). Since *zich* takes the place of *pro* in the configuration, *zich* must be interpreted like *pro* as a set which is exhaustively identified with its antecedent. However, while *pro* arguably is a DP interpreted at the interface as an entity, *zich* semantically is a time-slice. Differently from *pro*, *zich* does not represent a set of DPs, but a set of time-slices. Consequently, the interpretation of (37a) is as in (38):

- (38) *Zelf-Focus ranges over temporal slices (zich)*:  
*zelf* exhaustively identifies any potential temporal slice t<sub>x</sub> that is washed  
 (represented by *zich*), with the temporal slices {t<sub>1</sub>...t<sub>2</sub>...t<sub>n</sub>} contained in the DP *Jan*.

Note that this interpretation has a formal structure identical to that of (36c).

As a result of the focalizing nature of *zelf*, the use of *zichzelf* necessarily involves a type of reflexivity which involves a set of time-slices. By contrast, our analysis of the simplex anaphor *zich* makes crucial use of the idea that *zich* involves a single simultaneous time-slice to establish reflexivity. Before going into an explanation of how this difference can account for ‘duplication’ effects noted in section 1, it is fair to ask how this difference bears on cases such as (1), repeated here, where at first sight there does not seem to be any difference in *temporal* interpretation that corresponds to the use of *zich* or *zichzelf*.

- (1) a Sally waste zich(*zelf*)      b Jan verdedigde zich(*zelf*)  
 ‘Sally washed herself’      ‘Jan defended himself’

Our account of *zich* as a simultaneous time-slice, and *zichzelf* as a set of time-slices predicts that there be a difference between, put simplifyingly, washing or defending predicated of a simultaneous time-slice, and washing or defending predicated of several time-slices of the antecedent. We would like to contend that there is such a difference,

although it is in part masked by the specific predicates in (1). In the case of *wash*, potential differences in temporal interpretation between the washer and his body being washed are largely masked by the nature of the predicate. Since washing involves a different slice (body-part) of oneself as the activity goes on, every time-slice of the antecedent involved in washing will correspond to a different body-part, and vice versa. This means that there is no way of telling apart what counts as a simultaneous time-slice or a set of time-slices.

The case of *verdedigen* 'defend' in (1b) is more promising: when *zich* is used, the interpretation of *verdedigen* 'defend' refers to a defense in response to an immediate attack, while the use of *zichzelf* is also compatible with an interpretation in which Jan defends a decision taken previously. Already, this interpretation affords a glimpse of 'duplication' effects, to the extent that Jan's previous self is spatio-temporally different from the self that is taking care of the defense. In our view, the fact that *zichzelf* refers to a set of time-slices allows for a wider range of reflexive interpretations.

The cases involving 'duplication' discussed informally in section 1 receive a similar analysis. 'Duplication' arises as a side-effect of the requirement that *zichzelf* refer to a set of time-slices of the antecedent. When Münchhausen pulls himself out of the swamp with a rope, this event is true of a single time-slice of Münchhausen. The 'duplication' effect arises as an attempt to interpret what it might mean for Münchhausen to pull his own set of time-slices, in other words his entire self, out of the swamp. The fact that *zich* refers to a simultaneous time-slice explains the restrictions in (3): although Sally looks like Freddy and vice versa, they certainly do not represent each other's simultaneous time-slices, but rather a spatio-temporally different manifestation of each other. Hence, only *zichzelf* is possible since this form can refer to nonsimultaneous, temporally dissociated time-slices. In (3b), only *zichzelf* can refer to Dorian Gray's nonsimultaneous time-slices. The sentence (4b) is only felicitous with *zichzelf* for the same reason: the video recording requires reference to nonsimultaneous time-slices which can only be made available by *zichzelf*. The sentence (4a) appears as a case in which the differences between *zich* and *zichzelf* are masked. In (5), *zich* imposes a reading of simultaneity, while *zichzelf* forces a reading with a spatio-temporally different self. This is the result of seeing or hearing one's own set of time slices, i.e. one's entire self, acting independently.

The sentences in (39) provide some additional cases in which the meaning of the predicate is such that it cannot accommodate an interpretation involving a simultaneous slice of the subject. In (39a), translating can only involve the author's completed work, i.e. a different, nonsimultaneous, time-slice of himself; in (39b) outrunning necessarily involves a previous record, again requiring a temporally nonsimultaneous time-slice.

- (39) a García Márquez heeft zichzelf/ \*zich nooit vertaald.  
 'García Márquez never translated himself.'  
 b Marie-José Percé heeft zichzelf/ \*zich weer eens voorbijgelopen.  
 'Marie-José Percé outran herself once again.'

We have thus answered the question raised with respect to the generalization in (6) as to why 'duplication' effects arise with certain predicates and not with others. In our view, 'duplication' effects are not an idiosyncratic property of certain uses of *zichzelf*. Rather, *zichzelf* refers to a set of time-slices of the antecedent as a result of the operation of exhaustive identification imposed by the focus-marker *zelf* on time-slice *zich*.

#### 4.4 The distributive effects of *zichzelf*

Certain interpretive effects of the *zich/ zichzelf* distinction are related to distributivity, and do not involve 'duplication' in the sense defined above. This shows that 'duplication' is only one among several effects of the behavior of time-slice set *zichzelf*. Reuland (1996) has observed that there are differences between *zich* and *zichzelf* with respect to collective or distributive interpretations of plural antecedents. In (40), it appears

that *zich* can be interpreted with either a collective (one flag for all soldiers) or a distributive interpretation (one flag per soldier), while *zichzelf* is only compatible with a distributive interpretation. Similar distributive effects obtain in (41).

- (40) a De soldaten plaatsten een vlag achter zich. (distributive/collective)  
 ‘The soldiers placed a flag behind them.’  
 b De soldaten plaatsten een vlag achter zichzelf. (distributive/\*collective)  
 ‘The soldiers placed a flag behind themselves.’
- (41) a De soldaten verdedigden zich tegen de krijgsauditeur. (distributive/collective)  
 ‘The soldiers defended themselves (individually/as a group) against the prosecutor’  
 b De soldaten verdedigden zichzelf tegen de krijgsauditeur. (distributive/\*collective)  
 ‘The soldiers defended themselves (individually/as a group) against the prosecutor’

We would like to argue that this distributive effect can be immediately derived from our analysis. First, it should be observed that the notion of distributivity is built into our formulation of exhaustive identification of time-slices in (38): any potential time-slice  $t_x$  is identified with a time-slice in the antecedent. The distributivity effects noted apply only to plural animate DPs. In semantic terms, it would be natural to conceive of plural animate DPs as sets of sets of time-slices. If we assume that this complex semantic structure is preserved in the function applying exhaustive identification of time-slices to the antecedent, distributivity is immediately accounted for.<sup>11</sup>

## 5. Conclusions

We have argued that a finer-grained notion of (co)reference in terms of time-slices provides an insight into the semantic differences between simplex and complex anaphors in Dutch. These differences result from the interaction of the semantics of time-slice *zich* with different syntactic configurations. The semantics of simplex *zich* is derived from its status as a functional head in T. The semantics of *zichzelf* mirrors its syntactic complexity. *Zelf*, a Focus-marker in constructions such as *Jan zelf* ‘John himself’, plays the same role with respect to time-slice *zich* in *zichzelf*, deriving its various interpretive properties.<sup>12</sup>

The spirit, if not the execution, of this analysis is minimalist in nature: morphosyntactic elements (DPs, the ‘temporal slice’ element *zich*, the Focus-element *zelf*) are interpreted at the interface in the context of their particular configuration. In accordance with Chomsky (1995), indices can be eliminated from Binding theory. In our analysis, these are replaced by mechanisms of syntactic and semantic identification.

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<sup>11</sup> The fact that *zichzelf* is incompatible with collective readings also explains the observation that collective predicates such as *verzamelen* ‘gather’ cannot be combined with *zichzelf*:

i. De soldaten verzamelden zich/?\*zichzelf.  
 ‘The soldiers gathered/ ?\*The soldiers gathered themselves.’

Moreover, the distributivity of *zichzelf*, derivable from its semantic formalization, invites a comparison with ‘bound variable’ readings of pronouns, where the quantifier in the antecedent plays a similar role.

<sup>12</sup> The analysis can be extended to middles which involve reflexive clitics in Romance (e.g. Labelle 1992) and Germanic (cf. Heerlen Dutch, Hulk & Cornips 1996). We speculate that middle *zich* is generated not in  $T_j$ , but in  $Asp_j$ , thus deriving aspectual differences between middles with and without *zich*.

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