

Reflexive Constructions in German, Spanish, and French as a Product of Cyclic Interaction

German *sich* (1, 2) and Spanish *se* (4, 5) can have a reflexive or an anticausative interpretation but only Spanish *se* (6) can have a passive reading while German *sich* cannot, as in (3).

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| (1) Hans wäscht sich.
Hans washes self
"Hans washes himself." | (2) Die Tür öffnete sich.
the door opened self
"The door opened." | (3) *Die Wohnungen verkauften sich.
the flats sold selves
Intended: "The flats were sold." |
| (4) Juan se lava.
John Refl _{se} washes
"John washes himself." | (5) Se abrió la puerta.
AntiC _{se} opened the door
"The door opened." | (6) Se vendieron los pisos.
Pass _{se} sold the flats
"The flats were sold." |

We argue that Spanish Pass_{se} is the result of interaction between two linguistic cycles (Bahtchevanova & Van Gelderen 2016). We make two claims: i) *pro* merges in Spec, Voice in Pass_{se}, following MacDonald (to appear), due to the subject agreement cycle; and ii) *se* heads Voice due to the reflexive (*se*) cycle. Different *se* types are derived by the presence or absence of *pro* and *se*'s status as a head or a DP. The types of constructions a language has depends on whether it has *pro* and whether it has grammaticalized the reflexive pronoun as inflection.

The reflexive cycle: Crosslinguistically, reflexive pronouns are grammaticalized as valency-marking morphology on the verb (Faltz 1985, Haspelmath 1990, *i.a.*). This cycle takes a full DP reflexive pronoun and turns it into a Voice head (Van Gelderen 2011, Maddox 2016). In German, this cycle has not taken place since, following Schäfer (2008), *sich* is an independent DP that has free word order status, abstract case, and selects the *have* auxiliary rather than *be*, showing that it is an argument in Spec, Voice. In Spanish, the cycle is complete. The pronoun *se* came from Latin. Maddox (2016) argues based on movement, coordination, modification, and auxiliary selection that *se* underwent grammaticalization whereby it changed from a full DP pronoun in Latin and Old Spanish (OS) to a D-head in Middle Spanish (MidS) to a Voice head in Modern Spanish (ModS). That *se* heads Voice or a similar projection is independently claimed by others such as Cuervo (2003, 2014), Folli & Harley (2005), *i.a.* Latin *sē* has the distribution of a DP: it can be coordinated, separated from the verb via XP-movement (7) and modified (8).

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| (7) mē et sē hīsce impedīvit nuptiīs!
me and Refl _{se} this shackled marriage | (8) sē ipse ... dēfenderet.
Refl _{se} very.M.S defended |
| "He shackled me and himself in this marriage!" | "He defended his very self..." |

Previous scholars (Rivero 1986, Fontana 1993, *i.a.*) have argued that separation from the verb, "interpolation," is evidence for *se* as a DP in OS. Further support comes from auxiliary selection following McGinnis (2004). In OS, unaccusatives select the *be* auxiliary (9) while reflexives select *have* (10), suggesting transitive syntax in the latter. Thus, *se* is still a DP argument in OS.

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| (9) Minaya Alvar Fáñez essora es llegado.
Minaya Alvar Fáñez then is arrived | (10) quando el se ha echado en tierra...
when he Refl _{se} has thrown on ground |
| "Minaya Alvar Fáñez then arrived." | "...when he has cast himself to the ground..." |

In MidS, interpolation is lost. Auxiliary selection patterns as in OS (Aranovich 2003), so *se* is still a DP that moves as a D-head/determiner clitic. In ModS, *se* is inflection (Maddox 2016).

The subject agreement cycle: Subject agreement affixes are grammaticalized from subject pronouns (Givón 1976, Lambrecht 1981, Jelinek 1984, Van Gelderen 2011). Spanish subject affixes from Latin and German subject affixes from Old High German are from Proto-Indo-European pronouns (Bopp 1857, Shields 1992). The subject cycle has three stages. At stage (a), the pronoun is a DP that moves to Spec, T to contribute interpretable ϕ -features. At stage (b), it is reanalyzed as a D-head and feature loss begins. At stage (c), it is reanalyzed as uninterpretable

φ-features on T, triggering another element to merge. This “renewal” restarts the cycle. Spanish is at stage (c): there is subject agreement on the verb and the pronouns are full DPs; i.e., they can be coordinated (11), modified and be separated from the verb, as in (12). Crucially, the affix can be doubled by an overt pronoun or *pro* (13); i.e., renewal. Thus, having *pro* licensed by agreement in the sense of Rizzi (1982) is a result of the subject agreement cycle.

(11) Tú y yo somos amigos. (12) Yo mismo no quiero ir. (13) Tú / (*pro*) com-es
 you and I are friends I myself not want-1.S to-go you *pro* eat-2S
 “You and I are friends.” “I myself do not want to go.” “You eat.”

Since German is a partial null subject language (D’Alessandro 2014), it has gone through this cycle as well. German has *pro*, but this is only one of the ingredients needed to make passive *se*.

Cyclic interaction: We adopt MacDonald’s (to appear) structures for AntiC_{se} and Pass_{se}:

(14) AntiC_{se}: [VoiceP Voice_{se} [VP DP]] (15) Pass_{se}: [VoiceP *pro* Voice_{se} [VP DP]]

se as Voice head (due to the reflexive-cycle) and *pro* in Spec, Voice (due to the subject agreement cycle) in Pass_{se} in (15) is a type of cyclic interaction. *Pro* is in Spec, Voice in Pass_{se} because of renewal. It is absent in AntiC_{se}. In both, *se* heads Voice. The difference reduces to distinct configurations of *se* (Voice) and the presence or absence of *pro*. Two predictions fall out of this: A) languages that have not grammaticalized the reflexive as a Voice head may have AntiC_{se} but will not develop Pass_{se} due to the reflexive occupying Spec, Voice; B) a language that lacks subject agreement affixes of the kind that license *pro* per Rizzi (1982) will not develop Pass_{se} even if *se* heads Voice since there is no *pro* to merge in Spec, Voice; i.e., no renewal.

Both predictions are consistent with the data. German *sich* is a full DP and not a Voice head (Schäfer 2008). It merges in Spec, Voice and thus *pro* cannot merge there, as in (16):

(16) German: [VoiceP *sich* Voice [VP DP]] (17) Latin: [VoiceP *sē* Voice [VP DP]]

In Latin, a null subject language, *sē* was a full DP, but it only had Refl_{se} (see 7 and 8) and AntiC_{se} as in (18) below (Geniušienė 1987). While Latin did have *pro*, it could not merge in Spec with anticausatives since *sē* was there (17). Pass_{se} developed in Late Latin/early Romance (Cennamo 1999, Adams 2013), when *se* begins to be reanalyzed as a head. This explains the presence of Pass_{se} in early Spanish texts, despite interpolation showing that, for some speakers, *se* was still a full DP. In Latin, interpolation with *sē* was frequent while in OS, it was rare (Maddox 2016), suggesting reanalysis as a head was still in progress but almost complete in OS.

(18) dum calor sē frangat. (19) Les pieds (**pro*) se bougent sur la piste de danse.
 while heat AntiC_{se} breaks the feet *pro* Pass_{se} move on the floor of dance
 “While the heat breaks...” “One moves one’s feet on the dance floor.”

French appears to contradict our second prediction since it has Refl_{se}, AntiC_{se}, and Pass_{se}, as in (19) above. However, Pass_{se} existed in Old French (Cennamo 1993), which was a null subject language (Roberts 1993, Vance 1997), so *pro* could merge in Spec, Voice in Pass_{se}. Thus, French is actually consistent with our prediction: it developed Pass_{se} at a time when it had subject *pro* and *se* as Voice head. Pass_{se} survived into Modern French as a historical remnant of Old French.

References: Bahtchevanova, M. & E. van Gelderen. 2016. The interaction between the French subject and object cycles. In E. van Gelderen (ed.), *Cyclical Change Continued*. Amsterdam: John Benjamins. Geniušienė, E. 1987. *Typology of Reflexives*. Berlin: Mouton De Gruyter. Schäfer, Florian. 2008. *The Syntax of (Anti-)Causatives*. Amsterdam: Benjamins. Shields, K. 1992. *A History of Indo-European Verb Morphology*. Amsterdam: John Benjamins. **Diachronic data:** (7), Terence, *Phormio*, 2.4; (8), Caesar, *de Bello Gallico*, 20.5; (9) *Cid*, l. 2449; (10), Ferrer Sayol, *Libro de Pallado BNM 10211*, para. 115; (18), Cicero, *De oratore* 1.265.