## Unergative frames for non-argument SE verbs: a case study

The modern Romanian verb  $r\hat{a}de$  'laugh' displays three inflectional patterns, the latter two in non-standard varieties: active voice (1a), non-argumental reflexive voice with an Accusative (1b), and with a Dative (1c). The PP-de encoding the goal is obligatory in (1c) but not in (1a,b).

- (1) a. *Maria* râde (de mine).

  Maria laughs at me 'Maria is laughing at me.'
  - b. Maria **se** râde (de mine).
    - Maria REFL.3.ACC laughs at me 'Maria is laughing at me.'
  - c. Maria **își** râde de mine

Maria REFL.3.DAT laughs at me 'Maria is laughing at me.'

In this paper, we argue that: (i) all variants of 'laugh' in (1) are unergative, which is a challenge for current analyses of reflexive constructions as either unaccusative or transitive (Grimshaw 1982, Reinhart & Siloni 2005, Labelle 2008, Armstrong 2013, Sportiche 2014, etc.); (ii) the reflexive pronouns in (1b, c) are merged inside vP as operators on events (see also Borer 2005); (iii) they exhibit further sub-classes in the typology of non-argumental SE/SI, as they cannot be equated with either the Agentive types nor the Transitive types in Armstrong's (2013) dichotomy. Hence, not only v (Voice) qualifies as a '(default) delimiter' on events (Ritter & Rosen 2000 a.o.), but also ApplP (Dat refleixve) and IntensP (Acc reflexive) which can act as event operators. For the technical implementation, we proceed to a further decomposition of the unergative frame in Hale & Keyser (1992), as indicated by tests applied to our reflexive delimiters. Unergativity tests. In syntax, the lack of a direct object position for active  $r\hat{a}de$  is visible in (2a, b), respectively: this predicate cannot occur with 'be' auxiliaries or with a past participle.

(2) a. \*Maria era râsă. VERSUS ok. Maria era plecată/căzută.

Maria was laughed Maria was gone/fallen 'Maria was gone/fallen.'

b. \*O consider râsă. VERSUS ok. O consider plecată/căzută. her consider.1sg laughed her consider.1sg gone/fallen 'I consider her gone/fallen.'

The standard unergativity tests are unavailable for Romanian reflexives (i.e., auxiliary selection, extraction of partitive pronouns, object agreement), so we rely on **semantic** testing: **i**) First, as indicated in the translation of (1), the presence of the reflexive pronouns  $se/\hat{i}si$  is optional on unergative  $r\hat{a}de$ , insofar as they do not change the meaning (the event). Nuances arise regarding the language register (with se  $r\hat{a}de$  as lowest in substandards), the encoding of the beneficiary, which is implicit in active/Acc reflexive  $r\hat{a}de$  but spelled out in the Dat reflexive variant, as well as implicatures of willful intent with the Dat variant. **ii**) Second, as opposed to non-argumental se constructions in Spanish (Armstrong 2013, Nishida 1994, Sanz 2000), but similarly to the Hebrew non-selected datives (Borer 2005), none of these variants pass telicity tests when submitted to Vandlerian diagnosis. They instead conform to an aspectual composition generally assigned to unergative predicates (Hale and Keyser 1992); i.e., the presence of in- delimiter induces uniform ill-formedness (3), where 'They laughed for an hour' is ok but \*'They laughed in an hour' is not.

(3) a. **S-/ Şi-**Au râs de noi timp de o oră/ \*într-o oră.  $SE_{ACC}/SE_{DAT}$ -have laughed at us time of an hour/ in an hour

**iii**) Third, although the predicate under each of the alternations in (1) is not completely deficient aspectually (i.e, it does not behave like predicates which fail both atelicity and telicity tests) the telic *in*-phrase is blocked even under inchoative readings.

<u>Analysis</u>. We start from the premise that unergative frames involve the conflation of a light predicate (V) with the DP object (Hale & Keyser 1992 a.o.) and the entire predicate projects the external argument (in Spec,vP). While this grasps the syntax of active *râde* (1a), it cannot account for the presence of reflexive pronouns (1b, c): why and where are the reflexive pronouns merged in such a frame? For clues, we consider the syntactic/semantic differences detectable in the relevant constructions; i.e., binding of anaphors (4) and intensification/exclamatives (5):

- (4) a *Maria* **îşi**<sub>k</sub> râde de ea însăşi<sub>k</sub>.

  Maria REFL.3.DAT laughs at her self 'Maria is laughing at herself.'
  - b. \*Maria  $se_k$  râde de ea însăşi $_k$ .

    Maria REFL.3.ACC laughs at her self
- (5) a. Ce m-am mai râs de voi! what REFL.1SG.ACC=have.1SG more laughed at you 'I've been laughing so much on your account!'
  - b. \*Ce **mi**-am mai râs de voi! what REFL.1SG.DAT=have.1SG more laughed at you

Dat reflexives can bind anaphoric pronouns inside PP, whereas Acc reflexives cannot. The latter may derive exclamatives and intensifiers, whereas the former cannot. Active râde can derive both structures. We relate these contrasts to the way various operators on events are implemented in the argument structure; i.e., either lexically (the properties of v) or functionally (see Ritter & Rosen 2000 for defining Voice as a delimiter). In our case study, the functional delimiters are the reflexive pronouns, which spell-out two distinct operators merged low (inside vP) – an Intens projection and an Appl projection. More specifically, (5a) indicates that Acc se has intensifier properties (see Goledzinowska 2009 for inherent intensifier 'se' predicates across Slavic), spelling out an Intens head. We assume the structure in (6). The optionality of the PP (1b) indicates that it is merged as an adjunct to  $\nu$ P, hence deriving impossibility of binding (4b):  $(6)[_{vP}PP-de\ ea\ \hat{i}ns\check{a}si_k[_{vP}\ Maria_k\ [_{v}\ r\hat{a}de\ [_{Intens}P\ <Maria>\ [_{Intens}\ se_k[_{VP}\ <r\hat{a}de>\ V/DP(conflated)]]]]]]$ Another way of introducing an event operator is through ApplP (the Dat reflexive), which is in complementary distribution with se in this context. Impossibility of a possessive reading as well as the ban on a cooccurring (argumental) dative with this ApplP (\*Maria și-a râs mamei – Maria SEDAT laughed her motherDAT) indicates that it is not sister to V (Pylkkanen 2002, 2008), but a 'higher' ApplP, generated above the obligatory PP-goal, as in (7). The hierarchy allows for binding anaphors (4a), while competition for the  $\theta$ -role explains the complementary distribution with IntensP. The ungrammaticality of (5b) indicates that the 'delimitation' function does not reside with v in this construction, but with ApplP, analyzed as functionally equivalent to IntensP. (7)  $[_{\text{VP}} Maria_k [_{\text{V}} r\hat{a}de [_{\text{ApplP}} < \text{Maria} > [_{\text{Appl}} \hat{i}si_k [_{\text{VP}} PP-de ea \hat{i}ns\check{a}si_k [_{\text{V}} V/DP(conflation)]]]]]]$ For (6)/(7), VSO in Romanian further involves movement of the subject to CP/TopP, and of the verb and preverbal clitic pronouns to T (V-oriented clitics).

<u>Conclusions.</u> These data illustrate a SE alternation paradigm which has not been previously analyzed in detail, and confirm that the split Agentive/Transitive (Armstrong 2013) is not typologically sufficient. The binding facts in turn also i) argue against complex predicate accounts which see SE as a predicate merged with V (see Armstrong 2013 for discussion); ii) demonstrate that event operators with non-argumental SE are not necessarily merged high, outside *v*P (as in Borer 2005, Sanz 2000, Boneh and Nash 2011, a.o.).