Rigid Syntax, Rigid Sense: Absolutes/Unaccusatives as Evolutionary Precursors

Ljiljana Progovac
Wayne State University

Rigid Syntax generates structures which cannot be manipulated by Move or recursion and which often show formulaic/non-compositional semantics. Evidence of Rigid Syntax is typically found among intransitive constructions, specifically among unaccusative and absolutive-like constructions. This paper postulates a stage in the evolution of syntax at which only intransitive absolutive patterns were available, that is, patterns in which a verb takes only one argument, and in which the distinction between subjects and objects is neutralized. In this view, transitivity is taken to be an evolutionary innovation, an additional layer of structure superimposed upon the foundational (absolutive) layer. This approach sheds light on the existence of two distinct case marking systems in the world languages, as well as on the availability of the foundational absolutive-like pattern in various guises in Nom/Acc languages.

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1 Rigid Syntax

One good example of Rigid Syntax at work can be found among root unaccusative (small) clauses (U-SCs) in Serbian (1), formed with perfective participles, but without a finite auxiliary verb. Unaccusatives can be roughly characterized as intransitive structures which blur the boundary between subjects and objects in the sense that their only argument, typically theme, shows properties of both (see e.g. Perlmutter 1978 and Burzio 1981 for crosslinguistic manifestations and characterizations). In Serbian, e.g., there is a preference for unaccusative subjects to follow the verb, the position typically associated with objects. With U-SCs in (1) this preference becomes rigid, essentially requiring the otherwise non-canonical VS order (see Progovac 2008a for details):

(1) a. Stigla pošta. (cf. *Pošta stigla.)
   ‘The mail has (just) arrived.’

b. Pala vlada. (cf. ?Vlada pala.)
   ‘The government has (just) collapsed.’

c. Umro Petar. (cf. ?Petar umro.)
   ‘Peter just died.’

d. Pao sneg/ mrak. (cf. ?Sneg pao./?Mrak pao.)
   ‘It has just snowed./It got dark.’

Among U-SCs, many are formulaic/rigid/non-compositional in meaning:

e. Pala karta. (cf. *Karta pala.)
   ‘Card laid, card played.’

f. Proš,o voz. (cf. *Voz proš,o.)
   ‘The opportunity has passed.’

g. Pukla tikva. (cf. *Tikva pukla.)
   ‘The friendship/alliance has ended.’
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The full (non-rigid) counterparts feature the finite auxiliary *je*, as well as free word-order (2a–d). However, formulaic readings do not survive expansion into full clauses, as shown in (2e–g):

(2)  

a. Poštta je stigla. / Stigla je poštta.  
   ‘The mail (has) arrived.’

b. Vlada je pala. / Pala je vlada.  
   ‘The government (has) collapsed.’

c. Petar je umro. / Umro je Petar.  
   ‘Peter died.’

d. Sneg je pao. / Pao je sneg.  
   ‘It snowed.’

   Mrak je pao. / Pao je mrak.  
   ‘It got dark.’

e. Karta je pala. / Pala je karta.  
   ‘The card fell.’ (literal meaning only)

f. Voz je prošao. / Prošao je voz.  
   ‘The train is gone.’ (literal meaning only)

g. Tikva je pukla. / Pukla je tikva.  
   ‘The squash has burst.’ (literal meaning only)

While the clauses in (1a–d) are not formulaic/rigid in the same way as those in (1e–g) are, they still can express only a limited range of meanings: for example, they are limited to the here and now, and thus cannot be modified by an adverbial such as *pre tri godine* ‘three years ago’:

(3)  

a. *Pala vlada pre tri godine.

b. *Umro Petar pre tri godine.

c. *Pao sneg pre tri godine.

This property is shared with English root small clauses, which are also often formulaic (see e.g. Progovac 2006):

(4)  

a. Case closed (*three years ago).

b. Point taken (*three years ago).

c. Problem solved (*three years ago).

d. Me first (*three years ago).
Root small clauses, including U-SCs, have been analyzed as lacking a TP projection, which would explain the pragmatic rather than grammaticalized grounding in time, as well as the lack of structural case for the subject (4) and the lack of (finite) verbs (e.g. Progovac 2006, 2009).

In addition to the rigidity of the subject position exemplified in (1), further rigid properties of U-SCs include the lack of other types of Move (5) and the lack of recursion/embedding (6):

\[
(5) \quad \text{*Kada stigla pošta?} \quad \text{*Ko umro?} \quad \text{*Gde pao sneg?}
\]
\[
\begin{array}{ll}
\text{when arrived mail} & \text{who died} & \text{where fallen snow}
\end{array}
\]
\[
(6) \quad \text{*Mislim (da) pala vlada.}
\]
\[
\begin{array}{ll}
\text{think}_{\text{1SG}} & \text{that fallen government}
\end{array}
\]
\[
\text{*Sumnjam (da) stigla pošta.}
\]
\[
\begin{array}{ll}
\text{doubt}_{\text{1SG}} & \text{that arrived mail}
\end{array}
\]

In sharp contrast, the full finite counterparts are syntactically flexible in both respects:

\[
(7) \quad \text{Kada je stigla pošta?} \quad \text{Ko je umro?} \quad \text{Gde je pao sneg?}
\]
\[
(8) \quad \begin{array}{lll}
\text{a. Mislim da je pala vlada.}
\end{array}
\]
\[
\begin{array}{llll}
\text{think}_{\text{1SG}} & \text{that AUX fallen government}
\end{array}
\]
\[
\quad \text{‘I think that the government collapsed.’}
\]
\[
\begin{array}{lll}
\text{b. Sumnjam da je stigla pošta.}
\end{array}
\]
\[
\begin{array}{llll}
\text{doubt}_{\text{1SG}} & \text{that AUX arrived mail}
\end{array}
\]
\[
\quad \text{‘I doubt that the mail has arrived.’}
\]

These syntactic properties make it clear that the rigid formations in (1) cannot possibly be analyzed as elliptical versions of full finite counterparts in (2), but rather that they show a distinct type of grammar, a rigid grammar that produces structures which are not only syntactic islands, but also syntactic isolates.

Rigid Syntax, at least in this case, generates (small) clauses consisting of a verb and one single argument (typically theme), with arguably no TP layer on top. They are intransitive, unaccusative-like structures, not requiring a VP shell (Section 3). Their syntactic rigidity follows from this analysis: without a TP or a CP on top of the small clause, neither the subjects nor wh-phrases have syntactic space into which to move.
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Even though rigid and crude, this type of grammar is coherent and capable of expressing propositions. It is moreover theoretically characterizable, showing exactly what syntax would look like if it did not exhibit a variety of functional projections which enable Move and recursion, e.g. TP and CP. Notice that the assumption in Minimalism is that at the heart of modern syntax is the free and recursive operation Merge, which subsumes Move, compositionally building novel utterances with flexible meanings (e.g. Chomsky 2005; Hauser, Chomsky and Fitch 2002). Where does Rigid Syntax come from, then?

2 Whence Rigid Syntax?

Progovac (e.g., 2008a, 2008b, 2009, 2010) explores an approach which invokes evolutionary tinkering with syntactic complexity. If we postulate that rigid grammars predated flexible grammars in language evolution, then we can begin to understand the very nature of modern language design, including cross-linguistic variation. In this approach, the unaccusativity phenomenon can be seen as an option to retain (elements of) rigid grammars in constructions which can be supported by such grammars, e.g. intransitive constructions with a single (internal) argument (Casielles and Progovac 2012). Transitive constructions, as well as intransitive constructions involving agents in some languages, may need extra syntactic space, e.g. a vP shell, and thus cannot be expressed as readily with rigid grammars. To put it another way, if rigid grammars involve less grammatical burden and are less costly to process, then one would expect to find them in constructions in which more complex grammars do not confer much advantage.

Absolutive constructions in ergative languages can also be seen in this light (Section 3.2). Intransitive absolutive constructions of ergative languages, as well as various absolutive-like constructions elsewhere (Section 3.3), are again structures which blur the distinction between subjects and objects in the sense that their only argument has some characteristics of both.¹ This is also the case, to some extent, with unaccusatives (Section 1). The only difference seems to be that unaccusatives tend

¹ Comrie (1978) has made an argument that subjecthood across languages is not a rigid notion, but on a continuum. This is expected under the evolutionary scenario explored here.
not to encompass agents. This may be due to the special status agents have acquired in Nom/Acc languages, possibly by being necessarily associated with their own functional projection, such as vP in Minimalism. What both phenomena have in common is the unavailability of the accusative case.

3 Intransitivity: Absolutives/unaccusatives as precursors to transitivity

Transitivity is considered to involve an additional layer of structure, a vP/VP shell (e.g. Chomsky 1995), as illustrated in (9). On the other hand, intransitive structures, especially unaccusatives (or intransitive absolutes), need not have the vP layer (10):

(9) [TP: Maria will [vP Maria [SC/VP roll the ball]]]
(10) [TP: Maria will [SC/VP fall Maria]]

If there is no TP either, then these unaccusatives can just remain root small clauses (Progovac 2008a, 2008b):

(11) [SC Pala vlada]

This evolutionary approach also offers a deep insight into the reason why modern clauses (TPs) are built upon the foundation of the small clause in the first place (e.g. Stowell 1981; Burzio 1981; Kitagawa 1986; Chomsky 1995 and subsequent Minimalist work), as exemplified in (12). It is as if the building of TP retraces its evolutionary steps.

(12) a. [SC pala vlada] \rightarrow 
b. [TP je [SC pala vlada]] \rightarrow 
c. [TP vlada [T je [SC pala vlada]]]
   ‘The government has collapsed.’

Casielles and Progovac (2012) explore the connection between unaccusatives and thetic statements. According to e.g. Marty (1918), categorical judgments (also referred to as double judgments) involve two successive acts (choosing an entity and making a statement about it) and are expressed by traditional subject-predicate sentences (Vlada je pala).
In contrast, thetic statements or *simple judgments* merely assert a state of affairs where a new situation is presented as a whole. In these statements the entity involved in the event forms a unit with it (*Pao sneg; Pala vlada*). It would stand to reason that grammars which generate thetically more primary, as well as simpler.

### 3.1 Are exocentric VN compounds absolutive constructions?
Exocentric (i.e. headless) verb-noun compounds, as illustrated for English and Serbian below, constitute a good approximation of what an absolutive-like stage in the evolution of syntax would have looked like (Progovac 2009, 2012; Progovac and Locke 2009):

(13) scare-crow, kill-joy, pick-pocket, cry-baby, cut-purse, busy-body, spoil-sport, turn-coat, rattle-snake, hunch-back, dare-devil, wag-tail, tattle-tale, saw-bones, cut-throat, Burn-house, Love-joy, Pinch-penny (miser), sink-hole

(14) ispi-čutura (drink.up-flask; drunkard); guli-koža (peel-skin; who rips you off); cepi-dlaka (split-hair; who splits hairs); muti-voda (muddy-water; trouble-maker); jebi-vetar (screw-wind; charlatan); vrti-guz (spin-butt; fidget); vrti-rep (spin-tail; fidget); tuži-baba (whine-old.woman; tattletale); pali-drvice (ignite-stick; matches)

The grammar behind these compounds is quite simple: it involves a verb taking only one argument (whether the verb is semantically monovalent or bivalent), and moreover an argument whose thematic role is syntactically unspecified. The argument often corresponds to an object in a corresponding sentence. However, it can also correspond to a surface subject, as is the case with the underlined compounds above, showing that these are really absolutive-like roles. The blurring of the distinction between subjects and objects leads to vagueness, also attested with absolutes (Section 3.2).^2^ The rigid morpho-syntax of these compounds manifests itself in the lack of constituent rearrangement (Move) (15) and recursion (16), in

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^2^ Some compounds can even be simultaneously doubly interpreted in this respect: *pali-drvice* (ignite-stick, matches) is at the same time a stick that ignites and a stick that gets ignited. This implicates vagueness, rather than structural ambiguity.
contrast to more complex counterparts, which seem to show rearrangement, as well as some recursion (17)–(18):

(15) *coat-turn, *pocket-pick, *devil-dare
(16) *scare-pick-pocket
(17) #pocket-picker; head-turner
(18) #pocket-picker scarer; #truck-driver chaser

3.2 Ergative/absolutive patterns

In modern ergative languages, the subject of an intransitive predicate is morphologically or syntactically equivalent to the object of a transitive predicate, both occurring in the so-called absolutive role (e.g. Comrie 1978, Dixon 1994). Vagueness can arise in intransitive structures, where it is not grammatically specified if the only argument (absolutive) is subject-like or object-like, comparable to the vagueness found in exocentric compounds. The following example from Tongan illustrates (Tchekhoff 1979: 409):

(19) ‘oku kai ‘ae iká.

‘The fish eats. / The fish is eaten.’

The addition of an external (agent) argument (e.g. the man), presumably in the vP layer (but see Alexiadou 2001 and references therein for an adjunction analysis of the ergative argument), renders the role of the fish necessarily object-like. In a similar fashion, the addition of –er in compounds renders the noun necessarily object-like. In other words, the addition of an outer layer (e.g. a functional projection) forces the inner layer to reorganize and specialize with respect to the outer layer, which in this case specifically introduces an external argument, e.g. agent.

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3 See e.g. Roeper and Siegel (1978) for the proposal that these compounds are derived from the VN order by Move. Note that Romance VN compounds are recursive and productive, suggesting that they may have acquired additional structure (see Progovac 2012).

4 See also Gil (2005) for an extensive discussion of comparable vague structures in Riau Indonesian (i), and for their evolutionary significance.

(i) Ayam makan.

chicken eat

‘The chicken is eating; Somebody is eating the chicken; etc.’
Assuming an intransitive absolutive protosyntactic stage, which neutralized the distinction between subjects and objects, one can explain the subsequent development of two language types, primarily nominative-accusative and primarily ergative-absolutive. This approach also predicts that the foundational absolutive-like patterns will be found in some guise or another in Nom/Acc languages as well, as explored in the next section. The pressure to accommodate additional verbal arguments would have been a powerful driving force behind the evolution of more complex (transitive) patterns.5

3.3 Absolutive-like patterns in nominative/accusative languages
In addition to exocentric compounds discussed in Section 3.1, according to e.g. Alexiadou (2001), nominal arguments across various languages are intransitive, as well as absolutive-like (passive-like). For example, nominals assign only one structural case, typically to an internal argument (20), while the agent is often introduced in an oblique (by) phrase also used in passives, resembling ergative case (21):

(20) kritikovanje studenata (*profesora) (Serbian)
criticizing studentsprep professorprep
‘criticizing of the students (*of the professors)’

(21) kritikovanje studenata od strane profesora
by professorprep

Comparable ergative/absolutive-like patterns can be found even at the clausal level. For example, dative “subjects” co-occur with nominative “objects” in what certainly looks like an ergative/absolutive pattern:

(22) Pije mi se kafa. (Serbian)

drinks meDAT SE coffeeNOM
‘I feel like drinking coffee.’

Nominative on the object is like absolutive, as it is also the case of intransitive subjects, while dative adds an external argument, akin to an ergative argument. What these grammars share is, once again, the inability to assign accusative case.

5 See Section 4 for the emergence of transitivity in Nicaraguan Sign Language.
It is also of note that dative subjects must co-occur with the pronoun *se* in modern Serbian. The grammatical morpheme *se* can be seen as introducing transitivity (accusative case) to the ancient absolutive pattern. Serbian *se* is analyzed in Progovac (2005) as an expletive object pronoun (see Franks 1995 for the argument that *se* absorbs accusative case). *Se* cannot really be analyzed as a reflexive pronoun, as will also become clear from the examples below.

*Se* also occurs in Serbian equivalents of so-called ergative verbs, i.e., verbs that exhibit both transitive and intransitive patterns, as in English (23)–(24) (e.g. Radford 2004). *Se* in Serbian only occurs, and obligatorily so, when such verbs are used intransitively (25)–(26):

(23) The ball rolled down the street. / We rolled the ball down the street.
(24) The ashtray broke. / He broke the ashtray.
(25) a. Lopta *se* kotrljala niz ulicu.
   ball SE rolled down street
b. On *je* kotrljao loptu niz ulicu.
   he AUX rolled ball down street
(26) a. Pepeljara *se* razbila.
   ashtray SE broke
b. On *je* razbio pepeljaru.
   he AUX broke ashtray

In fact, *se* constructions in Serbian exhibit astounding vagueness of thematic meaning where allowed by pragmatics, reminiscent of the absolutive roles (Section 3.2):

(27) Deca *se* tuku.
   children SE hit
   ‘The children are hitting each other/themselves. The children are hitting somebody else. One hits/spanks children.’
(28) Pas *se* ujeda.
   dog SE bites
   ‘The dog bites (someone). (?The dog is biting itself. ?One bites dogs.)’
(29) Marko *se* udara.
   Marko SE hits
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‘Marko is hitting me. Marko is hitting somebody. Marko is hitting himself.’

Even though (30) below offers an unambiguous way of expressing the first reading of (29), (30) is much less commonly used to express that reading in the heat of the moment, suggesting that se constructions may be easier to process than regular transitives:

(30) Marko me udara.
    Marko me hits

Returning to the evolutionary scenario, introducing transitivity in Nom/Acc languages, with a structural Acc case and the vP/VP shell, would not have precluded some other structures (e.g. U-SCs, nominalizations, compounds), from remaining absolutive-like, that is, fossil-like (see e.g. Jackendoff 1999, 2002 for syntactic fossils of language evolution). In this respect, se clauses can be seen as a transitional stage between absolutives and transitives. Se simply suggests that there is one more argument involved in the event, in addition to the one surfacing. Typically the role of that argument can be inferred from pragmatic context. But the role of the expressed argument is still absolutive-like, not grammatically specified either as subject or as object.

Transitivity in syntax thus need not be seen as conceptual necessity, but rather as an evolutionary innovation. It is an additional layer of structure superimposed upon the foundational (absolutive) layer, leading to a variety of crosslinguistic strategies for marking case relations, and reflected in the postulation of two verbal layers in Minimalism (a vP shell). This renders syntax a quirky rather than optimal system.

4 Corroborating evidence and conclusions

Consider the emergence of Nicaraguan Sign Language (NSL) among deaf children in the 1970s and 1980s, as characterized by e.g. Kegl et al. 1999). The early pidgin stages of NSL do not exhibit transitive NP V NP constructions, such as (31) below (Kegl et al. 1999: 216–217). Instead,

\[ \text{(31) Color the sky blue.} \]
the structure is typically broken into two (intransitive) clauses: NP V NP V as in (32) or (33):

(31) *WOMAN PUSH MAN.
(32) WOMAN PUSH — MAN REACT.
(33) WOMAN PUSH — MAN FALL.

According to Goldin-Meadow (2005), Homesign syntax appears to be ergative in nature in that both patients/themes and intransitive agents tend to precede verbs (e.g. BOY-HIT, APPLE-EAT), once again neutralizing the distinction between subjects and objects. Patients are more likely to be expressed than agents, as is also the case with the exocentric compounds and nominals discussed above. Considering that NSL and Homesign construct language from scratch, the patterns of intransitivity observed in their acquisition are of evolutionary significance. A gradualist evolutionary approach to syntax may prove to be an indispensible tool in any ultimate explanation of language design.

References

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progovac@wayne.edu