Transitivity prominence in Indo-European and beyond

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ASTRAPIE
Argument Realization in Indo-European

Transitivity prominence is understood as the extent to which a language employs transitive encoding (Haspelmath 2015) For example: English shows stronger tendency to adopt transitive encoding than German (Hawkins, 1986) According to Lazard (2002: 153–154), it is not only action verbs that have transitive construction but 'a property or a location' can also implement such construction as in a sentence like 'This room sleeps four persons' (see also Dahl 1990: 7). Lazard found this extension of construction in some other languages like French. He proposed that this may be 'a characteristic typological feature in Western European Languages'. Creissels (2018) explores the typological profile of Basque with respect to transitivity prominence. He employed a sample of 30 two-argument verbs and tagged them according to their tendency to select transitive encoding, being understood as a construction that 'includes two terms coded like the two arguments of core transitive verbs, whatever their semantic roles' (Creissels 2018).
In many respects, transitivity prominence is a somewhat understudied field of morphosyntax. For example, it remains unclear whether or to what extent it is a diachronically stable feature within languages and language families. Here, we explore this question based on data from representative languages of the eleven main branches of the Indo-European family.

Core transitive verb: a core transitive verb is a bivalent verb that has the ability to refer to two-participant events involving two well-individuated participants, a typical agent (i.e. a human participant consciously and willingly controlling an activity oriented towards the other participant), and a typical patient (i.e. a participant undergoing a change of state or position triggered by the activity of an agent' (Creissels 2018) For example:

We have collected verb samples from different branches of Indo-European languages on the basis of Creissels' list and examined transitivity prominence in a comparative-historical context. A set of 30 verbs from the following languages are analyzed in this research:

Hittite	Vedic Sanskrit	Greek	Latin
Old Irish	Classical Armenian	Tocharian	Old English
Old Church Slavonic	Old Albanian	Old Lithuanian	

Attack	**Climb**	**Forget**	**Laugh at**	**Scold**
Be afraid of	**Cross**	**Hate**	**Like-please**	**Search for**
Believe	**Despise**	**Hear**	**Listen to**	**See**
Betray	**Escape from**	**Help**	**Look at**	**Touch**
Bite	**Find**	**Hit**	**Need**	**Wait for**
Call	**Follow**	**Know**	**Pity**	**Want**

In all the sample languages, core transitive verbs characteristically show active voice marking, nominative-marked first argument and accusative-marked second argument, three morphosyntactic features, which also constitute the basis for our notion of fully transitive verb.

Each verb can achieve a score of three points, one for each feature. The score of verbs showing non-canonical voice or argument marking is reduced accordingly, while alternation between canonical and non-canonical marking is assigned a half point. The results for each language is given in the table below.

	Active Voice	Nominative-marked first argument	Accusative-marked second argument	Total /90	Score/30
Hittite	24.5	26.5	23	74	17
Vedic Sanskrit	25	30	23.5	75	15
Greek	24.5	29	17.5	72	14
Latin	27	29	24	80	18
Old Irish	21.5	30	22.5	74	13
Classical Armenian	20	29	13	62	12
Tocharian	16	29	25,5	70,5	9
Old English	28.5	29	17	75.5	12
Old Church Slavonic	26.5	28	13	67.5	7
Old Albanian	29	29	16.5	74.5	16
Old Lithuanian	27.5	27	13	67.5	11

Table 1: Transitivity prominence across eleven branches of Indo European

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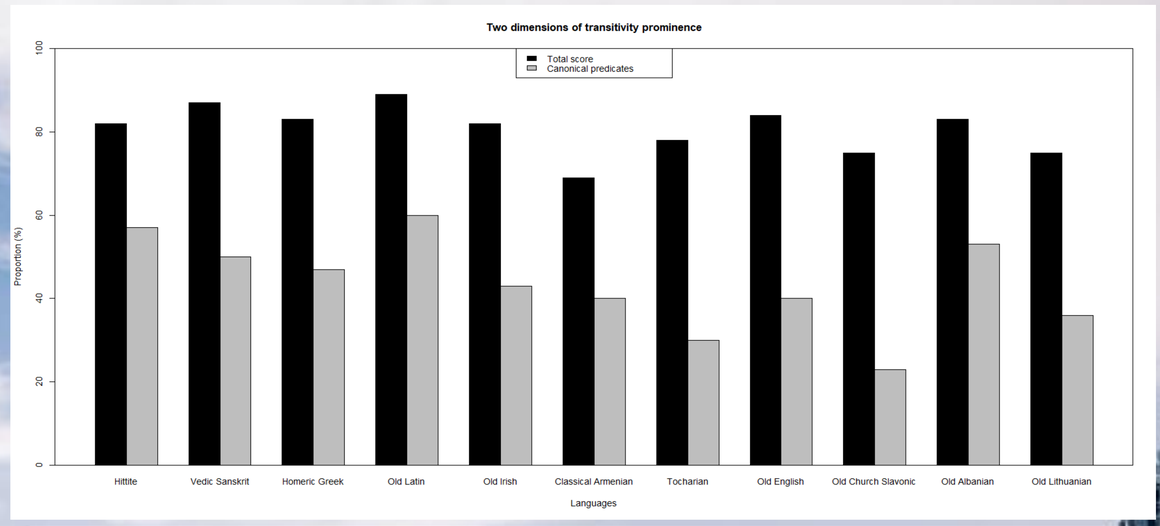
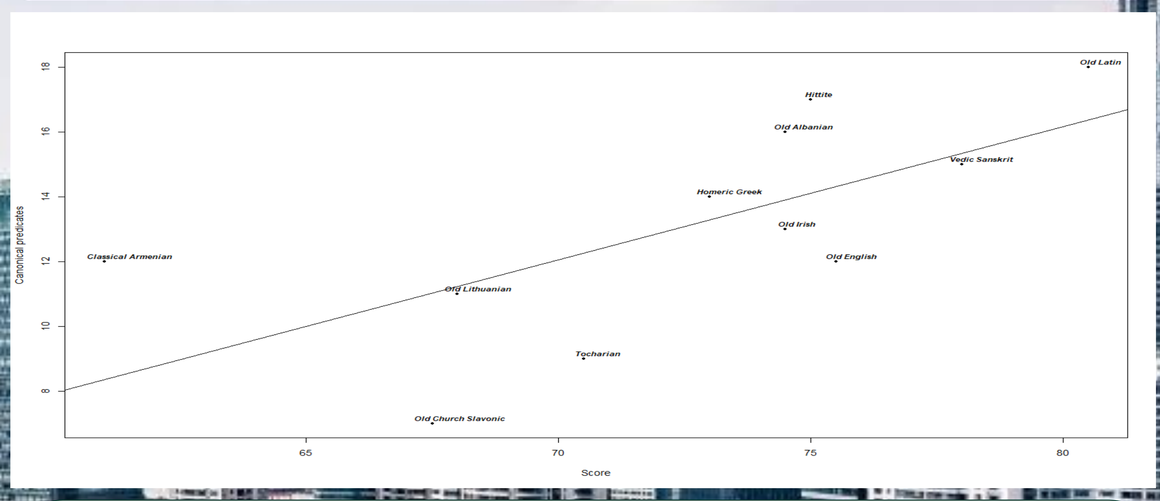
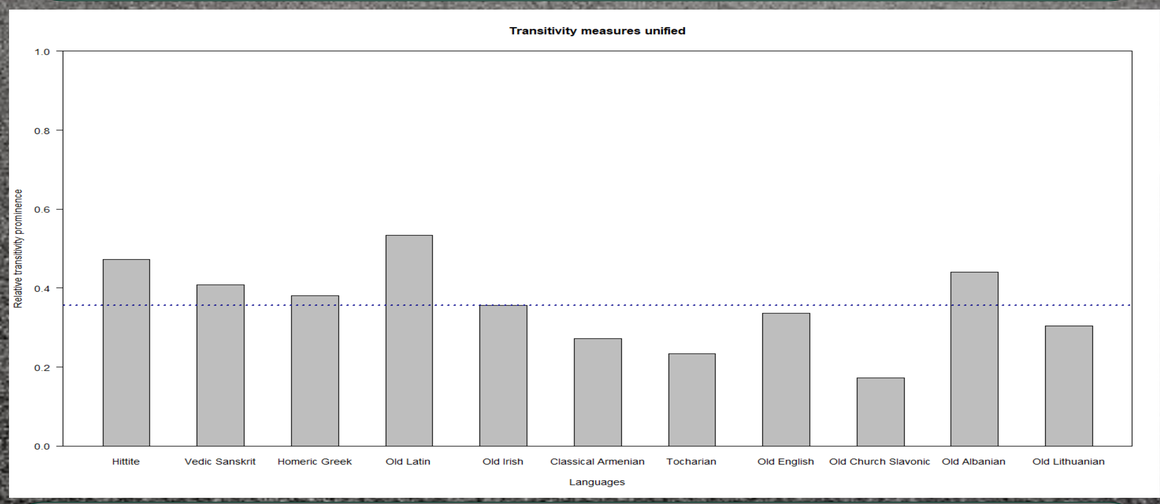
The last two columns of the previous table measure two slightly different dimensions of variation. The first indicates the total score of each language, the highest possible score being 90 (3 parameters x 30 predicates = 90). This dimension covers all aspects of micro-variation between the languages. The second concerns the number of predicates that show the canonical transitive construction, the highest possible score being 30. The following figure indicates that these two dimensions do not quite coincide. Note that the representation reflects the proportional values (%).



The figure below gives a linear regression analysis of the relationship between these two dimensions based on the observed values. The scattered distribution of the dots/languages indicates supports the impression that they are somewhat weakly related. These considerations suggest that an alternative approach is needed to arrive at a unitary notion of transitivity prominence.



The alternative we suggest is to divide the observed values in each dimension by the highest possible score of each dimension and multiply the results. For example, in the case of Hittite the score 74 in the first dimension is divided by 90 (≈ 0,82) and the number of canonical predicates, 17, is divided by 30 (≈0,57) and then the quotients are multiplied (≈0,47). The results are represented in the following figure. The dotted blue line indicates the mean transitivity prominence value. Intriguingly, the earliest attested languages (Hittite, Vedic Sanskrit, Homeric Greek and Latin) show a higher degree of transitivity prominence than the later attested languages, except for (Old) Albanian. A chi-squared test of the normalised data yielded a p-value of 0,000383, a chi-squared value of 32.114, with 10 degrees of freedom (p-value = 0,000383, $\chi^2(10) = 32.114$). We take this to indicate that there is significant variation between (some of) the languages in our sample regarding transitivity prominence.



Conclusion: Although the languages in our sample belong to the same linguistic family, they show divergence with regard to transitivity prominence. We have argued that transitivity prominence represents the product of two interrelated dimensions, one reflecting all aspects of micro-variation in this realm and another reflecting the number of predicates, the latter being the one commonly used in the literature (e.g., Haspelmath 2015, Creissels 2018). An interesting observation arising from our data is that the oldest attested and, by hypothesis, most archaic languages generally show a higher degree of transitivity prominence than the later attested languages. Future research will establish whether or to what extent this tendency finds parallels in the history of individual languages or in other linguistic families.

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