

## On syntactically represented Causation, argument structure and the flavors of vCause in Ukrainian

Our paper provides an in-depth look at the syntax of causation in Ukrainian, examining the syntactic position and function of vCause vis-à-vis Voice, on the one hand, and vP on the other. Our account extends the line of research into external causation in Slavic and beyond (Alexiadou, Anagnostopoulou and Schäfer (AAS) 2015; Bruening 2013; Harley 2013; 2017; Lavine 2010; 2014a; 2017 i.a., Legate 2014; Ramchand 2008; Wood 2017 i.a.), offering an important clarification of several key points found in existing analyses. One strand of research identifies vCause as a transitivity marker in East Slavic impersonal constructions (see esp. Lavine 2014a; 2024; Lavine&Babby 2019 i.a.) and places NP<sub>INSTR</sub>, the non-volitional Causer, in a low, VP-internal position. We provide extensive evidence confirming vCause as a syntactically independent head, but identify NP<sub>INSTR</sub> as the sole argument of vCause, thus a high, vP-external argument that c-commands all internal arguments in its Merge position (see ex.3). Additionally, we argue that (i.) vCause assigns Accusative case to the direct object under strict locality (Cf. Lavine 2022); and (ii.) in the absence of vCause (diagnosed by the impossibility of NP<sub>INSTR</sub>), ACC case is shown to be impossible, which gives rise to a number of derived subject constructions where the direct object receives NOM from Tense (ex.5-7). Finally, and crucially, we show that vCause qua transitivity marker (henceforth vCause<sub>TR</sub>) is only one of the varieties of vCause flavors available; other Causative heads we identify have distinct syntactic functioning and semantics that set them apart from vCause<sub>TR</sub>.

Some of the strongest evidence in favor of syntactically represented causation (vCause as unbundled from Voice) comes from quantification (see (1), *the Scope Freezing Diagnostic*, Antonyuk 2015; 2020 i.a.). Thus, the NP<sub>INSTR</sub> of Ukrainian Transitive Impersonals is shown to behave differently from the morphologically identical NP<sub>INSTR</sub> subject of passives, suggesting structural positions of different heights (Antonyuk 2024; Bruening 2001; Cf. Bruening 2013). As we show, the SFD also indicates that the causative PP material commonly regarded as modificational (AAS 2015) is similarly base-generated high, above vP. We argue that these in fact represent arguments of additional causative heads/flavors of vCause. Thus, while NP<sub>INSTR</sub> is shown to be the sole argument of vCause<sub>TR</sub>, *vid/from*-PP and *čerez/because-of*-PP, in turn, serve as the argument of valence-reducing head vCause<sub>P<sub>de-TR</sub></sub>. The logic of the argument here is simple. The SFD suggests that causative PPs are merged at the same level as NP<sub>INSTR</sub> (i.e., higher than all other internal arguments). This conclusion is strongly supported by the complementary distribution of NP<sub>INSTR</sub> and causative PPs, suggesting they occupy the same slot (i.e., that of a vCause argument, although the flavor of vCause is different). Furthermore, it is easy to observe that these additional flavors require dedicated morphology, which in turn co-occurs with the corresponding causer PP. Curiously, an argument of (any flavor of vCause) syntactically may always remain implicit, which is in stark contrast to the licensing conditions on the argument of Voice, which may only remain null or implicit under very specific conditions, as well as from the licensing of vP-internal arguments, which is likely why the purported arguments of vCause are widely viewed as adjunctive, modificational material. Our approach allows us to offer a principled syntactic account of transitive impersonals, middles (ex.7), internally caused unaccusatives (4/6), anticausatives (5;8b) as well as causatives (2; 8a) that accounts for the Argument Structure and Case properties of these constructions. Ultimately, we derive the empirical generalization that a sole argument of a predicate can never carry ACC, appearances to the contrary being cases of externally caused dyadic eventualities wherein the Cause argument remains implicit.

The resulting picture is one where Ukrainian emerges as a clear Split-Voice language, with a dedicated vCause head and its flavors. An important question, which arises from the above picture, is whether vCause is bundled with the verbalizer *v*, or whether they are distinct categories in Ukrainian, yielding the **Voice--vCause--v--√** sequence (see esp. Harley 2017i.a.) Morphosyntactic analysis shows the two categories are indeed distinct, with either different (e.g., *bil-y-ty* vs *bil-i-ty* (*whitewash* vs *be white*)) or, even more obviously, the same verbalizer (e.g., *za-koh-a-ty* vs *za-koh-a-ty-sja* (*cause fall in love* vs *fall in love*)) present in vCause<sub>TR</sub> and vCause<sub>P<sub>de-TR</sub></sub> for instance (see Kovačević et al. 2024 and esp. Matushansky 2024 on the mixed status of theme vowels as verbalizers in Russian). Finally, quantificational evidence strongly suggests that when ApplP is present in the clausal spine in Ukrainian, it is sandwiched between Voice and vCause (**Voice--ApplP--vCause--v--√**), thus providing striking evidence of a complete separation of heads within the Initiator portion of the tree (see McGinnis 1998; 2001 and Pytkänen 2002;

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2008; Harley 2017 on high Appl diagnosing unbundled Voice). The analysis we propose has implications for other Slavic languages and presents clear evidence that *the Undifferentiated Initiator* view (Bruening 2013; Ramchand 2008; Legate 2014; Wood 2017 i.a.) may be suitable for the description of individual languages but is not viable as a universal syntactic representation of causation in natural languages.

- (1) ***The Scope Freezing Diagnostic: Frozen surface scope implicates a derived structure resulting from Argument Inversion (AI).*** (AI = permutation of arguments in the postverbal field)
- (2) a. Likar infikuvav jakojus' xvorobuju kožnoho pacijenta.  
doctor infect-pst some illness-**ins** every patient-**acc**  
'=The doctor infected every patient with some illness' (**surface&inverse scope available**)  
b. Likar infikuvav jakohos' pacijenta kožnoju hvorobuju.  
doctor infect-pst some patient-**acc** every illness-**ins**  
'=The doctor infected some patient with every illness' (**frozen surface scope: no inverse scope**)  
(by SFD: scope frozen order is derived by AI, hence **INSTR >> ACC**)
- (3) **Relative Argument Hierarchy at Merge: V NP<sub>INSTR</sub> >> NP<sub>ACC</sub> >> NP<sub>DAT</sub>/PP<sub>LOC/DIR</sub>**  
(NB: V is shown in its surface position after head mvmt; key here is high Merge for NP<sub>INSTR</sub>)
- (4) a. Jakas' šybka trisnula čerez kožen vybuh/\*kožnym vybuh-om.  
Some windowpane-**nom** crack from every explosion/\*every explosion-**ins**  
'Some windowpane cracked from every explosion' (**frozen surface scope: no inverse scope**)  
b. Čerez jakyjs' vybuh trisnula kožna šybka.  
From some explosion cracked every windowpane-**nom**  
'From some explosion (or other), every window pane cracked' (**surface&inverse scope available**)  
(by SFD: **from-PP >> NP<sub>NOM</sub>** NB: **DO** gets **NOM** from **T** in the absence of a source of **ACC**)
- (5) Dit-y poranyly-sja vid vybuhu kuli/\*vibuh-om.  
Children-**nom** hurt-<sub>PST-SELF</sub> from explosion/explosion-**ins**  
'The children got hurt from the explosion of a bullet'  
(NB **-sja** is a **detransitivizing morpheme** => **no source of ACC**, experiencer **DO** gets **NOM**)
- (6) Kvity nespodivano rozkvitly čerez speku/\*spek-oju.  
Flowers-**nom** suddenly blossomed because of heat/heat-**ins**  
'The flowers blossomed unexpectedly because of the heat'
- (7) Hlib legko narizajet'-sja tsym/takym nožem/\*su-šefom/ √ z družjamy/\*čerez niž  
Bred-**nom** easily cuts this/such knife/sous-chef-**ins**/with friends-**ins**/because of knife  
'Bred cuts easily with this/such a knife/\*by a sous chef/?with friends'  
(NB: NP<sub>INSTR</sub> => **vCauseP must be present, but VoiceP isn't (since \*su-šefom)**.  
comitative *with*-PP<sub>INSTR</sub> by SFD are low, VP-internal material (Cf. Bruening 2013).  
NOM on DO means ACC is not available, despite the grammaticality of NP<sub>INSTR</sub>. We assume  
**-sja** suppresses ACC-case assigning ability of vCause, thus DO must get case from Tense.
- (8) a. za-koh-a-ty kohos<sup>j</sup> v sebe NP<sub>INSTR</sub>/\*čerez PP  
cause.fall.in.love someone-<sub>ACC</sub> in self NP<sub>INSTR</sub>/\*because of-PP  
b. za-koh-a-ty-sja v kohos<sup>j</sup> čerez-PP/\*NP<sub>INSTR</sub>  
fall.in.love.-sja in someone because of-PP/\*NP<sub>INSTR</sub>

**Selected References:** Antonyuk, S. 2024. "From scope freezing to, well, everything: investigations into the syntax of Instrumentals in Ukrainian". In: *Advances in Formal Slavic Linguistics 2022*, B. Gehrke, D. Lenertová, R. Meyer, D. Seres, L. Szucsich, J. Zaleska, eds. Open Slavic Linguistics ○ Harley, H. 2017. The "bundling" hypothesis and the disparate functions of little v. In: R. D'Alessandro, I. Franco and A. J. Gallego (eds), *The Verbal Domain*, pp. 3-28. Oxford: OUP. ○ Lavine, J. & L. Babby. (2019) "A new argument for the lexical underspecification of causers". *Linguistic inquiry* 50: 803–24. ○ Matushansky, O. (2024) "Thematic non-uniformity of Russian vocalic verbal suffixes", *Glossa: a journal of general linguistics* 9(1). doi: <https://doi.org/10.16995/glossa.8571>