Chapter 1

From scope freezing to, well, everything: Investigations into the syntax of Instrumentals in Ukrainian

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I present arguments in favor of a particular view of argument hierarchies in alternations that results from taking a deductive approach to scope freezing (Antonyuk 2015, 2020, 2022, submitted) and especially from relying on the Scope Freezing Diagnostic (SFD) as a source of insight in this domain. The primary focus of the paper is on several causative constructions in Ukrainian that feature an Instrumental case-marked argument. It is argued that in all constructions under consideration Instrumentals are merged in a structurally more prominent position than either the Accusative or the Dative argument, resulting in the V Instrumental >> Accusative >> Dative relative argument ordering at Merge. Next, I follow Lavine (2022, 2023) in arguing against the Undifferentiated Initiator view (Ramchand 2008; Bruening 2013; Legate 2014; Wood 2017, i.a.) and provide a new argument in support of Lavine's structural differentiation between the Instrumental Agents of passives and Instrumental Inanimate Causers.

1 Introduction

While research into argument structure alternations (ASAs) has made great advances, yielding important results over more than six decades, it has also been characterized by the vastly different, indeed, often diametrically opposing conclusions that have been reached based on largely the same types of evidence. Limiting our attention to the Slavic languages for the purposes of this discussion, we notice that the debate around the Ditransitive Alternation (exemplified in (1) and

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(2) for English and Ukrainian) has witnessed accounts that posit a derivational relation between the two frames as well as those that posit independent projection of the two structures. Within these two large groups, further differences are observed based on the posited Merge position of the internal arguments, with accounts differing on, for example, whether the Dative argument is merged in the Specifier of V (Greenberg & Franks 1991, Franks 1995, Richardson 2007), the complement of V (Bailyn 1995, 2010, 2012; Antonyuk 2015, 2020; Titov 2017), the Specifier of an Applicative head (Dyakonova 2009), as well as accounts that posit Datives base-merged at different heights (Boneh & Nash 2017).

(1) The Ditransitive Alternation
   a. Mike gave a toy to his cat. Prepositional Dative (PPD)
   b. Mike gave his cat a toy. Double Object Construction (DOC)

(2) a. Myxajlo po-daruvav (jakus') igrašku svojij kišci. PPD
   Myxajlo.NOM PO-gift.PST some toy.ACC his cat.DAT
   'Myxajlo gifted (some)/a toy to his cat.'
   b. Myxajlo po-daruvav svojij kišci (jakus') igrašku. DOC
   Myxajlo.NOM PO-gift.PST his cat.DAT some toy.ACC
   'Myxajlo gifted his cat (some)/a toy.' (Ukrainian)

A rather underinvestigated property of the Ditransitive Alternation, familiar since Larson (1990), is the "frozen" surface scope relation between the internal arguments in the DOC, which contrasts with scope fluidity/scope ambiguity of the PPD frame, cf. (3a)–(3b).

(3) a. Mike gave some toy to every cat.
   Surface scope: For some toy *x*, for every cat *y*, Mike gave *x* to *y* (e.g., this week).
   Inverse Scope: For every cat *x*, for some toy *y*, Mike gave *x y* (different cat–toy pairings possible).
   b. Mike gave some cat every toy. (frozen surface scope)
   Surface scope: For some cat *x*, for every toy *y*, *x* received *y* from Mike (i.e., 'one happy cat' scenario).
   Unavailable inverse scope: For every toy *x*, for some cat *y*, *x* was given to *y* (different toy-cat pairings possible).

As noted in Larson (1990), Schneider-Zioga (1988) observes the arguably identical pattern of scope freezing in the 'with'-variant of the *Spray-Load* Alternation

(4), thus the scope ambiguity-scope freezing patterns found in the two alternations have come to be known as their characteristic, albeit fairly understudied, property.[1]

(4) The *Spray-Load* Alternation
   a. Mike planted the flowers in the garden. locative frame
   b. Mike planted the garden with flowers. the 'with'-frame

(5) a. Mike planted some sort of flowers in every garden.
   Surface scope: For some sort of flowers x, for every garden y, Mike planted x in y.
   Inverse scope: For every garden x, for some sort of flowers y, Mike planted x with y.
   b. Mike planted some garden with every sort of flowers.
   (frozen surface scope)
   Surface scope: For some garden x, for every sort of flowers y, Mike planted x with y.
   Unavailable inverse scope: For every sort of flowers x, for some garden y, Mike planted x in y.

While the above scope patterns and the scope freezing in particular have come into focus in Bruening (2001), the phenomenon has effectively been explained away: Bruening takes scope freezing to be epiphenomenal, that is, a mere consequence of the purportedly Superiority-obeying nature of the covert movement operation Quantifier Raising (QR), which, combined with Richards's (1997) Tucking in, is taken to result in situations where the structurally more prominent QP takes obligatory wide scope upon QR due to the lower one obligatorily tucking in and thus scoping below it.[2] Assuming the treatment in Antonyuk (2015, 2020, 2022, submitted), where scope freezing is viewed as an empirical phenomenon in its own right and thus in need of a principled theoretical explanation, the present paper will take without justification the need for the deductive approach

[1] Scope freezing is the only property of the ditransitive alternation (DA) where the mirror-image behavior of the two frames breaks down with respect to the Barss & Lasnik's (1986) diagnostics. Yet, as noted in Harley & Miyagawa (2017), it continues to be underinvestigated and poorly understood.

[2] Bruening's (2001) treatment of scope freezing is critically evaluated and ultimately rejected in Larson et al. (2019) for English and Antonyuk & Mykhaylyk (2022) for Ukrainian. See Abels & Grabska (2022) for a recent account that adopts (a modified version of) Bruening (2001) to model scope relations in Polish ditransitives and Hallman (2018, 2024) for the causative ditransitive alternation in Syrian Arabic.

to scope freezing underlying the above works and will proceed to rely on the Scope Freezing Diagnostic (Antonyuk 2015) yielded by this approach in order to probe underlying argument structure relations.[3] As will hopefully become apparent, this approach to scope freezing and especially the diagnostic contributed by it is highly valuable as far as diagnostics developed for Slavic languages go, able to provide non-trivial insights into the syntax of argument structure alternations and remaining remarkably consistent where other diagnostics fail to be so. Among the findings reported here is that across a number of causative constructions involving an Instrumental NP, the latter is consistently implicated by the Scope Freezing Diagnostic (SFD) to be merged in a structurally superior position relative to its VP-internal co-argument(s). Furthermore, I show that an Instrumental Inanimate Causer NP is distinguished from the (morphologically indistinguishable) Instrumental Agent NP in passives in terms of scope behavior, which supports Lavine's (2022, 2023) broader argument for the need to distinguish between agent/animate causers, which are arguments of Voice, and a variety of inanimate causers, argued to merge lower in the structure.

The remainder of the paper is structured as follows. Section 2 presents empirical data from Ukrainian that demonstrate the Scope Freezing Generalization and introduces the Scope Freezing Diagnostic that is based on it. Section 3 is concerned with mapping out the verb phrase by applying the SFD to a variety of constructions involving Accusative, Dative and Instrumental arguments. It shows, i.a., that the relative ordering of internal arguments at Merge differs significantly from that often considered "standard" in the field (Section 3.1). The rest of Section 3 then goes deeper into the syntax of Instrumentals by contrasting their scope behavior with that of the Instrumentally case-marked subjects of passives, providing new evidence against the Undifferentiated Initiator view and thus offering support to Lavine's (2022, 2023) position (Section 3.2.1) according to which Inanimate Causer Instrumentals are merged lower than Agents. Section 3.2.2 argues that the Merge position of Inanimate Causer Instrumentals is

[3] An anonymous reviewer challenges the terminology, pressing about what makes this approach deductive rather than inductive. Of course, the reviewer is correct to press on it, as the present approach does in fact combine elements of both. Inductively, this approach follows the data to form generalizations to form broader theory of scope freezing. The approach is however deductive in that, relying on the general minimalist set of assumptions and the newly formed theory (or, barring that, a set of strong generalizations about scope freezing), it allows us to test a range of properties under discussion, from properties of scope freezing itself, to argument hierarchy in argument structure alternations and syntactic properties of particular constructions to, e.g., information structural phenomena manifested in such constructions, such as specificity, discourse neutrality, etc. (see esp. Antonyuk 2022). To the extent that any such insights are derived from the theory of scope freezing advocated for here, they are all derived by deductive reasoning. I am grateful to the reviewer for the chance to clarify this point.

at the same time much higher than usually assumed, specifically, Spec,*v*Cause (rather than the often assumed Complement of V position). Section 4 offers my conclusions.

2 Scope freezing in Ukrainian: The empirical domain

While taking such an approach to scope freezing (i.e., one deducing what scope freezing is from patterns of alternating word order-QP scope distribution) makes good scientific sense in general, it is arguably especially important as far as Slavic languages are concerned, for, as shown in Antonyuk (2015) and elaborated in Antonyuk (2022, submitted), unlike English, where there appear to be only two constructions that exhibit frozen surface scope, the phenomenon of frozen surface scope is not only found in (East) Slavic as well, but it is found in a considerably broader range of constructions.[4] What all these constructions have in common is the pattern, schematized in (6), whereby one linearization of internal arguments is scopally ambiguous while the opposite order of arguments in the postverbal field is surface scope frozen, allowing only the QP scope interpretation that corresponds to overt c-command relations.

(6) a. $[_{TP}$ EA [<EA> V+v $[_{VP}$ QP2 <V> QP1]]] scope ambiguous

b. $[_{TP}$ EA [<EA> V+v $[_{XP}$ QP1 <V> $[_{VP}$ QP2 <V> QP1]]]] scope frozen*,[5]

*where QP1 ≠ $PP_{LOCATIVE/DIRECTIONAL}$

According to (6), the conditions under which scope freezing arises are quite specific and limited, that is, scope freezing arises whenever the structurally lower internal argument raises overtly across its structurally superordinate co-argument to a c-commanding position in the postverbal field. The word order alternations below provide some of the empirical basis for (6).[6]

[4]The phenomena discussed here are observed in many Slavic languages across the subgroups. See Antonyuk (2015, 2020, 2022) and Boneh & Nash (2017) on Russian. See Antonyuk & Mykhaylyk (2022) on the interaction of quantification and Object Shift in Ukrainian. See also Marvin & Stegovec (2012) for a brief discussion of scope freezing in Slovenian DOCs and Abels & Grabska (2022) for a detailed discussion of scope distribution in Polish ditransitives.

[5]When QP1 = $PP_{LOCATIVE/DIRECTIONAL}$ the result of argument permutation is surface scope bias, not surface scope freezing. See Antonyuk (2020, submitted) for a relevant discussion.

[6]See Dyakonova (2009) and Bailyn (2010, 2012) on Russian ditransitives and the discussion of the relation between the two linearizations. Both authors agree they instantiate the two frames of the Ditransitive Alternation.

(7) The Ditransitive Alternation

a. Myxajlo po-daruvav jakus' igrašku kožnij kišci.
Myxajlo.NOM PO-gift.PST some.ACC toy.ACC every.DAT cat.DAT
'Myxajlo gifted some toy to every cat.'
Surface scope: For some toy *x*, for every cat *y*, Myxajlo gifted *x* to *y* (i.e., the same toy).
Inverse scope: For every cat *x*, for some toy *y*, Myxajlo gifted *x y* (i.e., different cat–toy pairs).

b. Myxajlo po-daruvav jakijs' kišci kožnu igrašku.
Myxajlo.NOM PO-gift.PST some.DAT cat.DAT every.ACC toy.ACC
'Myxajlo gifted some cat every toy.'
Surface scope: For some cat *x*, for every toy *y*, Myxajlo gifted *x y*.
Unavailable inverse scope: For every toy *x*, for some cat *y*, Myxajlo gifted *x* to *y*.

(8) The *Spray-Load* Alternation

a. Myxajlo za-lyv [jakyjs' vyd pal'noho] [v
Myxajlo.NOM ZA-fill.PST some.ACC type.ACC gas.GEN into
kožen bak].
every.ACC tank.ACC
'Myxajlo filled some type of gas into every tank.'
Surface scope: For some type of gas *x*, for every tank *y*, Myxajlo filled *x* into *y*.
Inverse scope: For every tank *x*, for some type of gas *y*, Myxajlo filled *x* with *y* (i.e., possibly different type of gas for each tank).

b. Myxajlo za-lyv [jakyjs' bak] [kožnym vydom
Myxajlo.NOM ZA-fill.PST some.ACC tank.ACC every.INS type.INS
pal'noho].
gas.GEN
'Myxajlo filled some tank with every type of gas.'
Surface scope: For some tank *x*, for every type of gas *y*, Myxajlo filled *x* with *y*.
Unavailable inverse scope: For every type of gas *x*, for some tank *y*, Myxajlo filled *x* into *y*.

(9) Reflexive Causatives

a. Likar infikuvav-sja jakojus' xvoroboju vid kožnoho
doctor.NOM infect.PST-REFL some.INS illness.INS from every.GEN
pacijenta.
patient.GEN
'The doctor got infected from every patient with some illness.'
Surface scope: For some illness *x*, for every patient *y*, the doctor got infected with *x* from *y*.
Inverse scope: For every patient *x*, for some illness *y*, the doctor got inflected by *x* with *y*.

b. Likar infikuvav-sja vid jakohos' pacijenta kožnoju
doctor.NOM infect.PST-REFL from some.GEN patient.GEN every.INS
xvoroboju.
illness.INS
'The doctor got infected with some illness from every patient.'
Surface scope: For some patient *x*, for every illness *y*, the doctor got infected by *x* with *y*.
Unavailable inverse scope: For every illness *x*, for some patient *y*, the doctor got infected with *x* by *y*.

(10) Causative verbs

a. Likar infikuvav jakojus' xvoroboju kožnoho pacijenta.
doctor.NOM infect.PST some.INS illness.INS every.ACC patient.ACC
'The doctor infected every patient with some illness.'
Surface scope: For some illness *x*, for every patient *y*, the doctor infected *y* with *x*.
Inverse scope: For every patient *x*, for some illness *y*, the doctor infected *x* with *y*.

b. Likar infikuvav jakohos' pacijenta kožnoju xvoroboju.
doctor.NOM infect.PST some.ACC patient.ACC every.INS illness.INS
'The doctor infected some patient with every illness.'
Surface scope: For some patient *x*, for every illness *y*, the doctor infected *x* with *y*.
Unavailable inverse scope: For every illness *x*, for some patient *y*, the doctor infected *y* with *x*.

The key observation to note here is, of course, that the change in scope interpretations in each pair (i.e., the appearance of scope freezing in the (b) examples)

tracks the change in overt word order, which constitutes the foundation for the Scope Freezing Generalization in (11), according to which scope freezing is an inherently derivational, in fact, *a derivation-by-movement* phenomenon.[7]

(11) The Scope Freezing Generalization (SFG) (Antonyuk 2015)
Scope freezing obtains when one QP raises overtly across another to a c-commanding´ position as a result of a single instance of movement within the *v*P/VP.

That scope freezing must be limited to the domain of *v*P/VP (i.e., below VoiceP in more modern terminology) becomes obvious once the above examples are compared to those involving a subject QP: Here we observe that the interaction between an object QP and a subject QP never amounts to a frozen scope relation.[8]

(12) Simple SVO transitives: No scope freezing
Jakas' divčynka na-hoduvala kožnu kišku.
some.NOM girl.NOM NA-feed.PST.F every.ACC cat.ACC
'Some girl fed every cat.'
Surface scope: For some girl *x*, for every cat *y*, *x* fed *y*.
Inverse scope: For every cat *x*, for some girl *y*, *x* was fed by *y*.

(13) OSV (locally scrambled) clauses: No scope freezing
Jakus' kišku kožna divčynka na-hoduvala.
some.ACC cat.ACC every.NOM.F girl.NOM.F NA-feed.PST.F
'Some cat, every girl fed.'
Surface scope: For some cat *x*, for every girl *y*, *x* was fed by *y*.
Inverse scope: For every girl *x*, for some cat *y*, *x* fed *y*.

(14) OVS clauses: No scope freezing
Jakus' kišku na-hoduvala kožna divčynka.
some.ACC cat.ACC NA-feed.PST.F every.NOM.F girl.NOM.F
'Some cat was fed by every girl.'
Surface scope: For some cat *x*, for every girl *y*, *x* was fed by *y*.
Inverse scope: For every girl *x*, for some cat *y*, *x* fed *y*.

[7]The importance of this conclusion should be immediately clear: It implicates a much greater degree of derivationality inherent in the derivation of numerous structures and argument structure alternations than is currently assumed.

[8]Building on the original observation in Larson (1990), Bruening (2001) provides independent evidence in favor of scope freezing being limited to object QPs, never an object and a subject QP. Thus, conclusions based on the richer East Slavic empirical data are fully aligned with the conclusions based on the English data. As argued especially in Antonyuk (submitted), since the scope freezing found in Ukrainian and Russian is arguably identical to the English case, the conclusions reached on the basis of the former should be viewed as naturally extending to the latter.

While the absence of scope freezing in OVS is important, showing that object QP–subject QP pairs do not result in scope freezing under any circumstances, much will depend on one's analysis of OVS, which is a hotly contested issue in Slavic linguistics.[9] Whatever derivation of OVS one may assume, however, the basic empirical observation is that subject QP >> object QP pairs as well as object QP >> subject QP pairs do not result in scope freezing. Coupled with the observation that direct objects readily participate in frozen surface scope configurations, the conclusion this invites is that VoiceP, the layer that on most assumptions introduces the external argument, is outside the domain within which scope freezing can be established. On the assumption that OVS clauses are derived by overtly raising the object phrase to a position preceding and c-commanding the subject, the SVO–OVS examples are particularly telling in this respect when compared with, e.g., the ditransitive alternation in (7) or, e.g., (10), where the two orders are arguably also derived by an overt instance of movement raising the lower object to a position preceding and c-commanding the higher one. Whereas in the former cases the overt instance of movement still yields scope ambiguity, in the latter case what results in surface scope freezing.

Another argument in favor of the domain of scope freezing to exclude the subject layer comes from nominalizations (see esp. Alexiadou 2009, 2017; Borer 2014; see also Chomsky 1970; Grimshaw 1990; Harley 2009; Marantz 1997, i.a.). Specifically, the nominalizations in (15) and (16), which exclude the external argument, still preserve the argument structure of the corresponding verbal layer of full sentences, with the scope relations between the internal arguments being preserved as well. Thus, once again, we see scope freezing reappear in one of the two possible linearizations of internal arguments in the absence of (an overt) subject:

(15) a. za-lyv-annja jakohos' vydu pal'noho v kožen
ZA-pour-*annja*.NOM some.GEN type.GEN gas.GEN into every.ACC
bak
tank.ACC
'the pouring of some type of gas into every tank' (cf. (8a))
Surface scope: For some type of gas x, for every tank y, there is a filling of x into y.
Inverse scope: For every tank x, for some type of gas y, there is a filling of x with y (i.e., possibly different type of gas for each tank).

[9] For the sake of clarity, I assume the analysis of OVS proposed in Antonyuk (2021).

b. za-lyv-annja jakohos' baku kožnym vydom pal'noho
za-pour-*annja*.NOM some.GEN tank.GEN every.INS type.INS gas.GEN
'the pouring of some tank with every type of gas' (cf. (8b))
Surface scope: For some tank *x*, for every type of gas *y*, there is a filling of *x* with *y*.
Unavailable inverse scope: For every type of gas *x*, for some tank *y*, there is a filling of *x* into *y*.

(16) a. infikuv-annja jakojus' xvoroboju kožnoho pacijenta
infect-*annja*.NOM some.INS illness.INS every.ACC patient.ACC
'infecting of every patient with some illness' (cf. (10a))
(Lit.: the infecting with some illness of every patient)
Surface scope: For some illness *x*, for every patient *y*, there is infecting of *y* with *x*.
Inverse scope: For every patient *x*, for some illness *y*, there is infecting of *x* with *y*.

b. infikuv-annja jakohos' pacijenta kožnoju xvoroboju
infect-*annja*.NOM some.ACC patient.ACC every.INS illness.INS
'the infecting of some patient with every illness' (cf. (10b))
Surface scope: For some patient *x*, for every illness *y*, there is infecting of *x* with *y*.
Unavailable inverse scope: For every illness *x*, for some patient *y*, there is infecting of *y* with *x*.

Of course, Complex Event Nominals (CENs), such as the examples in (15) and (16), probably do not really "exclude" the subject layer, as the data above may superficially suggest: the subject is implicit, as evidenced by the ability of such nominalizations to be modified by agentive modifiers such as *navmysne* 'deliberate', as in *navmysne infikuvannja* 'deliberate infecting'. Thus, especially within DM, on various instantiations of the "Phrasal Layering" analysis of Complex Event Nominals, the verbal structure, including the layer that introduces the external argument, is included in nominalizations, with the nominalizer head little *n* attaching on top of fully projected verbal structure (Alexiadou 2001, 2017; Bruening 2013; Borer 2014; Iordăchioaia 2020; McGinnis 2020, i.a.).[10]

This means that the examples in (15) and (16) do not really provide bullet-proof evidence that the subject is "excluded" is any real sense, merely that it appears to

[10]See also Wood (2023) for a detailed theoretical overview as well as an alternative proposal based on Icelandic data that CENs can be formed in syntax without nominalizing full verbal structure.

be inert and not participating in whatever processes result in the establishment of the surface scope freezing relation. Minimally, the account of scope freezing adopted here (spelled out in more detail in later sections) is committed to the following conclusion: the preservation of the scope freezing relation means that the layer of structure arguably (and crucially) implicated in scope freezing, ApplP (located between *v*P and VoiceP), must be included in the verbal structure nominalized by *n* (cf. Wood 2023).

To summarize, we see that the SFG points to a derivational nature of scope freezing, resulting from an overt instance of movement I will henceforth refer to as Argument Inversion (following Antonyuk & Mykhaylyk 2022). Taking place in the postverbal field, Argument Inversion (AI) constitutes a local instance of overt syntactic movement, and, as examples such as the anaphor binding data below suggest, AI involves A-movement:[11]

(17) a. Dolja po-daruvala nas$_i$ odyn odnomu$_i$.
Fate.NOM PO-gift.PST us.ACC each other.DAT
'Fate gifted us to each other.'

b. Dolja po-daruvala nam$_i$ odyn odnoho$_i$.
fate.NOM PO-gift.PST us.DAT each other.ACC
'Fate gifted us each other.'

The anaphor binding data provides clear evidence that A-movement is involved. Considering A-movement leads to new binding relations, however, it can be argued that the directionality of the derivation in fact goes in the opposite direction. That is, rather than assuming that (17a) represents the base order and (17b) is derived from it by overt movement, it has been argued that (17b) represents the base order, and (17a) obtains from overtly raising the direct object across the Dative-marked anaphor, thus establishing a new binding relation.

While this type of argument has indeed been made many times, let me point out that it works much better with cases involving binding than it does with cases involving scope relations. This is so since the binding data in (17) is symmetric, i.e., both (17a) and (17b) can be explained on either type of account. With QP scope, things are very different. On the widely held assumption that the Dative argument in ditransitives is merged in a structurally higher position than the Accusative argument, the scope freezing familiar from the DAT >> ACC ditransitives must be seen as an inherent property of the construction or, e.g., on Bruening's (2001) Superiority account, as an entirely epiphenomenal property. As pointed out in Larson et al. (2019), Bruening's account thus predicts that scope

[11]The original examples are due to Asarina (2005), cited in Bailyn (2012).

freezing should be found in English in many more constructions, namely all of those where the base relation between the two QPs can be plausibly analyzed (as in Bruening 2001) as involving asymmetric c-command in the base structure, – contrary to fact. Since this prediction is thoroughly falsified, we are left with a conclusion that scope freezing is, perhaps, just an inherent property of certain constructions, at least, as far as English is concerned. That is, we are left with no way of predicting where else we might find scope freezing. And perhaps one could accept it on the grounds that this property is somehow "exceptional", i.e., found in these two ditransitive constructions only.

Drawing now on our insights from Ukrainian/East Slavic, it becomes clear that our inability to model scope freezing, to predict where else in the language we may find it, is, in fact, a problem, as the phenomenon is found in a significant number of constructions, thus posing a challenge for syntactic theory. On the view adopted here, on the other hand, not only do we have an extensive list of environments where scope freezing has already been found to obtain, the Scope Freezing Generalization allows us to predict potential further environments where scope can be expected to "freeze" in this way as well. While this result is significant, the SFG also provides us with a powerful diagnostic tool for probing argument structure relations and allows for other non-trivial insights into the derivation of the extended verbal domain in East Slavic. Thus, I conclude that the below schematization accurately describes the conditions on scope freezing for the language under discussion, Ukrainian:

(18) Surface scope freezing, schematized:
[$_{TP}$ ExtA [$_{VoiceP}$ <ExtA> V+v [$_{XP}$ QP1 [$_{VP}$ QP2 <V> <QP1>]]]]

In what follows then, I will be relying on the Scope Freezing Diagnostic (SFD), which allows us to probe relative argument structure relations at Merge (Antonyuk 2015):

(19) The Scope Freezing Diagnostic
Frozen surface scope implicates a derived structure resulting from Argument Inversion.

The methodological goal of this paper is to demonstrate the remarkable internal consistency of the diagnostic and the non-trivial insights into the syntax of argument structure alternations that can be gained by applying it. I will not attempt to demonstrate all the insights already derived from the application of the SFD to the East Slavic (Ukrainian and Russian) data for reasons of space, directing the reader to the original research papers where these results are presented. Here I

will only summarize and briefly exemplify some of the findings so we can build on them in this paper.[12]

3 Mapping out the verb phrase

3.1 The relative ordering of internal arguments at Merge

As should already be clear from our preliminary discussion, the SFD is a simple diagnostic, one which can (at most) point to a derived structure among the alternating frames under investigation (if such exists), as well as point to the relative ordering of arguments at Merge. The SFD cannot tell us much about the exact Merge position of arguments; what it does give us is a heuristic according to which the linearization that is surface-scope frozen must be the derived one, and moreover that it must be derived by raising the structurally lower of the two internal arguments overtly across the structurally higher one in the postverbal field, thus gaining c-command over it.[13,14] In other words, what the SFD gives us is a mere ordering of arguments at Merge. For the constructions discussed earlier, these relative ordering statements are as follows:

[12] See Antonyuk (2015, 2020, 2022, submitted) and Antonyuk & Mykhaylyk (2022) for the original data and findings. See Abels & Grabska (2022) for an experimental confirmation of the empirical claims in Antonyuk's work based on Polish QP scope data as well as for a critical engagement with the account of scope freezing assumed here.

[13] Antonyuk (submitted) argues that, according to the SFD (and contra Antonyuk 2015), the *Spray-Load* Alternation is, in fact, *not* a case of a derivational relation between the two alternating frames. Crucially, she argues that the 'with'-variant (i.e., the Instrumental case-marked frame in Slavic) is, nevertheless, derived, as suggested by the fact that it exhibits scope freezing, just not from the locative frame, but from the Instrumental frame via Argument Inversion of the Accusative argument across NP_{INS}. That is, scope freezing in the 'with'-variant is indeed a marker of its derived status, but what it is derived from is not what is traditionally viewed as its "alternating" frame. This, of course, is good news, as the two frames differ not only in the morphosyntactic marking on their two internal arguments, but also in their theta roles, making a derivational account problematic in this case.

[14] Significantly, argument structure alternations, in Slavic and elsewhere, appear to never exhibit scope freezing on both possible orders/alternating frames. On accounts which posit independent projection of the two alternating frames, this should in principle be a logical possibility. On Antonyuk's (2015) treatment of scope freezing, assumed here, such a situation is impossible in principle, for obvious reasons. The only conceivable exception to this would be if what were (mistakenly) considered to be an alternation consisted of two structures, each of which would be derivationally related to another structure that is not viewed as part of the alternation. The closest case to this hypothetical situation would in fact be the *Spray-Load* Alternation, where (as described in the previous footnote) the frozen frame (V NP_{ACC} >> NP_{INS}) is derivationally related to another structure, (i.e., V NP_{INS} >> NP_{ACC}), rather than to the locative frame. Apart from this scenario, I will venture a prediction that such a situation should be impossible.

Table 1: Relative ordering statements

	Frozen order	Base
The Ditransitive Alternation:	DAT >> ACC	ACC >> DAT
The *Spray-Load* Alternation:	ACC >> INS	INS >> ACC
Reflexive Causatives:	PP_{FROM} >> INS	INS >> PP_{FROM}
Causative verbs:	ACC >> INS	INS >> ACC

Now, to some working on argument structure alternations and verbal argument structure more generally these insights may be surprising, as they go against a lot of what has arguably been assumed to be settled in the literature. My goal in this paper is not to provide conclusive evidence in favor of a particular structure for a particular alternation, but rather to demonstrate the general insights afforded by the SFD, especially in what concerns the relative Merge position of Instrumental arguments. A larger point, hinted at here and developed in detail elsewhere (Antonyuk 2025) is that, taken together, these insights suggest a rather interesting alternative view of how the derivation of the verb phrase in Discourse Configurational Slavic languages may proceed and what confounding factors have thus far prevented us from seeing this picture.

With respect to the Instrumentals specifically, the suggestion that they might be merged higher than the Accusative argument is certainly surprising, both because it is common to assume a low Merge/complement of V position for the Instrumental NP (as is standard for the Oblique case-marked arguments), as well as because the alternative would also suggest the Accusative NP must be merged low (in any case, lower than NP_{INS}). As already suggested in Table 1, the indication that the Instrumental NP is merged higher than either the Accusative-marked co-argument or the PP co-argument remains consistent even once we significantly expand the range of the constructions under investigation.

Consider the following data (which include examples presented earlier, for convenience):

(20) Causative verbs

a. Likar infikuvav jakojus' xvoroboju kožnoho pacijenta.
doctor.NOM infect.PST some.INS illness.INS every.ACC patient.ACC
'The doctor infected every patient with some illness.'
Surface scope: For some illness *x*, for every patient *y*, the doctor infected *y* with *x*.
Inverse scope: For every patient *x*, for some illness *y*, the doctor infected *x* with *y*.

b. Likar infikuvav jakohos' pacijenta kožnoju xvoroboju.
doctor.NOM infect.PST some.ACC patient.ACC every.INS illness.INS
'The doctor infected some patient with every illness'
Surface scope: For some patient *x*, for every illness *y*, the doctor infected *x* with *y*.
Unavailable inverse scope: For every illness *x*, for some patient *y*, the doctor infected *y* with *x*.

⇒ BASE ORDER: V NP_{INS} >> NP_{ACC}

According to the SFD, the V NP_{INS} >> NP_{ACC} linearization represents the relative order of arguments at Merge. The same conclusion is reached for the 'with'-variant of the *Spray-Load* Alternation:

(21) Instrumental/'with'-frame of the Spray-Load Alternation

a. Myxailo za-lyv jakyjs' bak kožnym vydom pal'noho.
Myxailo.NOM ZA-fill.PST some.ACC tank.ACC every.INS type.INS gas.GEN
Lit.: 'Myxailo filled some tank with every type of gas.'
Surface scope (∃>∀): for some tank *x*, for every type of gas *y*, Myxailo filled *x* with *y*.
Unavailable inverse scope (∀>∃): for every type of gas *x*, for some tank *y*, Myxailo filled *x* into *y*.

b. Myxailo za-lyv jakymos' vydom pal'noho kožen bak.
Myxailo.NOM ZA-fill.PST some.INS type.INS gas.GEN every.ACC tank.ACC
Lit.: 'Myxailo filled with some type of gas every tank.'
Surface scope (∃>∀): For some type of gas *x*, for every tank *y*, Myxailo filled *x* into *y*.
Inverse scope (∀>∃): For every tank *x*, for some type of gas *y*, Myxailo filled *x* with *y*.

⇒ NP_{INS} >> NP_{ACC} is the order at Merge within the Instrumental/'with' frame.

The passive-like *-no/-to* construction, taken up in detail in Lavine (2022, 2023) and illustrated in (22), is useful for our purposes in that it involves two internal arguments, hence it can be subject to the SFD as well.

(22) The *-no*/*-to* construction (Lavine & Freidin 2002)
Cerkvu bulo spaleno blyskavkoju.
church.ACC was.NON-AGR burned.down.NON-AGR lightning.INS
'The church was burned down by lightning.'

What we see is that, as before, the two arguments are permutable, and overtly permuting/crossing the arguments in the postverbal field results in scope freezing of the NP_{ACC} >> NP_{INS} order.[15]

(23) a. Jakus' cerkvu bulo spaleno kožnoju
some.ACC church.ACC was.NON-AGR burned.down.NON-AGR every.INS
blyskavkoju / z blyskavok.
lightning.INS from lightning.GEN.PL
'Some church was burned down by every lightning.'
Surface scope: For some church *x*, for every lightning *y*, *x* was burned down by *y*.
Unavailable inverse scope: For every lightning *x*, for some church *y*, *x* burned down *y*.

b. Jakojus' blyskavkoju bulo spaleno
some.INS lightning.INS was.NON-AGR burned.down.NON-AGR
kožnu cerkvu.
every.ACC church.ACC
'Some church was burned down by every lightning.'
Surface scope: For some lightning *x*, for every church *y*, *x* burned down *y*.
Inverse scope: For every church *x*, for some lightning *y*, *x* was burned down by *y*.

⇒ BASE ORDER: V NP_{INS} >> NP_{ACC}

Something worth pointing out is that the surface scope interpretation for (23a) is infelicitous in that it entails a situation where one and the same church was burned down by every one of the lightning strikes under consideration. Thus, if there were five lightning strikes during the night, every single one must have

[15] I assume that the surface word order in such structures is derived by ultimately raising either of the arguments to Spec,TP. In the scopally frozen sentence, Argument Inversion first raises the lower argument, NP_{ACC}, to a position to the left of its co-argument, NP_{INS}, still in the postverbal field, which results in scope freezing. The thus inverted NP_{ACC} then undergoes raising into Spec,TP. See Antonyuk & Mykhaylyk (2022) for evidence that scope freezing, once established by AI in the postverbal field, cannot be disturbed/"unfrozen" by further syntactic movement.

hit the church and contributed to its burning down for the sentence to be true on its surface scope interpretation. Yet, despite its real-world incongruent surface scope interpretation, which should have really facilitated the inverse scope reading, if it were available, to come through, the latter is nevertheless excluded for this sentence. This helps demonstrate one of the core insights about scope freezing: it is an all-or-nothing, categorical phenomenon, as opposed to surface scope bias, familiar from other contexts, which can be manipulated by the choice of lexical items, syntactic contexts, information-structural properties of the sentence, etc. This property is what arguably makes the Scope Freezing Diagnostic an incredibly reliable, internally consistent diagnostic (see esp. Antonyuk 2022).

The exact same conclusion about the higher Merge position of the Instrumental argument (relative to the Accusative) can be reached by applying the SFD to the so-called NON-AGREEING ACCUSATIVES (Lavine & Freidin 2002; Lavine 2022, 2023, i.a.). For clarity, the derivational path for the derived ((24a) and (25a)) is assumed to be largely identical to that described for the *-no/-to* constructions in footnote 15:

(24) a. Soldata po-ranylo kuleju.
soldier.ACC PO-wound.NON-AGR bullet.INS
'A soldier was wounded by a bullet.'
(modeled on Lavine & Freidin 2002)

b. Kuleju po-ranylo soldata.
bullet.INS PO-wound.NON-AGR soldier.ACC
'A soldier was wounded by a bullet.'

(25) a. Jakohos' soldata po-ranylo kožnoju kuleju.
some.ACC soldier.ACC PO-wound.NON-AGR every.INS bullet.INS
'Some soldier was wounded by every bullet.'
Surface scope: For some soldier *x*, for every bullet *y*, *x* was wounded with *y*.
Unavailable inverse scope: For every bullet *x*, for some soldier*y*, *x* wounded *y*.

b. Jakojus' kuleju po-ranylo kožnoho soldata.
some.INS bullet.INS PO-wound.NON-AGR every.ACC soldier.ACC
'Every soldier was wounded by a bullet.'
Surface scope: For some bullet *x*, for every soldier *y*, *x* wounded *y*.
Inverse scope: For every soldier *x*, for some bullet *y*, *x* was wounded with *y*.

⇒ BASE ORDER: V NP_{INS} >> NP_{ACC}

The non-agreeing accusatives involve two internal arguments, marked for Dative and Accusative case, allowing us to test whether the relative ordering V NP_{ACC} >> NP_{DAT} obtained for the DOC will be replicated. As shown in (27), this is indeed the case:

(26) a. Xlopcevi vidrizalo palec' na ruci.
boy.DAT severed.NON-AGR finger.ACC on hand
'The boy's finger was severed.'

b. Palec' na ruci vidrizalo xlopcevi.
finger.ACC on hand severed.NON-AGR boy.DAT
'A finger on hand was severed from a guy's hand.'

(27) a. Jakomus' xlopcevi vidrizalo kožen palec' (na ruci).
some.DAT guy.DAT severed.NON-AGR every.ACC finger.ACC on hand
'Some boy got every one of his fingers severed.'
Surface scope: For some boy *x*, for every finger *y*, *x* had *y* severed from *x*'s hand.
Unavailable inverse scope: For every finger *x*, for some boy *y*, *x* was severed from *y*'s hand.

b. Jakyjs' palec' (na ruci) vidrizalo kožnomu xlopcevi.
some.ACC finger.ACC on hand severed.NON-AGR every.DAT boy.DAT
'Some finger was severed from every boy's hand.'
Unavailable surface scope: For some finger *x*, for every boy *y*, *x* was severed from *y*'s hand.
Inverse scope: For every boy *x*, for some finger *y*, *x*'s y was severed.

⇒ BASE ORDER: V NP_{ACC} >> NP_{DAT}

Now, it is interesting that up to now we have seen two of the relevant "Merge orderings", that is, V NP_{ACC} >> NP_{DAT} and V NP_{INS} >> $NP_{ACC,}$ established and replicated over several types of constructions here and elsewhere. By transitivity, NP_{INS} should precede NP_{DAT} as well: V NP_{INS} >> NP_{DAT}. Since the example in (26) can be spelled out more fully, to include an implicit Instrumental Inanimate Causer argument, this new relative ordering, due to transitivity, can be put to the test by applying the SFD to the Instrumental and the Dative-marked quantificational arguments. Doing so confirms that V NP_{INS} >> NP_{DAT} is, indeed, the correct base structure ordering:

(28) Xlopcevi vidrizalo palec' elektryčnoju pyloju.
boy.DAT severed.NON-AGR finger.ACC electric.INS saw.INS
'The boy's finger got severed by an electric saw.'

(29) a. Jakomus' xlopcevi vidrizalo palec' kožnym
some.DAT guy.DAT severed.NON-AGR finger.ACC every.INS
instrumentom.
instrument.INS
'Some boy got a finger severed by every instrument.' (frozen)

b. Jakymos' instrumentom vidrizalo palec' kožnomu
some.INS instrument.INS severed.NON-AGR finger.ACC every.DAT
xlopcevi.
boy.DAT
'With some instrument (or other), every boy's finger was severed.'
(ambiguous)

⇒ BASE ORDER: V NP_{INS} >> NP_{DAT}

We have thus arrived at the relative "Merge ordering" for 3-argument NPs, summarized in (30). The SFD makes abundantly clear that the NP_{INS} argument cannot be equated with other obliques in occupying the lowermost, complement position (cf. Pesetsky 1995, i.a.). In fact, according to the SFD, NP_{INS} is merged the highest of the three internal arguments.

(30) V NP_{ACC} >> NP_{DAT}
V NP_{INS} >> NP_{ACC}
V NP_{INS} >> NP_{DAT}

Thus, whatever the actual Merge positions (something the SFD does not and cannot provide an answer to), the relative structure representation we arrive at looks like the following:

(31) V NP_{INS} >> NP_{ACC} >> NP_{DAT}

3.2 The syntax of Instrumentals in Ukrainian

While the above relative ordering is all the SFD can give us, it is plenty, of course. Supplementing with other types of evidence (see Antonyuk & Mykhaylyk 2022; Antonyuk submitted for arguments based on Ukrainian data; see also Bailyn 2010, 2012; Antonyuk 2015, 2020, 2022; Titov 2017 for related data from Russian; Kovačević 2020 for Serbo-Croatian, i.a.), we get a fairly clear idea of what the actual Merge positions must be. Most relevantly for our purposes, the SFD evidence provided here complements the argumentation and the analysis of Inanimate Causers and the Split Voice structure (see Pylkkänen 2002, 2008). In fact, we can adduce additional supporting evidence, also due to QP scope data, that strongly

supports Lavine's (2022, 2023) argumentation for the differentiated structural representation of the Instrumental case-marked Agents of passives and the Inanimate Causer Instrumentals.

3.2.1 On passives vs passive-like: Against the "Undifferentiated Initiator" view

Lavine (2022, 2023) argues against the "Undifferentiated Initiator" idea advanced in Ramchand (2008); Bruening (2013); Legate (2014) and Wood (2017). Examining a range of causative constructions in the crosslinguistic perspective, Lavine argues that the "Initiator" argument in the constructions under investigation is an Oblique Causer (Natural Force) argument that originates in the VP. This Natural Force Instrumental crucially licenses the presence of *v*CauseP in the structure, which licenses Accusative case on the direct object in the absence of an external argument. While I will come back to the question of the precise Merge position for the Instrumental Inanimate Causer, as this is the question where the analysis proposed here differs from Lavine's, let us for now focus on the latter point, namely the argument against the Undifferentiated Initiator position of Ramchand (2008) and subsequent work. Here, Lavine's conclusions, which he reaches based on independent types of evidence, receive strong support from the quantifier scope data presented here.[16] Perhaps the strongest argument for limiting the domain of application of the Scope Freezing Generalization to *v*P (i.e., crucially the layer below VoiceP) has been the absence of scope freezing in doubly quantified transitive SVO sentences (i.e., subject QP >> V >> object QP structures) as well as any other constructions involving a subject QP. Crucially, passive sentences do not exhibit scope freezing either (cf. (32) and the related OVS structure in (14)).

(32) Jakas' kiška bula nahodovana kožnoju divčynkoju.
some.NOM.F cat.NOM.F was.F fed.PASS.F every.INS girl.INS
'Some cat was fed by every girl.'
Surface scope: For some cat *x*, for every girl *y*, *x* was fed by *y*.
Inverse scope: For every girl *x*, for some cat *y*, *x* fed *y*.

[16] Lavine (2023) takes on the theoretical question of whether Agents, Instruments and Natural Forces are all realizations of the "macro-Initiator role" and provides evidence that crosslinguistically, causer arguments are differentially realized in the syntax. Some of the strongest evidence to this effect comes from the differences in the distribution of the Inanimate (Instrumental) Causer arguments in Ukrainian, Polish, and Icelandic that sets them apart from the Agents of passives in these languages.

Lavine's analysis of Transitive Impersonals (which in Ukrainian happen to be morphologically indistinguishable from the Instrumental Agent of passives) makes a strong prediction regarding QP scope. It predicts that a passive structure and a superficially similar impersonal construction will differ with respect to the availability of scope freezing. This is so since on Lavine's analysis the NP_{INS} in an impersonal construction is merged lower than the merge position of an Instrumental Agent NP (assumed to be an argument of Voice). Hence, the former, but not the latter, is predicted to show scope freezing. Moreover, based on the data we have already seen, we can predict that transitive impersonals will show scope freezing in the ACC >> INS order of arguments. Both predictions are correct (cf. (34a) and (35a)):[17]

(33) a. Passive
Cerkv-a bul-a spalen-a {#blyskavk-oju / church.F-NOM was-AGR.F burned.down.PASS-AGR.F lightning-INS okupant-amy}.
invaders-INS
(Intended:) 'The church was burned down by {the lightning / the invaders}.'

b. Trans. impers.
Cerkv-u bul-o spalen-o {blyskavk-oju / church.F-ACC was-NON-AGR burned.down-NON-AGR lightning-INS #okupant-amy}.
invaders-INS
(Intended:) 'The church was burned down by {the lightning / the invaders}.'

(34) a. Passive
Jakas' cerkv-a bul-a spalen-a some.NOM.SG.F church.F-NOM was-AGR.F burned.down.PASS-AGR.F kožnym okupantom.
every.INS invader.INS
'Some church was burned down by every invader.' (scope ambiguous)

[17] As detailed in Lavine (2022, 2023), a passive and a transitive impersonal differ with respect to the type of Instrumental NP they require: thus, a passive structure is infelicitous with an Inanimate Causer argument while a transitive impersonal is ungrammatical with an animate/Agent argument. This fact provides one of the arguments in favor of a differentiated approach to Instrumental NPs in Ukrainian.

b. Jakymos' okupantom bul-a spalen-a
some.INS.SG invader.INS was-AGR.F burned.down.PASS-AGR.F
kožn-a cerkv-a.
every-F.NOM church.F-NOM
'Every church was burned down by some invader.' (scope ambiguous)

(35) a. Trans. impers.
Jak-us' cerkv-u bul-o spalen-o
some-ACC.SG.F church.F-ACC was-NON-AGR burned.down-NON-AGR
kožn-oju blyskavk-oju.
every-INS lightning-INS
'Some church was burned by every lightning.' (scope frozen)

b. Jak-ojus' blyskavk-oju bul-o spalen-o
some-INS.SG lightning-INS was-NON-AGR burned.down-NON-AGR
kožn-u cerkv-u.
every-ACC.F church.F-ACC
'Every church was burned down by some lightning.'
(scope ambiguous)

Of course, we want to ask whether differences regarding scope freezing availability in the two structures are indeed due to different Merge positions for the Instrumental Inanimate Causer argument and the Agent argument of a passive sentence. Needless to say, if we could attribute the lack of scope freezing in passives to some other factor, the above argument would disappear or be significantly weakened. Consider the facts again. Both the subjects of active SVO sentences and the subjects of passives exhibit lack of scope freezing, as do all other constructions in which one of the two interacting QPs is the subject QP. In other words, while there are indeed non-trivial structural, semantic, and information-structural differences between, e.g., OSV, OVS, and passives, conspicuously, the absence of scope freezing is a property they all share. Furthermore, all internal arguments irrespective of case marking and structural height (i.e., ACC/DAT/INSTR) invariably participate in the scope ambiguity-scope freezing distribution patterns under AI, which is to say that the lack of scope freezing cannot be attributed to some confound that is due to the presence of any of these arguments.[18]

[18] As mentioned earlier, the only exception here is the locative/directional PPs, which consistently show surface scope bias, but not the categorical scope freezing. See Antonyuk (2020, submitted) for detailed discussions and the argument that the existence of this seeming exception to the Scope Freezing Generalization is not a problem for the SFG, but a source of additional insight in the search for an adequate, sufficiently restrictive account of scope freezing as a grammatical phenomenon.

Thus, in a passive structure (which, again, differs in terms of scope freezing from the superficially similar transitive impersonal), the difference can hardly be due to anything other than the status of the Agent QP.

One may also wonder whether subjects fail to participate in scope freezing relations due to any of the semantic properties that a subject QP may be associated with by virtue of its syntactic and semantic prominence (e.g., givenness, specificity, topicality, etc). I believe this is unlikely: research on the interaction of specificity and quantification in Ukrainian shows that specificity and QP scope diverge, i.e., a(n object) QP can be specific and take either high or low scope; more generally, further syntactic movement and specificity of either of the two or both objects can neither perturb existing scope freezing nor establish a new scope freezing relation once a QP raises above low temporal/manner adverbs, generally taken to mark the *v*P edge (in current terms: VoiceP edge).[19] This strongly suggests that the status of a subject QP as specific would likewise not interfere with its ability to participate in a scope freezing relation. From what I can tell, the same concerns givenness and topicality, though of course the status of the structurally higher QP as topical/given/specific can lead to some surface scope bias, meaning that the wide scope for the topical/given/specific subject QP may be the preferred interpretation in such a case.

On the Undifferentiated Initiator view all causer arguments, including the non-volitional ones, are arguments of Voice (Kallulli 2006, Ramchand 2008, Bruening 2013, Legate 2014, Wood 2017, i.a.). Thus, on these accounts, we expect that the Instrumental case-marked agents of passives and the Instrumental inanimate/non-volitional causers of Transitive Impersonal constructions would be syntactically identical, precisely because of their being generated in the same position, Spec,VoiceP. As we have just observed, their behavior is certainly not identical as far as QP scope relations are concerned. Recall that on the account adopted here, the scope freezing relation obtains as a result of a single instance of movement of the structurally lower internal argument QP to a position above the structurally higher one, but, crucially, below the Merge position of the external argument. Thus, in the impersonal *-no/-to* constructions, scope freezing obtains when the lower NP_{ACC} raises overtly above NP_{INS}. If we assume the generalization regarding scope freezing is correct, then on the Undifferentiated Initiator view, which has all initiators merged as arguments of Voice, *all* structures involving any type of initiator argument are then predicted to lack scope freezing, precisely because, as we have shown, scope freezing emerges in a layer of structure that crucially excludes VoiceP.

[19] See Antonyuk & Mykhaylyk (2022) for details.

Needless to say, of course, much will ultimately depend on the account of passives one adopts, and this is certainly a research area characterized by continued debate as well as significant differences in the general approach of individual researchers. Let us focus here on the structural, configurational accounts in which the agent phrase of a passive is base-generated in the same position as in the active, in accordance with Baker's (1988) UTAH (see esp. Collins 2005; cf. Bruening 2013; Hallman 2021, i.a.). On Collins' (2005) influential account, a participial phase containing the VP fronts around the agent in its Merge position, thus inverting the hierarchical relation between the agent and the object phrase. On an account of passives roughly such as this one, the lack of scope freezing in passives follows naturally. This is so since the agent is merged in its usual position, Spec,VoiceP (assumed to be Spec,*v*P in Collins 2005), and we have seen extensive evidence that external arguments never participate in the surface scope freezing relation, thus we expect the same in passives. On the present account, which follows Lavine (2022, 2023), what sets the non-volitional/inanimate causer Instrumentals apart from the agent Instrumentals of passives is precisely the structural difference in Merge positions, with the former being merged in a structurally lower position than the latter, hence the correctly predicted differences in scope behavior.[20]

Finally, note that I have provided no independent evidence that the Agent of passives is generated in the same position as the Agent of active transitives, though, arguably, the scope data (i.e., the same scope-taking ability of passives as other structures involving the Agent QP) do provide indirect evidence to this effect. Crucially, however, to argue against the Undifferentiated Initiator view, it is enough to show that the Instrumentals in Transitive Impersonals are generated in a position other than Spec,VoiceP. I conclude that the scope difference between a passive (34) and a transitive impersonal (35) is indeed due to a difference in the structural position of the Instrumental argument in the two types of constructions under consideration. Thus, we gain a novel argument against

[20] A question remains, of course, why the nature of a QP's Merge position should be relevant for establishing a scope freezing relation. While I cannot do this question justice here, in my related work (Antonyuk submitted; Antonyuk 2025) I argue that scope freezing is a first-phase syntax phenomenon, which arises when the lower QP raises into the specifier of ApplP (which I argue is located in Slavic between VoiceP and *v*P). The overt movement of the lower argument into the specifier of ApplP is argued to define and lead to the Spell-out of the first phase, the domain in which the scope freezing relation is set. Note that irrespective of whether this account is correct, what we are crucially relying on here is the empirically grounded generalization that the domain of scope freezing excludes the subject QP. Thus, the external argument, taken to be generated in Spec,VoiceP, is always going to be literally too high, being outside the domain in which this scope relation can be established.

the Undifferentiated Initiator view (Ramchand 2008; Legate 2014; Wood 2017, i.a.) and in favor of making a distinction between a higher verbal layer, VoiceP, which introduces the external argument and the lower verbal layer, *v*P, which introduces causative semantics and an inanimate causer argument in the absence of Voice (Lavine 2022, 2023).

3.2.2 On the VP-external Merge position of argument Instrumentals

Going back to the previous point, i.e., the exact nature of the Inanimate Causer's Merge position, as mentioned earlier, and as should be clear from the SFD insights already reviewed, I argue that the Merge position of Inanimate Causer Instrumentals cannot be VP-internal. Lavine (2022, 2023), on the other hand, posits a low VP-internal position in the complement of V, which is traditionally reserved for Oblique arguments.

As a reminder, the argument hierarchy deduced from applying the SFD to a variety of constructions is the following: V NP_{INS} >> NP_{ACC} >> NP_{DAT}. Thus, while NP_{DAT} is shown to pattern with the Obliques (i.e., arguably sharing the same Merge position with directional and locative PPs), the Inanimate Causer Instrumentals are in fact shown to have the highest Merge position of the three arguments. Hence, to the extent the SFD is accepted as being correct, the complement of V position for NP_{INS} becomes ruled out. Spec,V, on the other hand, might be somewhat more likely. Specifically, in dyadic constructions involving two internal arguments, NP_{ACC} and NP_{INS}, the former is consistently shown by the SFD to be merged lower than NP_{INS}, hence it is conceivable that the Merge position for the two arguments could simply be the reverse of what is commonly assumed.[21] This conclusion appears equally unavailable, however, once we consider again examples involving three internal arguments (ex. (28) and (29) repeated here for convenience as (36) and (37)).[22]

(36) Xlopcevi vidrizalo palec' elektryčnoju pyloju.
boy.DAT severed.NON-AGR finger.ACC electric.INS saw.INS
'The boy's finger got severed by an electric saw.'

[21] This is precisely what Landau (2010) proposes as far as the position of the Accusatives in object experiencer constructions (i.e., an Accusative as a concealed low Oblique), which in Ukrainian involve Accusative and Instrumental argument NPs.

[22] The # sign next to (38a) is meant to indicate that this example (just like (23a)) is infelicitous on its surface scope interpretation in that it describes a situation where the same finger is severed with every instrument in some contextually salient set of instruments. Our world knowledge tells us this situation is impossible or improbable, but in terms of logico-semantic properties of the sentence, this interpretation indeed obtains and is in fact the only interpretation available for this sentence.

(37) a. Jakomus' xlopcevi vidrizalo palec' kožnym
some.DAT guy.DAT severed.NON-AGR finger.ACC every.INS
instrumentom.
instrument.INS
'Some boy got a finger severed by every instrument.' (frozen)

b. Jakymos' instrumentom vidrizalo palec' kožnomu
some.INS instrument.INS severed.NON-AGR finger.ACC every.DAT
xlopcevi.
boy.DAT
'With some instrument (or other), every boy's finger was severed.'
(ambiguous)

⇒ BASE ORDER: V NP_{INS} >> NP_{DAT}

(38) a. # Xlopcevi vidrizalo jakyjs' palec' kožnym
boy.DAT severed.NON-AGR some finger.ACC every.INS
instrumentom.
instrument.INS
'Some boy got a finger severed by every instrument.' (frozen)

b. Xlopcevi vidrizalo jakymos' instrumentom kožen
boy.DAT severed.NON-AGR some.INS finger.INS every.ACC
palec'.
finger.ACC
'Some boy got every finger severed by some instrument.' (ambiguous)

⇒ BASE ORDER: V NP_{INS} >> NP_{ACC}

What we see here is that when NP_{DAT}, NP_{ACC} and NP_{INS} are all arguments of the same verb, the SFD points to the same relative ordering of arguments, i.e., V NP_{INS} >> NP_{ACC} >> NP_{DAT}. The above examples, while not producing any new evidence beyond that discussed earlier in the paper, nevertheless drive home the point that there is simply no place left in the VP for the Inanimate Causer argument. Hence, my proposal (in accordance with Lavine 2022, 2023 and Pylkkänen 2002, 2008), developed in detail in related work, is that the data considered in this paper are to be interpreted as evidence in favor of the Unbundled Voice projection in Ukrainian, the lower of which, call it *v*CauseP, following Lavine (2023), hosts the Inanimate Causer Argument while the higher one, VoiceP (Kratzer 1996), hosts the Agent external argument. Without going into the specifics of the larger proposal here, I will point out that semantically, it makes good sense for a Causer argument to be merged higher than the other VP-internal arguments (NP_{ACC}, NP_{DAT}, PP); syntactically, apart from the purely

theoretical reasons for favoring NP_{INS} as being merged in Spec,*v*CauseP, we now have solid empirical evidence that supports precisely this view.[23]

4 Conclusions

In this paper I have provided a novel argument against the Undifferentiated Initiator view (Ramchand 2008; Bruening 2013; Legate 2014 and Wood 2017), which posits distinct structural Merge positions for the Instrumental Agent of passives and the morphologically indistinguishable Instrumental Inanimate Causer argument of a range of "Transitive Impersonal" constructions in Ukrainian, thus providing independent support for the main theoretical claim in Lavine (2022, 2023). The novel evidence presented in this paper shows that the Instrumental Agents of passives and the Instrumental Inanimate Causers (e.g., in Ukrainian non-agreeing accusative constructions) behave differently with respect to QP scope, with the latter, but not the former, being able to participate in establishing a surface scope freezing relation. In this regard passives behave very much in line with a range of transitive constructions involving a subject QP: as shown in the paper, subject QPs categorically resist participating in scope freezing (Larson 1990; Bruening 2001). Thus, while no novel evidence bearing on the Merge position of the subject of passives is provided here, the paper does provide indirect support for configurational, structural accounts of passives such as Collins (2005), by showing strong similarities with respect to non-participation in scope freezing on the part of subject QPs in SVO, OSV, SOV, OVS and passive sentences. In other words, subject QPs are outside the domain in which scope freezing can be established, and the subjects of passives in this respect behave similarly to all other external arguments of transitive sentences.

I have also provided evidence in favor of a higher Merge position than is commonly assumed for a variety of Instrumental case-marked arguments. I suggest that their Inanimate Causer semantics ensures their being merged above all other internal arguments. Specifically, I argue that the Inanimate Causer Instrumentals must be merged outside the core VP (cf. Lavine 2022, 2023 for a low complement of V position for all inanimate cause Instrumentals), the most likely candidate for the Merge position being *v*CauseP (i.e., the lower Voice projection in Pylkkänen's 2002, 2008 Unbundled Voice proposal), which introduces causative semantics in the absence of Voice, thus very much being in the spirit of Lavine's work (see also esp. Harley 2013).

[23] As mentioned earlier, Lavine (2023) treats the inanimate causer arguments in Transitive Impersonal constructions as the Natural Force argument, which is arguably well aligned with the standard view of Instrumental arguments as being merged low in the VP (cf. Szucsich 2007; Schäfer 2008; Junghanns et al. 2017; Wood 2017 i.a. for other theoretical solutions).

Finally, it should be pointed out that the above arguments were all made based on the insights afforded by the Scope Freezing Diagnostic (Antonyuk 2015, 2020, 2022, submitted), which is a testament to its diagnostic utility. Here as elsewhere, the SFD is shown to be a remarkably consistent diagnostic tool, one that is especially well suited for the Discourse Configurational Languages such as Ukrainian and the rest of Slavic where overt syntactic movement correlates with semantic interpretation as well as discourse-related properties of the sentence.

Abbreviations

ACC	accusative	NON-AGR	non-agreeing form
AGR	agreement	PASS	passive
DAT	dative	PL	plural
F	feminine	PST	past
GEN	genitive	REFL	reflexive
INS	instrumental	SG	singular
NOM	nominative		

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