Polarity subjunctive in German and Russian

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Abstract

Subjunctives are typically used in intensional, or modal, contexts, to talk about possible worlds. But they have also been noted to be licensed in negative contexts, and while prior work has sought to unify these 'polarity' subjunctives with 'intensional' subjunctives, in this paper I build a case that in German and Russian at least, they constitute a distinct use as negative polarity items (NPIs). These items fill a gap in the typology of NPIs: unlike known items like *any* or *ever*, which are taken to activate alternatives consisting of individuals, eventualities, or times, they activate alternatives consisting of worlds.[*]

Keywords: subjunctive mood, negative polarity

1. Introduction. Subjunctives are canonically thought to be used in intensional contexts, contexts which require us to consider possible worlds. In Slavic languages, for instance, they typically appear in purpose or 'purpose-like' clauses (Dobrušina 2016: 263ff.), for example, under predicates like Russian *hotet'* 'want', as in 1:

(1) Učenye   hotjat, čto-**by**   vrednyj CO_2 sprjatali pod   zemlej.[1]
     scientists want   that-SUBJ harmful CO_2 hid.PL   under ground
     'Scientists want to hide away harmful CO_2 underground.'

There is also a prominent use of subjunctives, in Slavic and, say, in German, to mark counterfactuality in conditionals or other modal contexts, like the German sentence 2:

(2)   ..., obwohl   das Land   eigentlich reich sein könnte.[2]
      ..., although the country actually   rich   be   can.PAST.SUBJ
      '..., although the country could really have been rich.'

The central claim of this paper, however, is that there is a distinct use of subjunctive mood in extensional contexts, as a negative polarity item (an NPI), in at least two languages, German and Russian. I will present a series of arguments for this and, building on the analyses of the NPI *any* proposed by Chierchia (2013) and, somewhat differently, Crnič (2019), propose an analysis which predicts the polarity sensitivity of these 'polarity subjunctives': they activate 'subdomain alternatives' to their argument propositions.

The Russian sentence 3, essentially reproducible in many languages, such as French and German, may serve to give a sense of the facts that will be at issue.

(3) Ne vižu ženščiny,   kotoraja stojala **by**   nedaleko ot   vyhoda.
     not see woman.GEN who   stood   SUBJ near   from exit
     'I don't see any woman standing next to the exit.'
                    (Dobrušina 2010: 192 and Dobrušina 2016: 242, attributed to Elena Padučeva)

Here the subjunctive particle *by* in the relative clause depends on the negation *ne* in the matrix: The corresponding sentence without it, 4a (where the accusative replaces the 'genitive of negation' (see, e.g., Padučeva 2006)), is not felicitous.

(4)   a. #Vižu ženščinu,   kotoraja stojala **by**   nedaleko ot   vyhoda.
         see   woman.ACC who   stood   SUBJ near   from exit

      b. Vižu ženščinu,   kotoraja stoit   nedaleko ot   vyhoda.
         see   woman.ACC who   stands near   from exit
         'I see a/the woman standing next to the exit.'

Note that 3 is, by all appearances, an extensional context: the fact that it is felicitous while 4a is not is evidently not due to any form of intensionality. It has been suggested, by Partee (2008), that a negation can facilitate an intensional interpretation of a sentence, but I will argue, in section 3.2, that this line of reasoning is not tenable. The felicity of 3 will instead be argued to result from the fact that *by* is in a context which is downward-entailing. In fact, the argument will be that the subjunctive here acts like, and is, a negative polarity item, an NPI, like determiners such as *kakoj-libo* 'any' or adverbs like *kogda-libo* 'ever' in Russian:

(5)   a.   Ivan ne videl tam   kakih-libo studentov.
             Ivan not saw   there who-*libo*   students
             'Ivan didn't see any students there.'   (Padučeva 2015: 143)

        b. #Ivan videl tam   kakih-libo studentov.
            Ivan saw   there who-*libo*   students

(6)   a.   Boga nikto ne videl kogda-libo.
             God noone not saw   when-*libo*
             'Nobody has ever seen God.'   (The Gospel according to John, 1:18)

        b. #Boga kto-to   videl kogda-libo.
            God someone saw   when-*libo*

5b and 6b are infelicitous because they are upward-entailing contexts for the NPI: 'Ivan saw students there', say, entails 'Ivan saw people there'; 5a and 6a are felicitous because they are downward-entailing contexts for the NPI: 'Ivan didn't see people there', say, entails 'Ivan didn't see students there' (see section 2.2 for more on these notions).

I will try to show that the subjunctive in Russian and the past or past perfect subjunctive in German have a use which largely mirrors such canonical NPIs (one notable exception being that the downward-entailing context must be non-local, see section 2.2), and that this use is distinct from the intensional uses of the subjunctives. This motivates a treatment of it as an NPI, but crucially an NPI of a novel type: whereas NPI determiners like *kak- -libo* activate alternatives to domains of individuals and NPIs like *kogda-libo* activate alternatives to domains of times, NPI subjunctives activate alternatives to domains of worlds.

Concerning Russian, the view that a use of the subjunctive behaves like and should be thought of as an NPI is not entirely new: Bondarenko (2021) considers the distribution of certain classes of subjunctive clauses through the lens of NPI licensing and characterizes them as weak NPIs. I will be returning to Bondarenko's work in sections 2.4, 3.3 and 4.2. In fact, the Russian NPI subjunctive and the German NPI subjunctive will turn out, in

sections 2.2, 2.3 and 2.4, to behave in ways that set them slightly apart from well-studied NPIs, be they 'weak' or 'strong', and from each other; they thus lend support to a nuanced view of the landscape of NPIs, as advocated by Schaebbicke et al. (2021), where different NPIs show different sensitivities in different kinds of contexts.

In section 2, I present the evidence that there are separate NPI subjunctives to be taken into account in German and in Russian, and survey their distribution, in terms of (non-)locality and 'degrees of negativity' (de Swart 2010: 16) and with a view to scalar implicatures and presuppositions which may interfere with them. Section 3 reviews two approaches to cases like 3 which both seek to unify them with 'intensional' cases; one, I will argue, is too weak and overgenerates, the other is too strong and undergenerates. Then, the hypothesis developed by Bondarenko (2021) that the Russian subjunctive has a life as a 'weak' NPI is reviewed.

In section 4, I develop an analysis of NPI subjunctives which is patterned on the analyses of NPI indefinites proposed by Chierchia (2013) and Crnič (2019) and which predicts their dependence on downward-entailing contexts at various levels (implicatures, presuppositions, at-issue content). I provide a sample derivation of a simple case to show how the presupposition triggered by the covert *even*, but ultimately set off by the subjunctive, is violated in a positive context but satisfied in a negative one. The same logic will apply to all the cases shown in section 2, predicting that the NPI subjunctives are restricted to downward-entailing environments, with German and Russian coming slightly apart in regard to the scope of this restriction.

Section 5 sums up the account and briefly addresses the issues it has left open, about how NPI subjunctives relate to 'other' subjunctives and how German and Russian NPI subjunctives may relate to polarity subjunctives in other languages.

2. Polarity sensitive subjunctives: The evidence. In this section, I will provide various kinds of evidence in support of the idea that certain uses of subjunctives should be thought of in terms of polarity sensitivity: Positive and negative data, convergent or divergent for German and Russian, in contexts that vary in locality and negativity, data indicating that subjunctives can be sensitive to effects from presuppositions, and evidence that a polarity sensitive interpretation can compete with a counterfactual interpretation and cause ambiguities.

2.1. Some preliminary evidence. It will be useful to start by anchoring the phenomenon in a context of European languages, observing, first, a parallel pattern across a palette of them and noting, second, that in contrast to 'counterfactual' or 'intensional' variants, 'this' subjunctive has no counterpart (such as a fake past or a modal auxiliary) in

languages without subjunctives.

ACROSS EUROPEAN LANGUAGES. A sizable number of scholars set a 'polarity
subjunctive' apart from subjunctives that are, in one way or other, associated with
intensionality; with regard to Greek, Giannakidou (1998), with regard to Romance,
Stowell (1993), Portner (1997) and Quer (1998), and with regard to Slavic languages,
Sočanac (2017), to mention some. In many of the examples these scholars provide,
like the Bulgarian sentence 7, the subjunctive occurs in the complement clause of a
propositional attitude verb under a negation which cannot be removed if the sentence is
to be acceptable.

(7) #(Ne) vjarvam,   **da**   ima teč v rezervoara.
    not   believe.1SG SUBJ has leak in reservoir
    'I don't believe there's a leak in the tank.'   (Smirnova 2011: 253)

However, another kind of data is still better suited as evidence that subjunctives can
be sensitive to negative polarity in German and Russian, because it is more easily
reproducible in these two languages (a German version of 7 will not, and a Russian version
will not be likely to, feature a subjunctive in the embedded clause): Relative clauses
in negative contexts. This is the kind of data that 3 exemplifies, and the following six
examples instantiate this paradigm in six more languages.

(8) Il n'y   avait personne qui **puisse**   informer les autres. (French)
    it NEG-there had   noone   who can.SUBJ inform   the others.
    'There wasn't anyone there who could inform the others.'   (Čermáková 2007: 33)

(9) Ich besitze gar   nichts, was   wertvoll **wäre**.   (German)
    I   own   PART nothing what valuable was.SUBJ
    'I own nothing at all which is valuable.'   (Forßmann 2009: 92)

(10) Non ho   visto un uomo che **fosse**   ricco. (Italian)
    not have.1SG seen a   man   that was.SUBJ rich
    'I have not seen any man who was rich.'   (Panzeri 2008: 60)

(11) În România nu există oameni care **să**   creadă în el.   (Romanian)
    in Romania not exist   people that SUBJ believe in him
    'In Romania there are no people who believe in him.'   (Farkas 1985: 128)

(12) No veía   a   nadie que **conociera**.   (Spanish)
    not saw.1/3SG ACC nobody that knew.1/3SG.SUBJ
    'I didn't see anybody that I knew.'   (Fabregas 2014: 57)

(13) Dhen ídha   énan ándra pu **na** foraí   kókino kapélo. (Greek)
      not   saw.1SG a   man that SUBJ wear.3SG red   cap
      'I didn't see a man wearing a red hat.'   (Giannakidou 2011)

Note that there is in these cases – save for the Spanish case 12, where indicative is not an option – a next-to free alternation between subjunctive (whether it is a verbal inflection or, as in Slavic, Romanian, and Greek, a particle) and indicative. Next-to free – because the subjunctive may disambiguate in favor of a non-specific or narrow-scope reading of the relative clause NP relative to the negative context, in a similar way as familiar NPIs have been shown to mark narrow scope relative to their licensing contexts (see Barker 2018); this will be discussed in section 2.4.

NO ERSATZ IN SUBJUNCTIVELESS LANGUAGES. Another notable fact about the subjunctives in the contexts under consideration is that they do not correspond to any surrogate expression in languages which, like English or Mainland Scandinavian, lack a subjunctive/indicative mood distinction: there is no tense transposition as in counterfactuals ('fake past', Iatridou 2000) or any futurate modal as under volitionals (non-local 'modal concord', Zeijlstra 2007).

The Norwegian sentence corresponding to the Polish counterfactual 14, 15, shows the past perfect in the matrix and in the conditional clause 'instead of' the subjunctive particle *by* in the matrix and as a clitic to the complementizer *gdy*.

(14) Fajnie by   było, gdyby to była prawda, ale to przecież niemożliwe.[3]
      fine   SUBJ was C-SUBJ it was true   but it yet   impossible
      'It would be nice if it were true, but it's still impossible.'

(15) Det hadde vært fint hvis det hadde vært sant, men det er umulig.
      it had   been fine if   it had   been true but it is impossible

Further, the closest Swedish version of the Czech sentence 16, 17, displays the futurate modal *skall* as a substitute for the subjunctive particle *by* cliticizing to the complementizer *a* under the volitional predicate *chtít*.

(16) Nový bača   v Tatrách chce, aby   se neztratila jediná ovce.
      new shepherd in Tatras wants C-SUBJ SE NEG-lost single sheep
      'The new shepherd in the Tatra wants no sheep to go missing.'

                                                        (Dočekal & Dotlačil 2016: 97)

(17) Nya fåraherden   vill   att inte ett enda får   skall komma bort.
      new shepherd.DEF wants that not a   single sheep shall come   away

However, Norwegian or Swedish translations of 3 and 7–13 will not exhibit any fake past or futurate modal to compensate for the lack of a resource to match the subjunctive mood marking in those sentences. Thus in a Swedish version of 3, the relative clause will show the tense to be expected on the basis of the time reference in evidence, here the present, and also no modal auxiliary:

(18)   Jag ser ingen kvinna som står   nära utgången.
        I   see no   woman that stands near exit.DEF
        'I don't see any woman standing next to the exit.'

This accords well with the observations by Fabricius-Hansen et al. (2018: 64) and Dobrušina (2010: 193) that subjunctive relative clauses as in 3 and 9 alternate with indicative clauses without a consistent difference in meaning (see, however, section 2.4 for certain disambiguation effects and a discussion of their significance). If the subjunctive were to make a systematic semantic contribution here, one would expect it to require a substitute in translations into a subjunctive-less language.

2.2. ZOOMING IN ON GERMAN AND RUSSIAN: COMMON CONTEXTS. Let us adopt a working definition of a polarity sensitive subjunctive, a PSS, as a subjunctive which is possible if and only if it is in a downward-entailing context – more precisely, if and only if the local clause it is in is in a downward-entailing context.

A downward-entailing context for a clause it contains is a context which is weakened if the clause is strengthened – schematically:

> A context γ is downward-entailing for the clause α just in case for any clause β such that $\beta \Rightarrow \alpha$, $\gamma\,[\alpha] \Rightarrow \gamma\,[\alpha/\beta]$.

For example, the German example sentence 9 'I own nothing at all which is valuable' entails any sentence coming from it by strengthening the relative clause, say, 'I own nothing at all which is very valuable'.

The working definition is patterned on the NPI licensing condition stated by Gajewski (2005: 33), and the remainder of section 2 brings a succession of arguments to support the claim that in fact, German and Russian have subjunctives that conform to the definition and thus call for a treatment along similar lines as other NPIs.

The present subsection maps the positive data that German and Russian share – the range of contexts that license a subjunctive because they entail downward, in German or Russian, over and above the relative clauses illustrated in 3 and 9. In 2.3, I turn to one way in which the Russian PSS – polarity sensitive subjunctive – is evidently more tolerant than the German PSS, and in 2.4, I address a family of negative data, common,

again, to both languages: Non-downward-entailing presuppositions anti-licensing the PSS. Throughout sections 2.2–2.4, parallels and divergences between the two PSSs and some familiar NPIs are taken note of. In 2.5, finally, I observe that a subjunctive can be ambiguous between a polarity sensitive use and a counterfactual interpretation, as another piece of evidence that the PSS is a variant of its own.

The above working definition leaves the notion of a downward-entailing context underspecified in a number of regards. We will be able to make the wording more precise as we go along.

First, however, a note on the morphosyntax of the subjunctive is in order. In German, it surfaces as the *umlaut* stem of an auxiliary or main verb, in Russian, as the particle *by*, which can cliticize to the 'that' complementizer *čto*. This marking is accompanied by past tense: in Russian subjunctive clauses, past verb forms (or infinitives, see 23) are indiscriminately used for past or present reference, in German PSS clauses, past forms are used for present reference and past perfect forms are used for past reference (thus it is here the so-called 'second subjunctive' paradigm which is used as a PSS).

NEGATION UPSTAIRS, SUBJUNCTIVE DOWNSTAIRS. In German and Russian alike, the polarity sensitive subjunctive (PSS) can occur in a complement clause in a negative matrix clause context. 19 and 20 are clear cases in point.

(19) Nicht, dass es jetzt noch einen Unterschied machen würde.[4]
      not   that it now yet   a   difference   make   would.SUBJ
      'Not that it matters anymore.'

(20) Ne to, čtoby   sejčas ėto imelo kakoe-to značenie.[5]
      not it C-SUBJ now   that had   some   meaning
      'Not that it matters anymore.'

The negation is crucial in the sense that any similar sentence without it will force a counterfactual or, in German, a reportative interpretation of the subjunctive; the subordinate clause in the Russian sentence 21, say, can only be understood as a concealed counterfactual conditional, where the 'if' clause is missing.

(21) Ėto pravda, čto ėto imelo by   ogromnoe značenie.[6]
      that true   that that had   SUBJ great   meaning
      'It's true that that would matter / have mattered a lot.'

Moreover, the relation between the adverb of negation and the subjunctive must be non-local – the two cannot occur in the same clause. 22, say, does have an interpretation,

but only as a concealed counterfactual conditional, where the 'if' clause is missing, or as a concealed speech report, where the matrix is missing. A corresponding Russian sentence can only have a counterfactual interpretation.

(22)   Es würde   jetzt keinen Unterschied mehr machen.
       it would.SUBJ now no   difference   more make
       'It wouldn't matter anymore.'/'It didn't matter anymore (they said).'

Note that the negative element in the matrix clause can be implicit, for example, in words meaning 'without' or 'instead' (Russian *bez*, *vmesto*; German *ohne*, *statt*). In this connection, note, too, that in Russian, the PSS clause is not necessarily finite; in 23, the C-cum-subjunctive *čtoby* introduces an infinitive subordinate clause.

(23)   Ona vzjala sebja v ruki, vmesto togo čtoby   plakat' celymi dnjami.[7]
       she took   self in hand instead that C-SUBJ cry   whole days
       'She pulled herself together instead of crying all day.'

Recall the relative clause constructions 3 and 9; there, too, the key downward-entailing context spans a clause boundary. It may be that many of the relevant relative clauses are 'pseudo-relative' clauses (McCawley 1981), in final position in existential sentences. Collins & Postal (2014: 96) argue that NPIs can be raised from such relative clauses to become clausemates with their upstairs licensors. But not all the relevant cases involve pseudo-relative clauses; the German 24, say, is a different sort of case.

(24)   ... ist ... noch keiner gestorben den   ich besonders kennen würde.[8]
       ... is ... still noone died   whom I   especially know   would.SUBJ
       'So far, nobody has died that I have known well.'

To be sure, the relative clause DP will not be definite, but as we will see in section 2.4, that follows from a sensitivity to positive presuppositions; definiteness will have a clear effect of this kind, at least in German.

    That the negative item and the subjunctive cannot be clausemates is noted by Portner (2018: 111) in his discussion of Greek and Romance subjunctives licensed by negation – "...negation cannot trigger the subjunctive in its own clause." He suggests that negation may not be in the right structural position to do so, and it seems, indeed, reasonable to assume that the mood is merged in a higher position in the clause than negative elements can be. I will return to this in section 4.2.

    As noted above, the working definition of a PSS left the notion of a downward-entailing context underspecified in a number of regards, not least structurally. But now, we can

specify some more: To the extent that negative items create the downward-entailing context, this context must be non-local, containing the local clause of the PSS. As more facts are taken into account, the definition can be narrowed further.

PREDICATES BETWEEN NEGATION AND 'THAT' CLAUSE. Next, we may note that both in German and in Russian, a variety of predicates can embed a 'that' clause with a PSS while in the scope of a negation: Impersonal predicates meaning 'come to pass', as in 25/26, personal predicates meaning 'experience', perception verbs, as in 27/28, and more.

(25)   Mir ist es ... noch nie   passiert, dass sie nicht gewirkt hätte.[9]
         me is it ... yet   never passed   that it not   worked had.SUB.
         'To this day, my pill has never malfunctioned.'

(26)   So   mnoj ne slučalos', čtoby   sny   čto-to   predugadyvali.[10]
         with me   not happened that-SUBJ dreams something predicted
         'It has never happened to me that a dream predicted anything.'

(27)   Ich habe noch nie gehört, dass jemand daran   gestorben wäre,   ...[11]
         I   have yet   not heard   that someone thereon died   was.SUBJ ...
         'I never heard of anyone dying from it, ...'

(28)   Lično   ja nikogda ne slyšal, čtoby   kto-nibud' umer ... ot   ...[12]
         personally I never   not heard that-SUBJ anybody   died ... from ...
         'Personally, I never heard of anyone dying... from...'

The wider field includes clause embedding predicates meaning 'indicate', 'mean' (*heißen*, *značiť*), 'there is (no) sign', 'there is (no) indication' (*Hinweis*, *ukazanie*). All these predicates create upward-entailing contexts for the clauses they embed, hence negative elements over them create downward-entailing contexts for the same clauses.

But not all predicates that license known NPIs like German *jemals* or Russian *kogda-libo* ('ever') when negated also license the PSS when negated. It was noted in section 2.1 that the Bulgarian sentence 7, with a belief verb under negation, is not representative of the use of the polarity subjunctive in German or Russian. In fact, polarity subjunctives in clauses under verbs of thought or verbs of speech are scarcely attested in German and relatively rare in present-day Russian unless the verb is in the first person singular present form (see Dobrušina 2016: 292ff.). Apparent cases of this sort, such as 29 and 30, typically have a counterfactual, 'would' interpretation where a more or less definite conditional antecedent can be inferred from the context and the negation (implicit in 30) is not essential.

(29) Dr. Höngesberg glaubt nicht, dass das Landratsamt ein Veto eingelegt hätte.[13]
Dr. Höngesberg thinks not   that the Landratsamt a   veto entered   had.SUBJ
'Höngesberg doesn't think the district authority would have vetoed the plan.'

(30) Demid Momot ocenivaet obščie zatraty investora v 100-120 mln dollarov i
Demid Momot estimates total   costs   investor's to 100-120 m   dollars   and
somnevaetsja, čtoby   na takoe soglasilas' odna firma.[14]
doubts   that.SUBJ on such agreed   lone firm
'Damid Momot doubts that any one company would agree to anything like that.'

At first sight, this may seem to challenge a view of the mood as an NPI; after all,
known NPIs like *jemals* or *kogda-libo* ('ever') are unproblematic in these contexts. But
note that the contexts created by negation, a personal subject and a predicate like
glauben, *dumat'*, *verit'* 'believe', 'think', *uverennyj* 'sure', or (without negation) *bezweifeln*
or *somnevat'sja* 'doubt' are not in fact downward-entailing in the strict sense but only on
the assumption that the subject is an ideally rational agent. The reason is that only on
this assumption can positive belief contexts count as upward-entailing: that 'a believes
p' entails 'a believes q' whenever p entails q rests on the premiss that a is 'logically
omniscient'.[15] [16]

Moltmann (1994) discusses the fact that many NPIs are felicitous in contexts like
'a does not believe . . . ' even though they are not stricto sensu downward-entailing and
suggests that this is evidence that a conception of belief as upward-entailing can be
semantically relevant. It might now be that such a loose conception is relevant for many
but not all NPIs and that the German or, to a lesser degree, Russian polarity sensitive
subjunctive is more sensitive than most to the subjective element present in personal
attitude ascriptions.

It is in any case interesting to note that once this subjective element is removed, as in
the impersonal constructions 31 and 32, a subjunctive becomes unproblematic:

(31) Es gibt keinen Grund zu glauben, dass er je   der Ideologie verfallen wäre.[17]
it gives no   reason to believe   that he ever the ideology fallen   was.SUBJ
'There is no reason to believe that he ever succumbed to the ideology.'

(32) Somnitel'no, čtoby   škol'niki massovo hoteli stat'   svarščikami . . . [18]
doubtful   that.SUBJ students massively wanted become welders   . . .
'It is doubtful that hordes of students will queue up to become welders . . . '

The difference between somebody believing something and there being reason to believe
it, or that between somebody doubting something and it being doubtful, is evidently
significant. The contexts in 31 and 32 are arguably downward-entailing not just modulo

a rationality proviso about the beliefs of a person but unconditionally, because the proviso is, as it were, built into the impersonal constructions.

DOWNWARD-ENTAILING CONTEXTS ONE OR MORE STOREYS HIGH. In every case so far, the non-local downward-entailing context licensing the PSS has coincided with the global context, hence the whole sentence has been downward-entailing for the PSS clause. This is no necessity, though; the global context may not be downward-entailing for the PSS clause as long as an intermediate context is; typically, a non-local but non-global clause as in the Russian sentence 33.

(33)   Vrjad li est' ženščina, kotoroj ne   prihodilos' ispytyvat', čtoby   k nej
       hardly if is   woman   whom   not came-REFL experience that-SUBJ to her
       pristaval mužčina.[19]
       accosted man
       'Hardly a woman has not experienced being harassed by a man.'

Globally, this sentence is in fact upward-entailing with respect to the PSS clause, but that does not matter. The intermediate downward-entailing context can even be a phrase within the matrix clause, as in the German sentence 34.

(34)   Nur sehr wenige haben nie   etwas getan, was sie   nachher   bereut
       only very few   have   never -thing done   what they afterwards regretted
       hätten.[20]
       had.SUBJ
       'Very few have never done anything they regretted afterwards.'

What this shows is that no full clause needs to be a downward-entailing context for the PSS clause, a part of a clause can suffice.

Discussing the French NPI *quoi que ce soit*, Homer (2021: 10f.) considers cases which are structurally similar to 34 and identifies the part which is crucially downward-entailing as the polarity phrase. Following this, I will assume the polarity phrase to be the relevant level containing the negative adverb 'never' but not the subject DP 'very few', which Homer would locate in Spec, TP. The main thing, though, is that there is a relevant level between the two.

There is thus no single context, such as the maximal clause, or any full clause, which needs to be downward-entailing for a PSS to be licensed. The emerging picture so far is that the 'domains' for a PSS – the term used by Homer (2021) to refer to the contexts one of which needs to be downward-entailing with respect to an NPI – include the minimally non-local, immediately superordinate clause and its polarity phrase.

Note, though, that the downward-entailing context containing the PSS clause is not necessarily (in) the immediate matrix clause. Provided that the intermediate clause context is strictly upward-entailing, it can be two clauses removed, as in 35 and 36:

(35) Nicht, dass es jemanden gäbe, der mir eine Antwort schuldig wäre.[21]
      not   that it someone gave who me an answer owing was.SUBJ
      'Not that anybody owes me an answer.'

(36) Net ničego, čto ukazyvalo by na to, čtoby   Putin ob   ėtom voobšče
      not nothing that indicated SUBJ at it that-SUBJ Putin about this in-general
      dumal.[22]
      thought
      'There is nothing to indicate that Putin is thinking about this at all.'

There is a possible confound here, in that there is a PSS in the matrix already, so that the lower one could be described in concord or harmony terms, as a parallel to sequence-of-tense. But taken at face value, the data are consistent with a tentative characterization of the downward-entailing environment that the PSS must be in as some, any, polarity phrase or full clause containing the local PSS clause.

2.3. A GERMAN – RUSSIAN DIFFERENCE: SENSITIVITY TO SCALAR IMPLICATURES. One difference between German and Russian regarding the distribution of the PSS is that the Russian PSS is more tolerant of contexts that are not 'anti-additive' but just downward-entailing. As we will see, another way to describe the facts is that the PSS is less sensitive in Russian than in German to polarity at the level of scalar implicatures.

ANTI-ADDITIVITY OR PLAIN DOWNWARD-ENTAILINGNESS. In all examples so far, there is a context which is not just downward-entailing but anti-additive (see Zwarts 1998 for a locus classicus of this distinction as applied to NPIs). While a clause is in a downward-entailing context just in case the context entails the result of replacing the clause with a clause that entails it, for the context to be anti-additive, it must in addition be the case that the conjunction of the context and the result of substituting another clause entails the result of substituting the disjunction of the two clauses – schematically:

A context γ is anti-additive for the clause α just in case for any clause β,
$\gamma\,[\alpha] \wedge \gamma\,[\alpha/\beta] \Leftrightarrow \gamma\,[\alpha/\alpha \vee \beta]$.

For example, 'it is improbable that...' – German *es ist unwahrscheinlich, dass...*, Russian *maloverojatno, čto...* – makes a context which is downward-entailing but not anti-additive: α and β may both be unlikely but that does not make it unlikely that α or

β is the case. You may be unlikely, say, to spot a heron, and also unlikely to spot a crane, but that does not strictly mean that you are unlikely to spot one or the other. A negative word like 'never', however, is anti-additive: if you have never spotted a heron and never spotted a crane, then you have also never spotted one or the other.

A natural question is whether the PSS requires an anti-additive context, and it turns out that for German, the answer seems to be yes, whereas for Russian, it is no. As NPIs are traditionally sorted into strong and weak ones according to whether they need an anti-additive or just a downward-entailing context, another way to phrase this is that the German PSS would seem to be a relatively strong item.

In the two Russian downward-entailing but not anti-additive contexts 37 and 38, with the determiner *malo* 'few' and the adverb *redko* 'rarely', the subjunctive is unproblematic:

(37)   . . . sovsem malo ljudej, kotorye byli by   dovol'ny svoim telom. [23]
         . . . quite   little people who   were SUBJ satisfied their body
         'Very few people are satisfied with their body.'

(38)   Redko vstretiš',   čtoby   hudožnik narisoval sam   sebja vot tak.[24]
         rarely meets-REFL that-SUBJ artist   painted   REFL self   as   such
         'Artists rarely paint themselves this way.'

The German counterparts with subjunctives in the subordinate clauses, like 39, are only marginally possible, and since corresponding sentences with the negative determiner *keine* 'no' or adverb *nie* 'never' are felicitous, it would seem as though the German PSS needs to be in an anti-additive context.

(39)   Es gibt nur ganz wenige Menschen, die   mit ihrem Körper zufrieden sind /
         it gives only quite few   humans   who with their body   satisfied are /
         ? wären.
          were.SUBJ
         'Very few people are satisfied with their body.'

SCALAR IMPLICATURES. There is another reading of these facts, however: According to Gajewski (2011), the need for strong NPIs to be in an anti-additive context and their need to "be in a downward-entailing context at all levels of meaning – be it truth conditions, presuppositions or implicatures" (Penka 2020: 649) amount to much the same thing as far as the descriptive facts go, the latter property being as precise a strong NPI predictor as the former (for nuances, see Penka 2020 and Homer 2020).

More precisely, the reason that a German subjunctive is dubious in cases like 39 might have less to do with the downward-entailing context not being anti-additive than

with a scalar implicature arising in it, namely, that some, if only very few, *are* satisfied with their body, or that it does happen that artists portray themselves like that – non-downward-entailing implicatures, that is. From the point of view of a grammatical theory of scalar implicatures, being in a downward-entailing context at the level of scalar implicatures means being in such a context after exhaustification has served to factor scalar implicatures into the truth conditions. In this perspective, the German PSS would seem to need a context which stays downward-entailing when any such implicature is added to the content.

Even on a grammatical theory, scalar implicatures do not arise automatically from grammatical sources but are sensitive to features of the utterance situation (Chierchia et al. 2012: 2317), hence it is to be expected that the facts concerning NPI anti-licensing are subtle and unstable. This expectation is borne out: Instances like 40 do occur, but what they all have in common is that a potential non-downward-entailing scalar implicature is not actualized. Thus the author of 40 means that as far as she knows, no other Leipzig street may be more beloved than Gottschedstraße, in other words, she does not implicate that some streets are more beloved.

(40)   Es gibt schönere   Straßen in Leipzig, aber wenige, die beliebter wären.[25]
          it gives beautiful-er streets in Leipzig but few   who beloved-er were.SUBJ
          'There are nicer streets in Leipzig but few more beloved.'

Summing up, it seems evident that scalar implicatures originating in lexemes meaning 'few' or 'rarely' (or in words meaning 'many' or 'often' under negation), or the like, have a potential to anti-license the German, but not the Russian, PSS.

This potential seems to mirror the way such implicatures can constrain more familiar German NPIs which Zwarts (1998) *a.o.* have classified as strong, such as the adverbs *nennenswert* (mention-worth) and *sonderlich* (especially). 41 is one of his examples: the latter adverb is judged to be deviant in the context of 'few', implicating 'some'.[26]

(41)   Nur wenige Kaufleute sind (*sonderlich) zufrieden gewesen.
          only few   merchants are   especially content been
          'Few merchants were content.'

STRENGTH AND LOCALITY. There is a possible issue, though, with viewing the German PSS as a strong NPI: it would seem to conflict with the common assumption that strong NPI licensing is clause-bounded (see Lakoff 1969, Giannakidou & Quer 1997: 100f., Collins & Postal 2014: 93ff.); as we have seen, PSS licensing cannot be clause-internal.

That assumption has been disputed, however. Some of the counterevidence is based

on strong NPIs in complement clauses of Neg-raising predicates like *believe*, where the meaning is the same as if the negation were not upstairs but downstairs, so that the licensor is arguably local after all (see, again, Lakoff 1969 and Collins & Postal 2014: 93ff.; Richter & Radó 2014: 54ff. and Davidson & Klapheke 2019: 88ff.).

But other counterexamples are less easily dismissed. Horn (2014: 190ff.), citing Lindholm (1969), Baker (1970) and Horn (1978: 148), shows that a superordinate negation can license strong NPIs even if a neg-raising analysis is unavailable, if only speakers implicate that they disbelieve the content of the subordinate clause. 42 is one of his many attested examples: *in weeks/months* is a known strong NPI, yet it is licensed by a negation that cannot be analyzed as belonging in its clause.

(42)   I can't say I've cooked myself a full meal in weeks, if not months.

More to the point, Obrembalski (2008) notes that German strong NP verbs are not always licensed within their own clause, despite an unavailability of neg-raising. And in three of the seven examples of the adverb *sonderlich* given by the resource *CoDII: Negative Polarity Items in German*[27], its licensor is in a superordinate clause. In fact, co-occurrences of the PSS and this adverb are well attested in corpora, for instance the Die Zeit (1946–2018) weekly newspaper corpus.[28] Here is one case.

(43)   Es ist nicht so, dass ich ein **sonderlich** aggressiver Fahrer **wäre**.
        it is not   so that I   an especially   aggressive driver was.SUBJ
        'It's not the case that I'm a particularly aggressive driver.' (ZeitMagazin 17.12.2009)

What this shows is that to the extent that the cooccurrence of non-local licensing and strength presents a problem, it is one that must be addressed on a broad front, irrespectively of whether the PSS is in fact treated as an NPI.

2.4. DISRUPTIVE PRESUPPOSITIONS. One class of contexts form negative evidence for the German and the Russian PSS alike: contexts that are downward-entailing as far as the descriptive, at-issue content is concerned but have presuppositions that are not downward-entailing. More particularly, regarding German, a range of words which are commonly assumed to introduce such presuppositions and which license 'weak' NPIs like *jemals* 'ever' fail to license the PSS – emotive factives, exclusives, and more. Russian may seem to present a more mixed picture; in fact, Bondarenko (2021), who considers Russian polarity subjunctives as NPIs, claims that these items are insensitive to upward-entailing presuppositions, citing contexts created by *tol'ko* 'only'.

However, other contexts with downward-entailing entailments and upward-entailing

presuppositions fail to license the Russian PSS; moreover, the Russian and the German PSS can both have a disambiguating effect in contexts where an upward-entailing presupposition may or may not come into play. My conclusion will be that the Russian as well as the German PSS is sensitive to presuppositions.

DISRUPTION. As shown by Homer (2008), who references English, French and Italian, whereas NPIs labeled as strong are generally affected by upward-entailing presuppositions, items classified as weak are only affected by some such presuppositions. In this perspective, the German and the Russian PSS both emerge as strong, though their counterpart in French appears to align with weak items.

The relevant presupposition triggers include 'emotive factive' predicates which mean 'regret' or 'sorry', which are held to create downward-entailing contexts in regard to their truth conditions but also to induce upward-entailing contexts at presuppositional level. To illustrate: if you are sorry you left your landing net at home, you (i) believe you did leave your landing net at home (upward-entailing presupposition) and you (ii) wish it were not the case that you left your landing net at home (downward-entailing assertion) (see von Fintel 1999: 125).

These predicates do license NPIs like French *quoi que ce soit* 'anything', German *jemals* 'ever', or Russian *-libo* or *by to ni bylo* series adverbs, pronouns and determiners (see Padučeva 2015: 148); in French, such contexts license a subjunctive, in German or Russian, they do not.

(44)   a.   Ich bedauere, dass ich Herrn Gloor jemals Geld   gegeben habe.[29]
             I   regret   that I   Mr.   Gloor ever   money given   have
             'I regret I've ever given money to Mr. Gloor.'
             Presupposition: I have given money to Mr. Gloor

        b. #Ich bedauere, dass ich Herrn Gloor jemals Geld   gegeben hätte.
             I   regret   that I   Mr.   Gloor ever   money given   had.SUBJ

(45)   a.   Ona sožaleet, čto   malo gastrolirovala po Rossii.[30]
             she regrets   that little toured   on Russia
             'She regrets she has rarely toured in Russia.'
             Presupposition: (she believes) she has rarely toured in Russia

        b. #Ona sožaleet, čtoby   malo gastrolirovala po Rossii.[31]
             she regrets   that-SUBJ little toured   on Russia

A natural conclusion is that the PSS is sensitive to the factivity of emotive factives in German and in Russian, but not in French; more generally, that while the French

PSS (to some extent, but see section 51 on verbs meaning 'recall') only depends on partial, so-called Strawson downward-entailingness, counting presuppositions out, the German-Russian PSS depends on total downward-entailingness, counting presuppositions in.

But a split appears between German and Russian once we consider exclusive particles, German *nur* or Russian *tol'ko* 'only', or adjectives like *einzig-* in German, as in 46, or *edinstvenn-* in Russian ('(the) only'), as in 47:

(46)   a.   Musik ist die einzige Sprache, die   jeder versteht.[32]
              music is the only   language which every understands
              'Music is the only language that everyone understands.'

        b. #Musik ist die einzige Sprache, die   jeder verstehen   würde.
           music is the only   language which every understand would.SUBJ

(47)   a.   Ona edinstvennaja, kto ponimaet   Raskol'nikova, . . .[33]
              she only   who understands Raskolnikov
              'She is the only one who understands Raskolnikov.'

        b.   Ona edinstvennaja, kto ponimal   by   Raskol'nikova, . . .[34]
              she only   who understood SUBJ Raskolnikov
              'She is the only one who understands Raskolnikov.'

Like the English adjective or particle *only*, these adjectives are commonly described as introducing a descriptive content which is downward-entailing, but also a presupposition which is not – in 46, that music is a language everybody understands, in 47, that she's one who understands Raskolnikov. The subjunctive is infelicitous in German but felicitous in Russian, which we might, with Bondarenko (2021), take as evidence that the Russian polarity subjunctive is insensitive to presuppositions after all.

There is, however, another possible explanation for this split. The theoretical status of the inference to the prejacent of exclusives has remained controversial; while most assume that it is a presupposition, some, like van Rooij & Schulz (2007), building on McCawley (1980: 226f.), argue that it is a conversational implicature. Without going into the argument, we may note that if this latter view is accepted, data like 47 do not show that the Russian PSS is insensitive to non-downward-entailing presuppositions, only that it is insensitive to non-downward-entailing implicatures, which was already established in section 2.3.

German and Russian are parallel again in relation to another generic context where weak NPIs like *jemals* and *kogda-libo* 'ever' are licensed but the PSS is not: Restrictors of universal determiners, such as the relative clauses in 48a and 49a.

(48)   a.   Jeder, der jemals in Bhutan war, war von dem Land beeindruckt.[35]
            every who ever   in Bhutan was was of   the land impressed
            'Everyone who has ever been to Bhutan has been impressed.'

       b. #Jeder, der jemals in Bhutan gewesen wäre,   war von dem Land
            every who ever   in Bhutan been   was.SUBJ was of   the country
            beeindruckt.
            impressed

(49)   a.   Vse, u kogo   deti   idut v školu, posadjat derevce.[36]
            all   at who.GEN children go   in school plants.PF tree
            'Everyone with children going to school will plant a tree.'

       b. #Vse, u kogo   deti   šli by v školu, posadjat derevce.[37]
            all   at who.GEN children went SUBJ in school plants.PF tree

According to the textbook semantics of *jeder* 'everyone' and *vse* 'all', this context is
actually anti-additive, but there is also an inference of 'existential import', that the
restrictor denotes a nonempty set. Thus from 48a one can infer that some have been to
Bhutan, and from 49a one can infer that some have schoolchildren. While the status of
this non-at-issue inference may not be clear (see Geurts 2007), there are good reasons
to treat it as a presupposition (see, e.g., Morzycki 2021: 88), and then, its effect on PSS
licensing tunes in with what we have seen in connection with emotive factives above.

   Finally, the existence presupposition associated with definiteness can also be an
anti-licensor. This is more pronounced in German than in Russian. Specifically, the
German PSS is not felicitous in relative clauses in definite DPs under negation. 50 is a
case in point: the relative clause is part of a partitive construction with a demonstrative
pronoun 'that'. The subjunctive version 50b is infelicitous.

(50)   a.   Hier ist noch nichts   von dem geschehen, was   uns zugesagt wurde.[38]
            here is yet   nothing of   that happened what us promised was
            'Nothing of what was promised to us here has been accomplished.'

       b. #. . . nichts   von dem geschehen, was   uns zugesagt worden wäre.
            . . . nothing of   that happened what us promised been   was.SUBJ

51 provides a subjunctive control case where most factors are held equal but the DP
containing the relative clause is indefinite, thus while 50a presupposes that something was
promised, 51 does not presuppose that anything is beyond repair.

(51)   . . . , zum Glück ist nichts   geschehen, was irreparabel wäre.[39]
        . . . , to   luck   is nothing happened   what irrepairable was.SUBJ
        'Fortunately, nothing has occurred which cannot be remedied.'

DISAMBIGUATION. Across many languages, verbs meaning 'remember', which are ordinarily factive, can also be meant and read in a non-factive sense and are mostly meant and read in that sense when they are negated and the complement clause contains an NPI. Thus neither the German sentence 52 nor the Russian sentence 53, with *jemals* / *kogda-libo* 'ever' in the complement clause, presupposes the content of that clause.

(52) Allerdings kann sich   keiner der   3500 Besucher auf dem Killesberg erinnern,
      however   can REFL none the.GEN 3500 visitors   on the Killesberg recall
      dass sie jemals hier aufgetreten ist.[40]
      that she ever   here appeared   is
      'But nobody in the audience remembers her ever performing there.'

(53) Ona ne pomnit, čto kogda-libo zdes' byla ... rabota s   postojannoj oplatoj.[41]
      she not recalls   that when-ever here was ... work   with constant   payment
      'She cannot remember ever having a job with a steady income.'

The same effect can be observed in sentences with PSS complement clauses, with or without other NPIs, as in the German sentence 54 or the Russian sentence 55: the factive presupposition is missing. Homer (2008: 432), Hedin (2016: 158ff.), and B-Violette (2019: 19) illustrate the same pattern in French, Greek, and Portuguese.

(54) Beatrix Zurbrügg kann sich   aber nicht erinnern, dass Helga einmal länger nicht
      Beatrix Zurbrügg can REFL but not   recall   that Helga once   longer not
      gekalbt hätte.[42]
      calfed had.SUBJ
      'But Beatrix Zurbrügg cannot recall Helga once not calving for long.'

(55) Papa ne pomnit, čtoby   kogda-libo on otkazyvalsja govorit' s   kem-libo.[43]
      pope not recalls   that-SUBJ when-ever he refused   speak   with whom-ever
      'The Pope cannot recall ever refusing to speak to anyone.'

Here is a case, then, where the PSS does make a difference for the interpretation, disambiguating a verb which is only potentially factive to its non-factive reading.

Another case can be observed in connection with existence presuppositions. Recall the partitive construction in 50, where such a presupposition was seen to anti-license the German PSS. Now a parallel presupposition can in fact arise pragmatically, without overt partitivity, if only the context supports the inference that an indefinite is partitive; then a negative indefinite heading a relative clause, say, 'nothing which ...', is in reality a negative definite, 'nothing of that which ...'. And when such a presupposition may or may not be implied, the subjunctive can serve to disambiguate in favor of the

non-presuppositional reading. This is noted by Zifonun et al. (1997: 1751):

> "In Relativsätzen zu negierten Obersätzen kann der Konjunktiv ...
> distinktiv eingesetzt werden, um anzuzeigen, dass der Relativsatz sich im
> Negationsskopus befindet."

> 'In relative clauses in negated matrix clauses, the subjunctive can be used
> in a distinctive way, to indicate that the relative clause is in the scope of the
> negation.'

That the relative clause is in the scope of a matrix negation means that it does not project past it, in other words, it is not presupposed to denote a nonempty set. To see how this works, consider the German sentence pair 56:

(56) a. Ich habe nichts gefunden, was ich verloren habe.[44]
          I   have nothing found   what I   lost   have.IND
          'I haven't found anything of what I've lost.' or
          'I haven't lost anything of what I've found.'

      b. Ich habe nichts gefunden, was ich verloren hätte.[45]
          I   have nothing found   what I   lost   had.SUBJ
          'I haven't lost anything of what I've found',
          'None of the things I've found are things that I'd lost.'

In principle, nothing needs to be presupposed here, as either version could simply mean that the intersection between the set of things I've found and the set of things I've lost is empty, but in practice, one set will be presupposed to be nonempty, and 56b is only compatible with the reading where the former set is. More generally, the subjunctive bars a reading where it is common ground that the set denoted by the relative clause is nonempty.

So here is another case where the PSS makes a semantic difference vis-à-vis the indicative. Note that the indicative version is neutral and compatible with both the presuppositional and the non-presuppositional reading – hence the indicative does not seem to be, as English *some-* is, a positive polarity item, which would be likely to favor the presuppositional reading so as to escape the negative context.

Generally, favoring non-presuppositional readings seems to be *the* difference the PSS can make; whenever presuppositional readings are not on the table, it is interchangeable with the indicative once it is licensed. This is as is to be expected from grammatical morphemes like subjunctives, lacking a 'minimizing' meaning (like the meaning of German *im Geringsten* 'in the least' or Russian *hot' na kaplju* 'even one bit') and also the option

of an 'emphatic use'; see, e.g., Eckardt (2012) on these two typical attributes of lexical or phrasal NPIs which can add meaning.

2.5. POLARITY AND COUNTERFACTUAL SUBJUNCTIVES CAN BE IN COMPETITION. We have seen evidence that subjunctives can behave like negative polarity items. If they are in fact subjected to a treatment as negative polarity items, this will have the prima facie unattractive consequence that in some sense and to some degree, the subjunctive is ambiguous. However, there is evidence of a relatively direct sort that an ambiguity is in fact detectable. This evidence consists in contexts where a subjunctive may signal a counterfactuality, such as in a concealed conditional, but where that interpretation may be displaced by one where the subjunctive only reflects a higher negation.

Consider as a clear case in point the ambiguous German sentence 57:

(57)   Es gibt keinen Kämpfer, der dieses Angebot abgelehnt hätte,   ...[46]
        it gives no   fighter   who this   offer   declined had.SUBJ, ...
        'No fighter would have declined this offer / has ever declined this offer.'

One of the two readings of 57 is based on a counterfactual conditional with an implicit antecedent: there is no fighter who, were this offer made to them, would have declined it. This reading is independent of the negation in the matrix clause. The other reading coincides with the meaning of the version with the indicative; here, what you see is what you get. This reading of the original sentence with the subjunctive is dependent on the negation in the matrix clause.

57 could be reproduced in Russian. A slightly different Russian example, 58 (which could, in turn, be reproduced in German), shows the same point:

(58)   Ne to čtoby   ja skučal' po nemu, ...[47]
        not it that-SUBJ I missed on him
        'Not that I miss(ed) him, ...' / 'Not that I'd (have) miss(ed) him, ...'

On one reading, this sentence simply means that the speaker doesn't mean to say that he misses (or missed) the person – and then *-by* is a PSS; on the other reading, the sentence is a conditional, and *-by* is a counterfactual subjunctive: The speaker doesn't mean to say that he would miss the person if that person were gone.

Summing up, the hypothesis that there is a separate variant of the subjunctive in the languages under consideration, alongside variants which in some way mark counterfactuality or intentionality, receives support from the fact that in a context which is downward-entailing and compatible with a counterfactual interpretation, a subjunctive

can lead to an ambiguity: it may or it may not induce that counterfactual interpretation.

2.6. SUMMARY. This section has provided a variety of evidence that German and Russian display a variant of subjunctive behaving like an NPI. The facts that have been uncovered about this variant – the PSS – can be summarized thus:

- Some clause or subclausal phrase must be downward-entailing for the local clause (2.2).

- In German, this context must be downward-entailing even when scalar implicatures are counted in; in Russian, this condition is relaxed (2.3).

- Both in German and in Russian, the relevant context must be downward-entailing even when presuppositions are counted in (2.4).

The aim of section 4 is to outline an analysis from which these facts fall out. First, however, I will review some previous approaches to some of the facts as pertaining to Russian.

3. POLARITY SENSITIVE SUBJUNCTIVE: PREVIOUS PROPOSALS. Descriptively oriented work on the subjunctive in German or Russian like the two monographs by Dobrušina (2016) and Fabricius-Hansen et al. (2018) offers comprehensive characterizations of polarity sensitive uses (see Dobrušina 2016: 242ff. and Fabricius-Hansen et al. 2018: 62ff.). Theoretical approaches are scarce, though; what proposals there are owe to three authors, all of whom treat the Russian PSS, Kagan (2013), Partee (2008), and Bondarenko (2021).

The first two follow opposite strategies. On the one hand, in line with proposed theories about subjunctives in Greek or in Romance, Kagan (2013) concedes that the contexts in question are extensional but postulates a common denominator between these contexts and the intensional, counterfactual or volitional, contexts. On the other hand, Partee (2008) takes the critical negative element to enable or interact with a covert or overt intensional operator, making the polarity sensitive subjunctives intensional subjunctives in disguise. Bondarenko (2021) does not cite Kagan (2013) or Partee (2008), but is the only one to openly consider an NPI status for Russian polarity subjunctives.

3.1. THE NON-COMMITMENT APPROACH. The key idea of this approach, taken by Kagan (2013), who builds on Farkas (2003) and shares a common core with Giannakidou (1995, 2011), is that for a subjunctive to be licensed in a clause, the truth of that clause must not follow from a relevant context – as the case may be, a global context or an embedded context; the root clause proposition or a relevant epistemic state.

More specifically, Kagan draws on the constraint that Farkas (2003) subjects the Romance subjunctive to, namely, that the content of its clause must not be 'decided' in the relevant set of worlds, the output context to which the clause is added. It is decided if it or its negation follows from that context, or set of worlds:

A proposition p is decided in a set of worlds W iff $W \subseteq p$ or $W \cap p = \emptyset$.

For example, if you say that Mary is pregnant, that will be positively decided in the global output context since it follows from itself; if you say that Mary believes she is pregnant, the proposition that she is will be positively decided in the local output context of her beliefs.

The felicity of the version of the Romanian 59 with the negation *nu* and the infelicity of that without it can thus be accounted for.

(59)   …dar ea #(nu) crede   ša   fie   o problemă cu   lapticul…[48]
         but she   not believes SUBJ is.SUBJ a problem   with milk.DEF
         '…but she doesn't think there's any problem with the milk…'

The key point is that without *nu*, the content of the embedded clause is not added to the main output context but to the embedded epistemic context of the attitude holder *ea*, and here, relative to her 'worldview', it is decided (positively) – she is committed to its truth. With *nu*, by contrast, it is not added to any output context, or if it is, the addition fails to decide it, hence the subjunctive is felicitous.[49]

Kagan (2013) builds on this when analyzing the subjunctive in relative clauses under negation in Russian, as in 3 or, one of her examples, 60.

(60)   Ja #(ne) videl čeloveka, kotoryj by   sčital   inače.
         I   not saw man   who   SUBJ considered differently
         'I haven't seen a man with a different opinion.'

The core idea remains that negation, like many intensional verbs, cancels some commitment conflicting with the subjunctive, but while with complement clauses, the commitment is to the truth of the clause, with relative clauses it is to the existence of individuals in the denotation of the mother NP (Kagan 2013: 137):

Sentences in which subjunctive relatives are licensed neither entail nor presuppose that the intersection of the set denoted by the head noun and the set contributed by the relative clause is not empty.

60 – with *ne* – thus neither entails nor presupposes that there has been a man who has

had a different opinion. Kagan (2013: 138) derives this from Decidedness as follows (REC = relative existential commitment):

> The association of subjunctive relative clauses with lack of REC is, in fact, predicted on the basis of the approach to subjunctive mood developed by Farkas (2003). According to this approach, subjunctive mood is normally found in ... the absence of a commitment to the truth or falsity of a clause in any given set of worlds. However, a relative clause does not denote a truth value to begin with. [...] Rather, it denotes a property ... the non-commitment to truth associated with subjunctive mood is likely, in the case of relative clauses, to shift to a non-commitment to existence.

According to Kagan (2013), then, the subjunctive can be used in a relative clause if and only if there is no commitment in any relevant context to the existence of an entity with the property expressed by the mother NP. But this constraint is clearly too weak not to overgenerate. Epistemic possibility modals, say, such as *moč'* 'may', create contexts without any implication that the denotation of the NP is nonempty, but that does not suffice to license the subjunctive:

(61) a. Kak znat', možet byt', on vstretil ženščinu, kotoraya prednaznačena dlya
          how know, may   be, he met   woman, who   predestined   for
          nego samoj   sud'boj?[50]
          him self.INSTR fate.INSTR
          'Who knows, maybe he's met a woman who's fated for him?'[51]

      b. #Kak znat', možet byt', on vstretil ženščinu, kotoraya byla by
          how know, may   be, he met   woman, who   was SUBJ
          prednaznačena dlya nego samoj   sud'boj?[52]
          predestined   for him self.INSTR fate.INSTR

3.2. THE HIDDEN INTENSIONALITY APPROACH. Partee (2008) locates the key factor licensing the subjunctive in cases like 60 not in the negative element as such but in an implicit intensional element enabled by it. Insofar, her proposal has similarity to proposals about polarity subjunctives in Romance languages made by Portner (1997: 200) and Quer (2001: 91).

"If ... we want a unified account of the distribution of subjunctive," she writes, "there seem to be two options":

> Either there is some common feature shared by negation and intensional verbs such as non-veridicality that is responsible for licensing subjunctive [*i.e.*, the non-commitment approach, *a.c.*], or negative sentences are more able than

affirmative ones to accommodate the addition of a silent modal operator that in turn licenses subjunctive. I am inclined to favor the second alternative, in part because not all negative sentences allow NPs with subjunctive relative clauses, and there seems to be a difference in potential modality between those that do and those that do not. (Partee 2008: 302)

As a case in point, that is, a negative sentence where a subjunctive relative clause is not supposed to be allowed, Partee cites 62 and compares it to 63:

(62) #Kakoj-to gost' ne vidal devočki kotoraja by nosila krasnoe plat'e.
       some   guest not saw girl.GEN who SUBJ wear red dress
       intended: 'Some guest didn't see a girl who wore a red dress.'
       (Partee 2008: 303, attributed to Igor Yanovich)

(63) Ja ne videl čeloveka, kotoryj by sčital inače. (= 60)
       I not saw man who SUBJ considered differently
       'I haven't seen a man with a different opinion.'

She draws a distinction between 'accidental' and 'generic' negation: in 62, we are talking about a narrowly constrained situation; sentence 63, on the other hand, is not about a single occasion but "quantifies over all past situations, and in a sense over all the men I've ever seen" (Partee 2008: 304).

> Hence it seems that negation in [63] is helping to license some modality, in comparison with . . . the single-episode negative [62]. . . . [63] seems to suggest a characterization of a 'kind' of man I have never seen, and to be considering not just accidental properties like wearing a red dress, but dispositional properties . . .

Though Partee adds that this characterization is rather vague and intuitive and that more work will be needed to sharpen it up, the idea is certainly intriguing. But the problem is that 62 is parallel to 64 in most regards, including those that Partee puts the dispreference for the subjunctive in 62 down to.

(64) Ne vižu ženščiny, kotoraja stojala by nedaleko ot vyhoda. (= 3)
       not see woman.GEN who stood SUBJ near to exit
       'I don't see any woman standing next to the exit.'
       (Dobrušina 2010: 192, attributed to Elena Padučeva)

This sentence is about a single occasion and a constrained situation, and we do not seem

to quantify over non-actual situations or to consider dispositional properties; standing next to the exit is just as accidental a property as wearing a red dress.

62 contrasts with 64 in other regards, however, two of them decisive for its infelicity.[53] For one thing, the specific indefinite subject DP *kakoj-to gost'* suggests that somebody else did see a woman wearing a red dress. Secondly, the imperfective verb forms *vidal* and *nosila* invite an experiential or habitual interpretation which interferes with the episodicity of the described scene; this reason for the infelicity of 62 is independent of the subjunctive. In fact, if those two verb forms and the subject DP are suitably replaced, the subjunctive becomes fully felicitous:

(65)   On ne videl   devočki u kotoroj   by   bylo krasnoe plat'e.
        he not saw.PF girl.GEN at who.GEN SUBJ was red   dress
        'He didn't see any girl wearing a red dress.'

It is important to note that this is not due to any silent source of modality – the sentence is purely extensional and episodic – and also, as demonstrated by several attested cases offered by Dobrušina (2010) and Dobrušina (2016: 242ff.), that it is not an isolated instance.

The hidden intensionality approach to cases like 63, 64 or 65 is therefore faced with the opposite problem from that facing the non-commitment approach: Under-generation, predicting subjunctives to be infelicitous when they are in fact felicitous, as in relative clauses under negation in episodic, extensional contexts.

3.3. THE DOWNWARD-ENTAILINGNESS, NPI APPROACH. Noting that entailment reversal seems to hold a key to determining the distribution of the Russian polarity subjunctive, Bondarenko (2021), as the first to do so, formulates an NPI perspective on it.

She shows that a range of clause embedding verbs can only embed subjunctive, *čtoby* clauses in downward-entailing contexts, and argues, more specifically, that they can only embed such clauses in environments that are known to license weak NPIs, 'Strawson downward-entailing' environments: "Subjunctive clauses are weak NPIs and need to occur in Strawson Entailment-Reversing environments."

Although Bondarenko thus refers to subjunctive *clauses* as NPIs, it is clear that the subjunctive itself, represented by the particle *by*, is considered as a morpheme which combines with a proposition-expressing constituent – more exactly, a TP. And even though she argues that Strawson entailment reversal, where a possible entailment preserving presupposition is not counted, is the determinant, we have seen, in section 2.4, that general entailment reversal, where a possible entailment preserving presupposition is

counted, seems to be the key factor.

While Bondarenko (2021) stops short of offering a full account of the Russian polarity subjunctive, including an explicit semantics for it, she formulates a generalization about it in the form of a necessary condition for its acceptability:

Condition for licensing polarity subjunctive

By inside a complement clause is acceptable only if it is dominated by a constituent that is Strawson Entailment-Reversing with respect to the domain of the proposition that *by* combines with.

With the proviso about Strawson entailment reversal versus general entailment reversal (counting possible upward-entailing presuppositions out or in) in mind, this generalization provides a good starting point for an explicit semantic treatment of the Russian, and the German, polarity sensitive subjunctive morpheme.

3.4. SUMMARY. Two of the three approaches that have been reviewed can be called integrational because they seek to integrate the polarity use of the subjunctive into a more comprehensive picture of subjunctive usage. These two face empirical challenges – one tends to over-generate and the other tends to under-generate.

In fact, in consideration of the problems facing attempts at a unified account, a 'segregational', unilateral approach, like the third of the three approaches that have been reviewed, appears worth pursuing. This means focusing on the polarity use in its own right without searching for a unifier, which is also the line taken in the present paper.

Note, though, a theoretical concern with all three approaches: None provides an explicit definition of the meaning of the subjunctive, answering the question what causes the infelicity when the mood is not licensed. As observed by Chierchia (2013: 146) in connection with NPIs, 'Licensing generalizations' are inherently descriptive; "we should try to do better." In section 4, an analysis of subjunctive-qua-NPI aimed at doing better will be proposed.

4. POLARITY SUBJUNCTIVES ACTIVATE DOMAIN ALTERNATIVES. The goal of this paper is not just to build a strong case that German and Russian subjunctives have meaning variants which could and should be classified as NPIs. It is also an important objective to show how these variants are well-suited as NPIs, by providing a semantic analysis from which their licensing conditions follow.

One key ingredient in this analysis is the idea developed by Chierchia (2013) that NPIs activate alternatives in view of which their contexts are exhaustified by a covert operator,

a counterpart of *only* or a counterpart of *even*. Another ingredient is the proposal by
Crnič (2019) that the operator associating with NPI alternatives is always a covert *even*.

The third and innovative keystone of the analysis is the natural assumption that in
connection with subjunctives as NPIs, the relevant (sub)domains are not sets of objects,
as with determiners like *any*, or of times, as with adverbs like *ever*, but sets of worlds.
The upshot is a presupposition which fails unless the scope of the covert operator is a
downward-entailing context for the scope of the subjunctive, concerning both at-issue and
presuppositional content. This accounts for the licensing conditions which the German and
Russian polarity sensitive subjunctives share. Their distinctive licensing conditions are
accounted for by further assuming that the operator which associates with the alternatives
activated by the German subjunctive also takes scalar implicatures into account.

Before going into the specific analyses of the two polarity sensitive subjunctives, the
German and the Russian PSS, it is necessary to review the more general theory of NPIs in
terms of alternatives as developed in work by Chierchia (2013) and Crnič (2014, 2019), on
which those analyses are going to be patterned.

4.1. SUBDOMAIN ALTERNATIVES AND 'ALL ALTERNATIVES ARE WEAKER'. Rather
than just stating licensing conditions for NPIs, Chierchia (2013: 143ff.) aims to explain
their distribution by way of a lexical semantics from which it falls out. His proposal is
couched in an alternative-based framework where meanings have two separate dimensions:
The ordinary semantic value and an alternative semantic value, a set of alternatives to
the former. The NPI determiner *any* has the same two values as any indefinite article
or determiner, say, *a* or *some*. The ordinary value is defined in 66, classically, as the
generalized quantifier saying that the restrictor and the scope overlap; D is the covert
'domain argument', a contextually determined subset of the whole domain of individuals.
The alternative value is defined in 67, as the set of things coming from the ordinary
semantic value by replacing D by a subset.[54]

(66) $[\![\, any \,]\!] = \lambda P \lambda Q \; \lambda w \; D \cap P_w \cap Q_w \neq \emptyset$

(67) $[\![\, any \,]\!]^{\mathrm{A}} = \{ \mathcal{D}_{(s(et))((s(et))(st))} \mid \text{there is a } D' \subseteq D \text{ s.t. } \mathcal{D} = \lambda P \lambda Q \; \lambda w \; D' \cap P_w \cap Q_w \neq$
        $\emptyset \}$

However, while in the case of *a* and *some*, the alternatives are only active when they are
relevant, so that usually, $[\![\, a \,]\!]^{\mathrm{A}}$ reduces to $\{ \lambda P \lambda Q \; \lambda w \; D \cap P_w \cap Q_w \neq \emptyset \}$, *any* activates its
distinct alternatives by virtue of its lexical semantics.

These alternatives now, once activated, have to be factored into meaning, and this
is accomplished by a covert operator attaching at some point above the NPI. The one

presented in 68, $E_\subseteq$, shares features both with the covert *only* defined by Chierchia (2013: 139) and with the covert *even* defined by Crnič (2014: 178), but is also simpler than either of them. This is for perspicuity; the key point is what 68 and a definition of an alternative semantic value like 67 jointly predict, namely, that a sentence with an NPI cannot be true unless one of the contexts the operator can attach to is downward-entailing with respect to the NPI. In words, 68 says that a clause $E_\subseteq \ \phi$ is only true or false if ϕ entails all its alternatives, and that if it is true or false, it is true just in case ϕ itself is true.[55]

$$(68) \qquad [\![\, E_\subseteq \ \phi \,]\!]^w = \begin{cases} 1 \text{ iff} & \text{(i) for all } p \in [\![\, \phi \,]\!]^A, \ [\![\, \phi \,]\!] \subseteq p \ \text{ and } \ \text{(ii) } [\![\, \phi \,]\!]^w = 1 \\ 0 \text{ iff} & \text{(i) and } [\![\, \phi \,]\!]^w = 0 \end{cases}$$

In other words: $E_\subseteq$ adds to ϕ the presupposition that all its distinct alternatives are weaker than it. The contribution of $E_\subseteq$ to alternative semantic values is defined in 69: alternatives are reset once they are factored into ordinary semantic values.

$$(69) \qquad [\![\, E_\subseteq \ \phi \,]\!]^A = \{ [\![\, \phi \,]\!] \}$$

Together with the definition of the alternative semantic value of *any* in 67, the definition of the $E_\subseteq$ operator in 68 makes the prediction that a sentence $E_\subseteq \ \phi$ where ϕ contains *any* can only be true or false if ϕ is downward-entailing with respect to the *any* phrase. Let us see how this prediction plays out in a simple case.

(70)   Not that there are any flies . . . [56]

The alternative semantic value of *there are any flies* will consist of the propositions that come from the ordinary semantic value, the proposition that there are flies, by replacing the underlying domain by a subset, effectively narrowing the set of flies. Because all those propositions are stronger than (or as strong as) the proposition that there are flies, a presupposition failure would result if the operator $E_\subseteq$ were to attach at the level of *there are any flies*. At the level of *Not that there are any flies*, however, the presupposition will be satisfied, as the negation creates a downward-entailing context for *any flies* and turns the entailingness around; all the propositions coming from the proposition that there are no flies by narrowing the set of flies are weaker than (or as weak as) it, they are not subsets but supersets.

The analysis of the Russian NPI determiners *kak- -libo* and *kak- by to ni bylo*, which parallel the NPI *any* in most key regards (see Paducheva 2015), will follow the same logic. So will the analysis of NPIs like English *ever*, German *jemals* or Russian *kogda-libo*. The ordinary semantic value could be defined as the identity function over sets of times, and

the alternative semantic value would then consist of the functions that come from that by replacing its output by the intersection between its input and some subset of the domain of times T; formally:

(71) $[\![\, ever\,]\!] = \lambda \mathcal{T}_{(it)} \mathcal{T}$

(72) $[\![\, ever\,]\!]^{A} = \{\, f_{(it)(it)} \mid$ there is a $T' \subseteq T$ s.t. $f = \lambda \mathcal{T}_{(it)} \mathcal{T} \cap T' \,\}$

In a nutshell, the logic is: Substitutions of subsets lead to subset propositions as long as the context is upward-entailing, while according to the definition of the operator $E_{\subseteq}$, the alternatives to its argument proposition should all instead be supersets. But once the context becomes downward-entailing, the alternatives turn into supersets, as required.

4.2. From individuals or times to worlds: PSS as a modal *ever*. On the table is a theory of NPIs like *any* and *ever* saying that these items activate alternatives in the form of subsets of the relevant domains, alternatives that are propagated to the level of a proposition which is presupposed to be stronger than any of its distinct alternatives; a presupposition bound to fail if the context is upward-entailing and to succeed if it is downward-entailing.

The key idea is now that this theory can carry over to the German or Russian PSS so that the observations made in section 2 can be predicted, once the move is made from individuals (*any*) or times (*ever*) to **worlds** as the right sort of domain. At a general level, this move is anticipated by Bondarenko (2021: 15), who writes that while for NPIs like *kakoj-libo* 'any', entailment reversal is calculated for subdomains of the predicate, for *by* clauses it is calculated for subdomains of the proposition.

The analysis in outline. I will assume that polarity sensitive subjunctives are situated high in the clause.[57] While there is no need to determine their absolute position, their relative position vis-à-vis negation matters, for if negation cannot scope over them, that can explain the observation that "negation cannot trigger the subjunctive in its own clause" (Portner 2018: 111). There is also good reason to assume that they are interpreted higher than any functor that may create a downward-entailing context within their clause, as the smallest of the contexts one of which must be downward-entailing for them to be possible – their minimal domain (see 32) – seems to be the polarity phrase of the next clause up. This will also be the lowest level for the associated E operator to be adjoined at – more exactly, it will attach to a polarity phrase or at another, higher level whose entailingness can be relevant, say, TP, in some superordinate clause.[58]

Given these syntactic assumptions, the key semantic points of the analysis are:

1. The PSS morpheme, be it the German or the Russian variant, applies to a proposition p and activates all the subsets of p as alternatives.

2. These alternatives are eventually picked up by a silent operator introducing the presupposition that the proposition it applies to, say q, is stronger than all its distinct alternatives.

3. Because the alternatives to q come from alternatives to p which are stronger than p, that presupposition will be satisfied just in case any strengthening of p corresponds to a weakening of q – *i.e.*, in case q is a downward-entailing context for p.

The licensing condition that the PSS clause must be in just such a context thus follows. This broad-brush picture will now be filled out with detail and differentiation, in three stages:

- Key definitions and the composition of a case of PSS licensing, common to German and Russian,

- a sketch of how the PSS, in German or in Russian, will be anti-licensed by a non-downward-entailing presupposition involving it,

- a sketch of how the German, but not the Russian, PSS will be anti-licensed by a non-downward-entailing scalar implicature involving it.

DEFINITIONS AND A STANDARD CASE DERIVATION. In the framework presented in section 4.1, any meaning has two members, the ordinary semantic value and the alternative semantic value. The ordinary semantic value of the PSS, whether the German variant PSS_G or the Russian variant PSS_R, can be defined as the identity function over propositions:

(73) $[\![\,PSS_G\,]\!] = [\![\,PSS_R\,]\!] = \lambda\phi_{(st)}\ \phi$

Its alternative semantic value can be defined as the set of functions from propositions ϕ to intersections between ϕ and some subset $W' \subseteq W$ of the domain of possible worlds; formally:

(74) $[\![\,PSS_G\,]\!]^A = [\![\,PSS_R\,]\!]^A = \{\, f_{(st)(st)} \mid \text{there is a } W' \subseteq W \text{ s.t. } f = \lambda\phi_{(st)}\ \phi \cap W' \,\}$

Note the close parallel to the definition of the alternative semantic value of *jemals*, *kogda-libo* or *ever*, 72: the difference is just that sets of worlds are substituted for sets of times.

Let us walk through the composition of the alternative semantic value of 20 from section 2.2, repeated here as 75, up to the point where $E_\subseteq$ is adjoined, and then see how this operator factors the alternatives into the ordinary semantic value in the form of a presupposition which is satisfied by virtue of the negation.

(75) Ne to, čtoby   sejčas ėto imelo kakoe-to značenie.
      not it that-SUBJ now   that had   some   meaning
      'Not that it matters anymore.'

A rudimentary Logical Form is outlined in 76.

(76) $[\,E_\subseteq\,[\,ne\,[\,to\,[_{CP}\,\check{c}to\,[\,by\,[_{TP}\,sej\check{c}as\,\dot{e}to\,imelo\,kakoe\text{-}to\,zna\check{c}enie\,]]]]]]$

The subjunctive *by* can be assumed to be interpreted between the complementizer *čto* (that it cliticizes to) and the TP 'it matters now'. This is in agreement with the structure conjectured by Bondarenko (2021: 15).

Assume further that this TP has no distinct alternatives, so that its alternative semantic value only contains its ordinary semantic value, a propositon, *i.e.*, a set of worlds:

(77) $[\![\,sej\check{c}as\ \dot{e}to\ imeet\ kakoe\text{-}to\ zna\check{c}enie\,]\!]^{A} =$

      $\{\,[\![\,sej\check{c}as\ \dot{e}to\ imeet\ kakoe\text{-}to\ zna\check{c}enie\,]\!]\,\} = \{\,\lambda w\ \text{it matters now in } w\,\}$

Let us identify the subjunctive particle *by* as occurring in 75 with PSS_R, whose alternative value is defined in 74; we now need to compose 77 with 74, and for that we need the rule of Pointwise Function Application (Chierchia 2013: 138):

(78) $[\![\,a(b)\,]\!]^{A} = \{\,\gamma\mid \text{there is a } \alpha \in [\![\,a\,]\!]^{A} \text{ and a } \beta \in [\![\,b\,]\!]^{A} \text{ such that } \gamma = \alpha(\beta)\,\}$

This gives us the following alternative semantic value for the full clause (where the semantic values of *čto* are assumed not to make any difference):

(79) $[\![\,by\ (sej\check{c}as\ \dot{e}to\ imeet\ kakoe\text{-}to\ zna\check{c}enie\,)\,]\!]^{A} =$

      $[\![\,\check{c}to\ (by\ (sej\check{c}as\ \dot{e}to\ imeet\ kakoe\text{-}to\ zna\check{c}enie\,))\,]\!]^{A} =$

      $\{\,p\mid \text{there is a } W' \subseteq W \text{ such that } p = W' \cap \lambda w\ \text{it matters now in } w\,\}$

This is now the same as the power set of the argument proposition of the PSS_R *by*, the set of all that proposition's subsets:

(80) $\mathcal{P}(\lambda w\ \text{it matters now in } w)$

The next expression in line is the demonstrative pronominal correlate of the *čtoby* clause, *to*. Its semantic values can, once again, be assumed not to change anything, resulting in the same alternative semantic value as before:

(81) $[\![\, to\ (\check{c}to\ (by\ (sej\check{c}as\ \dot{e}to\ imeet\ kakoe\text{-}to\ zna\check{c}enie\,)))\,]\!]^{\mathrm{A}} =$

      $\mathcal{P}(\lambda w\ \text{it matters now in } w)$

Along comes the negative adverb *ne*, with an ordinary semantic value as in 82, the function mapping a proposition to its complement, the total set of worlds W minus the proposition, and an alternative semantic value as in 83, the set containing just that function:

(82) $[\![\, ne \,]\!] = \lambda\phi\ W \setminus \phi$

(83) $[\![\, ne \,]\!]^{\mathrm{A}} = \{\,\lambda\phi\ W \setminus \phi\,\}$

The two semantic values of the whole of the overt material in 75 now become:

(84) $[\![\, ne\ (to\ (\check{c}to\ (by\ (sej\check{c}as\ \dot{e}to\ imeet\ kakoe\text{-}to\ zna\check{c}enie\,))))\,]\!] =$

      $W \setminus \lambda w\ \text{it matters now in } w$

(85) $[\![\, ne\ (to\ (\check{c}to\ (by\ (sej\check{c}as\ \dot{e}to\ imeet\ kakoe\text{-}to\ zna\check{c}enie\,))))\,]\!]^{\mathrm{A}} =$

      $\{\,p\,|\ \text{there is a } q \in \mathcal{P}(\lambda w\ \text{it matters now in } w) \text{ such that } p = W \setminus q\,\}$

Note that before negation was taken into account, the alternatives were stronger than the ordinary semantic value proposition, but now, it is the other way around: The members of the set defined in 85 are all supersets of the set defined in 84.

    This is significant for the covert operator $\mathrm{E}_{\subseteq}$, which enters into the semantic composition at this stage. Recall 68, repeated here for convenience:

(68) $[\![\, \mathrm{E}_{\subseteq}\ \phi \,]\!]^{w} = \begin{cases} 1 \text{ iff} & \text{(i) for all } p \in [\![\, \phi \,]\!]^{\mathrm{A}},\ [\![\, \phi \,]\!] \subseteq p\ \text{ and } \text{ (ii) } [\![\, \phi \,]\!]^{w} = 1 \\[2mm] 0 \text{ iff} & \text{(i) and } [\![\, \phi \,]\!]^{w} = 0 \end{cases}$

The essential part is (i), the definedness condition that all distinct alternatives to the argument proposition are (weakly) weaker than it. This is indeed the case here:

(86) $[\![\, \mathrm{E}_{\subseteq}\ (ne\ (to\ (\check{c}to\ (by\ (sej\check{c}as\ \dot{e}to\ imeet\ kakoe\text{-}to\ zna\check{c}enie\,)))))\,]\!]^{w} = 1 \text{ or } 0 \text{ iff}$

      $\forall p \in \{\,p\,|\ \text{there is a } q \in \mathcal{P}(\lambda w\ \text{it matters now in } w) \text{ such that } p = W \setminus q\,\}:$

      $(W \setminus \lambda w\ \text{it matters now in } w) \subseteq p$

The definedness condition introduced by $E_\subseteq$ is thus verified. But if the negation (represented here as $W\backslash$) were missing, it would be falsified, for then the sets on the left and the right of $\subseteq$ would not stand in the subset but in the superset relation.

In this way, the fact that the Russian PSS is licensed in a negative context but not in the corresponding positive context is accounted for in terms of its semantics, and the analogous German case 19 would be accounted for in the same way.

Note that while 75 (=20) and 19 are negative contexts, the same logic will extend to all downward-entailing environments in the scope of $E_\subseteq$.

SENSITIVITY TO PRESUPPOSITIONS. 68 is underspecified in a key regard: ϕ may have a presupposition, and then $[\![\phi]\!]$ and its alternatives p are not sets but partial functions from worlds to truth values, therefore they cannot stand in the $\subseteq$ relation; they must be reduced to sets.

One way to do this is to focus on the sets of worlds where they are true, and to substitute '$\lambda w[\![\phi]\!](w) = 1 \subseteq \lambda w' p(w') = 1$' for '$[\![\phi]\!] \subseteq p$' in the definition of $E_\subseteq$. The revised definition 87 says that a clause $E_\subseteq \phi$ is only true or false if the set of worlds where ϕ is true is, for all its alternatives p, a subset of the set of worlds where p is true, and that if it is true or false, it is true just in case ϕ itself is true.

$$(87) \qquad [\![\,E_\subseteq\ \phi\,]\!]^w = \begin{cases} 1 \text{ iff} & \text{(i) for all } p \in [\![\,\phi\,]\!]^A, \\ & \lambda w[\![\,\phi\,]\!](w){=}1 \subseteq \lambda w' p(w'){=}1 \text{ and (ii) } [\![\,\phi\,]\!]^w{=}1 \\ 0 \text{ iff} & \text{(i) and } [\![\,\phi\,]\!]^w = 0 \end{cases}$$

This amounts to factoring any presupposition into the content, providing suitably strict licensing conditions for presupposition-sensitive NPIs – more exactly, NPIs that are sensitive to presuppositions which are not downward-entailing for them, as 'strong' NPIs are held to be. The worlds where a sentence carrying a presupposition is true are those where both the presupposition and the carrier sentence are true, therefore according to 87, any presupposition ϕ may have must be downward-entailing for any NPI there may be in it. As we saw in section 2.4, the German PSS_G and the Russian PSS_R are both sensitive to non-downward-entailing presuppositions, which means that the operator defined in 87 is the right kind for them.

The other option, of factoring presuppositions out to provide suitably loose licensing conditions for NPIs that are insensitive to presuppositions, like Russian *-libo* series words, consists in concentrating on the worlds where ϕ and its alternatives are not false. An operator that ensures this can be defined as in 87 save for '$\lambda w[\![\phi]\!](w){=}1 \subseteq \lambda w' p(w'){=}1$' being replaced by '$\lambda w[\![\phi]\!](w){\neq}0 \subseteq \lambda w' p(w'){\neq}0$'.

Generally, the assumption in the theory is that different NPIs, with different licensing conditions along a strength axis, can have covert operators with slightly different properties associating with the alternatives they activate. It remains something of an open question, though, how the right pairings between NPIs and covert operators come about. One way to think about it is in terms of different sorts of alternatives and of alternative semantic values, another is to assume that an NPI can lexically 'select for' a certain covert operator, for example, by carrying features that can only be checked by it (see Chierchia 2013: 152, 217ff.; for critical discussion, see Zeijlstra 2017). One particular concern is how two NPIs of different strength in one sentence can each have the alternatives they activate factored into the meaning of the sentence by the appropriate operator. This issue cannot be settled here; I will below use the locution that a subjunctive 'selects for' a certain operator, conscious that it does not explain, in the words of Sauerland & Yatsushiro (forthcoming), "the still unexplained different . . . operator selection properties of strong and weak NPIs".

SENSITIVITY TO SCALAR IMPLICATURES. As we saw in section 2.3, PSS_R, the Russian polarity sensitive sunjunctive, is not sensitive to non-downward-entailing scalar implicatures, but PSS_G, the German one, is. 37 and 39 were cases in point: the implicature that there are some who *are* satisfied with their body is upward-entailing with respect to the relative clause, which is unproblematic for PSS_R but not for PSS_G.

(37)   . . . sovsem malo ljudej, kotorye byli by   dovol'ny svoim telom. [59]
        . . . quite   little people who   were SUBJ satisfied their body
        'Very few people are satisfied with their body.'

(39)   Es gibt nur ganz wenige Menschen, die   mit ihrem Körper zufrieden sind /
        it gives only quite few   humans   who with their body   satisfied are /
        ? wären.
         were.SUBJ
        'Very few people are satisfied with their body.'

Therefore, PSS_G must be assumed to select for an E operator which 'looks at' not only at-issue content and presupposition but also any scalar implicature, while PSS_R selects for an E which only pays attention to the two first levels of meaning. One way to encode this distinction, framed in a theory where scalar implicatures are built into the at-issue content through exhaustification, might be to restrict the operator that PSS_G selects for to cases where no scalar alternatives are active so any exhaustification must have taken place. In this way, the operator would in fact be looking at any scalar implicature on a par with the other content. No such restriction would be imposed on the operator selected for by PSS_R.

That the two PSSes part ways regarding sensitivity to scalar implicature while both are sensitive to presuppositions means that they do not conform to a simple dichotomy of strong and weak NPIs where one needs downward-entailingness at all levels while the other only cares about at-issue content. Insofar, they strengthen the case, as it has been made by Schaebbicke et al. (2021), for a more nuanced picture where different NPIs show different sensitivities in different kinds of contexts.

SUMMARY. Through an analysis of the polarity sensitive subjunctive in German and Russian as an NPI, adapted closely from the treatment of such items developed by Chierchia (2013) and Crnič (2019), the facts established in section 2, both concerning what PSS_G and PSS_R share and in view of their differing sensitivities, have been seen to fall into place.

It is worth pausing to appreciate the close conceptual parallel to the Chierchia-Crnič theory of NPIs like *any* and *ever*. The common core is the contrast with smaller domains and the insistence on the statement even in view of the full domain. To illustrate, consider the three cases 88–90, which feature *any*, *ever*, and a hypothesized subjunctive, respectively, but are otherwise very similar:

(88)   Not that she has regrets for any decision.

(89)   Not that she has ever regretted a decision.

(90)   *Not that she were regretful of her decision.

All three sentences – pretending that 90 is a grammatical sentence – presuppose that the proposition expressed by the sentence without the NPI – *any*, *ever*, *were* – has more difficulty being true than any proposition that comes from it by replacing the relevant domain – be it one of (here) events, times, or worlds – with a subset. And due to the negation, that is indeed the case. The effect is to say that even the full set of decisions of hers, the full set of past times, or the full set of worlds where she is regretful of her decision fails to contain an event she has regrets for, or a time at which she regretted a decision, or the world of evaluation, respectively.

5. CONCLUSION AND OUTLOOK. What has been done in this paper amounts to positing a separate meaning variant of the subjunctive in German and in Russian, a P(olarity)S(ensitive)S(ubjunctive), morphologically inseparable from other meaning variants. A coherent story has been told about this meaning variant, be it PSS_G or PSS_R, as an NPI. In a nutshell, the story is that the PSS activates alternative propositions which are all included in its argument proposition; eventually, an operator $E_\subseteq$ triggers the

presupposition that the alternatives to its argument proposition all include *it*, something which is true just in case the argument of the operator is downward-entailing for the argument of the PSS. The argument of $E_\subseteq$ includes presuppositions and, for PSS_G, scalar implicatures; this makes the two subjunctives comparatively 'strong' NPIs, the German one the stronger of the two.

This story is in two regards an isolated story. First, it limits itself to two languages and does not tell anything about, say, Romance, for which the term 'polarity subjunctive' was originally coined. Second, the other meaning variants of the subjunctive in either language are left out, in particular, the gain in positing the PSS has not been weighed against any loss from it. In both regards, something should be said to round the story off.

The first question is whether the same or a similar story can be told about the polarity subjunctives in, say, Romanian, or other Romance languages. The short answer is that it is difficult to know because existing work has tended not to focus on polarity subjunctive as a topic in its own right but to limit attention to one or two constructed examples which are conceived of as typical. That said, the cases reviewed in section 2.1 do point in the direction that core licensing contexts are shared across rather a wide array of European languages. On the other hand, we have seen signs that the difference in 'strength' that has emerged between the German and the Russian PSS, both being sensitive to presuppositions but only the German PSS being sensitive to implicatures, can be complemented by yet another difference once French is taken into account, where the polarity subjunctive seems to be insensitive to presuppositions as well (see section 2.4).

Further, the examples which authors do give of polarity subjunctives in other languages than German and Russian mostly include an example of a complement clause of a belief verb under negation; as we noted in section 24, however, such contexts do not form a consistent pattern across subject persons in German or in Russian, so here, again, other languages could be more lenient about the contexts that license their polarity subjunctives. In any case, though, further work must be done before safe conclusions can be drawn.

The second question is how NPI subjunctives relate to 'other' subjunctives. As was shown in section 3, previous work on this variant in Russian has sought to unify it with 'intensional' uses of the subjunctive. Here, I will sum up the challenges that such efforts face and provide thoughts on further reasons for, at least temporarily, maintaining a separation between polarity and intensional subjunctives.

This concept pair originated with Stowell (1993), whose proposal to distinguish polarity subjunctives from intensional subjunctives in Romance, elaborated on by Quer (1997), was motivated by three facts. First, a subjunctive can be enabled by a

negation above a matrix predicate which otherwise selects for indicative; second, only such subjunctives can alternate with indicatives; third, such subjunctives do not show the locality or obviation effects that otherwise accompany subjunctives. By and large, corresponding generalizations hold for Slavic languages and Greek. While the importance of the second and third fact for the question of one or two subjunctives may be debatable, the first fact constitutes a genuine challenge to a unitary conception of subjunctives in Romance, Slavic or Greek, because, in the words of Giannakidou (2011), "negation is not an intensional operator".

Regarding efforts to unify polarity and other uses of the Russian subjunctive, as shown in section 3, Kagan (2013), building on Farkas (2003), retreats to a weak stance, where, as it were, the greatest common divisor is assigned the leading role, while Partee (2008) advances to, so to speak, the least common multiple between negation and intensionality. While Kagan's non-commitment theory is too weak to accurately delineate the distribution of the subjunctive, Partee's silent modality theory is too strong. This does not by itself close the case; it may merely show that it is difficult to unify the cases where polarity is what enables the subjunctive and those where intensionality is what enables it, not that it is impossible.

Note, though, that what has proved difficult for Russian promises to be difficult for German too, only differently, because the landscape of non-polarity usage is different here. The subjunctive does have a prominent use as a counterfactual mood; an intensional use, however, as typified in 'purpose-like' complement clauses (see Dobrušina 2016: 263ff.), scarcely exists (anymore) (there is, on the other hand, the clearly separate 'reportive' use; see Fabricius-Hansen et al. 2018: 105ff.). Efforts to unify the polarity use with the counterfactual use will have to follow a different route than efforts to unify it with the intensional use, and so, success in one corner would be likely to entail failure in the other.

Reservations about the cost of drawing a line beween 'polarity' subjunctives and the 'intensional' subjunctives found in Romance and Slavic may remain. But this cost is not without a theoretical gain: Polarity subjunctives have been ascribed a meaning from which their polarity sensitivity falls out. A comparison with NPIs as one has known them may be instructive: Theories about these have mostly been concerned with characterizing the contexts where they can occur. By contrast, the theory of Chierchia (2013: 146) and others in its wake supply the items with semantic values from which their polarity sensitivity can be derived, as a symptom of underlying entailments or presuppositions.

Quite similar considerations carry over to the field of subjunctives: Sensitivity, whether to polarity or to intensionality, is essentially a symptom, and a diagnosis requires a step beyond the identification of licensing conditions, however accurate, into identifying the

meaning of the mood itself. Such a step has been taken above, following in the steps of explicit analyses of polarity sensitive items and widening the range of such items in the relevant languages. The benefit of this may clearly be limited by what is yet unknown about the meaning of subjunctives – limited, but hopefully not nullified, since here as elsewhere, it is better to light a candle than to curse the darkness.

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NOTES

[1]Source: https://hi-tech.news/science/1958-uchenye-hotjat-chtoby-vrednyj-co2-sprjatali-pod-zemlej.html

[2]Source: https://religion.orf.at/v3/radio/stories/3006043/

[3]Source: https://www.granice.pl/news/to-co-wlasnie-zobaczylam-nie-moglo-byc-prawda/7584

[4]Source: https://www.motor-talk.de/forum/probleme-schwaechen-am-x1-t5146995.html?page=2

[5]Source: https://www.litres.ru/galina-mironova-13186093/odnazhdy-v-ofise/chitat-onlayn/page-5/

[6]Constructed; judgment validated by Solomeia Bagautdinova

[7]Source: http://www.sega.la-fa.ru/ru8883.html

[8]Source: https://forum.worldofplayers.de/forum/threads/94094

[9]Source: https://www.gutefrage.net/frage/pille-20-min-zu-spaet-genommen

[10]Source: https://www.sv-nn.ru/forum/theme/10968

[11]Source: https://www.gruene-smoothies.info/gruene-smoothies-rezepte/

[12]Source: http://referat-news.ru/Ehnciklopediya-polovoyj-zhizni.html

[13]Source: https://www.obermain.de/lokal/obermain/art2414,875381

[14]Source: https://spb.aif.ru/archive/1797575

[15]The textbook semantics for verbs like *believe* does embody this premiss, but Hintikka (1962: 36f.), Partee (1973), Soames (1987) and others have accentuated that it is an unrealistic idealization.

[16]Note that the negated attitude contexts are strictly non-downward-entailing regardless of whether or not they have a 'neg-raising' reading, as neither reading of 'a does not believe that...' – in the sense of 'a believes that not...' (a neg-raising reading) or in the sense of 'a is not sure that...' (no neg-raising reading) – is strictly downward-entailing.

[17]Source: https://www.zeit.de/kultur/film/2015-11/luis-trenker-ard-moretti

[18]Source: https://philanthropy.ru/blogs/2015/11/17/30923/

[19]Constructed; judgment validated by Serge Minor and Natalia Mitrofanova

[20]Constructed; judgment validated by Anneliese Pitz, Heinz-Peter Prell and Alexandra Spalek

[21]Source: http://www.wolfgang-louis.de/Erzählungen.html

[22]Source: https://republic.ru/posts/email/95083

[23]Source: http://lenta.te.ua/other/2016/11/30/61390.html

[24]Source: https://amak-190.livejournal.com/276819.html

[25]Source: https://www.karo-architekten.de/cms/wp-content/uploads/2010/01/polis-all.pdf

[26]Zwarts marks the deviance with an asterisk, but a question mark would seem to be more appropriate.

[27]https://www.english-linguistics.de/codii/

[28]DWDS corpora URL: https://www.dwds.de/r

[29]Source: https://www.handelszeitung.ch/politik/daniel-gloor-ich-bedauere-mein-verhalten-625431

[30]Source: https://saratov.aif.ru/culture/prima-balerina_v_saratove_ona_sozhaleet_chto_malo_gastrolirovala_po_rossii

[31]Judgment validated by Solomeia Bagautdinova

[32]Source: https://www.soundskills.de/community/

[33]Source: https://vashurok.ru/questions/

[34]Judgment validated by Solomeia Bagautdinova and Serge Minor

[35]Source: http://www.sfs.uni-tuebingen.de/~gjaeger/lehre/ss07/semantikPragmatik/Pragmatik_05_SkalareImplikaturen.pdf

[36]Source: https://obozrenie-chita.ru/article/ukrashenie-i-blagoustrojstvo-dvora

[37]Judgment validated by Solomeia Bagautdinova and Serge Minor

[38]Source: http://blog.mp-p.info/2019/09/

[39]Source: Reimann, Brigitte: *Franziska Linkerhand*, Berlin: Neues Leben 1974, p. 345

[40]Source: https://www.stuttgarter-nachrichten.de/inhalt.patti-smith.73a972f6-080b-457d-915c-706d6b59c431.html

[41]Source: https://kazakh-zerno.net/131302-kak-menyaetsya-zhizn-selchan-tadzhikistana-pri-podderzhke-proon-i-rossii/

[42]Source: http://www.schweizerbauer.ch/tiere/fleischrinder/mit-23-jahren-geht-helga-immer-noch-z-berg-24101.html

[43]Source: https://fjp2.com/ru/

[44]Constructed, judgment validated by Alexander Pfaff and Alexandra Spalek

[45]Constructed, judgment validated by Alexander Pfaff and Alexandra Spalek

[46]Source: https://kr.ufc.com/node/69658

[47]Source: https://vk.com/@skazki_primus_julia-stranavozmognostei; judgments validated by Margarita Aslanova Kapstad

[48]Source: http://www.parinti.com/modules.php?name=Forums\&file=print\&topic_id=39591

[49]Note that according to Farkas (1992: 71), there is no 'neg-raising' effect in the version with negation and the subjunctive, as there would be with negation and the indicative; the sentence does not express a negative epistemic commitment but an uncertain epistemic attitude.

[50]Source: https://thelib.ru/books/neznanskiy_fridrih_evseevich/proschenie_slavyanki-read.html

[51]Source: https://thelib.ru/books/neznanskiy_fridrih_evseevich/proschenie_slavyanki-read.html

[52]Judgment validated by Margarita Aslanova Kapstad

[53]I am grateful to Serge Minor for careful judgments about 62 and 65.

[54]Here and in the following, I adapt the notation used by Chierchia (2013) slightly.

[55]In fact, Chierchia's covert *only*, which is also used to exhaustify sentences with items that trigger scalar implicatures, requires all *true* alternatives to be entailed by ϕ, and requires this as a truth condition, while Crnič's covert *even*, which does not do such double duty, does not require ϕ to be logically stronger but in any case less likely than its distinct alternatives. I call the operator I define in 68 $E_\subseteq$ to reflect that it is like Crnič's E in that the truth of the alternatives is not a factor and in that the added meaning is a definedness condition, but like Chierchia's O in that the relevant relation is the subset relation.

[56]Source: https://www.tripadvisor.com.au/ShowUserReviews-g528988-d3735605-r553633250.html

[57]See, e.g., Fabregas (2014: 64): "Most accounts treat subjunctive as the spellout of a head or a head complex which is quite high in the clausal structure and . . . involves the C node."

[58]Since there can be more than one potentially downward-entailing phrase, a sentence can have two or more readings, one for each E attachment site; for simplicity, though, I will assume that there is one such phrase, and thus one attachment site for the E operator, namely, the polarity phrase of the next clause up. See Homer (2021) for relevant discussion.

[59]Source: http://lenta.te.ua/other/2016/11/30/61390.html

Word count including references and endnotes: 17422 (Monterey Language Services)