

5 Negation and negative concord in Slovenian

Kristina Gregorčič,^a Gašper Ilc^a & Jakob Lenardič^b

^a*Faculty of Arts, University of Ljubljana*

^b*Institute of Contemporary History, Slovenia*

1 Introduction¹

This chapter discusses the syntactic and semantic characteristics of Slovenian indefinite pronouns which need to be structurally licensed by a propositional operator such as the clausal negator. From the perspective of morphological marking, there are two major groups of such dependent pronouns. The first group consists of pronouns with the negative prefix *ni-*, while the second group consists of various pronouns without an overt negative marker.

The defining distributional characteristic of the morphologically negative pronouns is that their grammaticality crucially depends on the presence of the overt clause negator *ne* ‘NEG’, as shown in (1a). When such items co-occur with the overt clause negator *ne* ‘NEG’ within a single clause, they display the phenomenon of Negative Concord (henceforth NC), which means that together they contribute only one instance of logical negation to the interpretation of the structure (Penka 2020: 3), as shown in (1b).

- (1) a. *Nihče* **(ni)* *včeraj* *prišel.*
NI.person.NOM NEG.be.PRS.3SG yesterday come.PTCP
‘Nobody came yesterday.’
- b. *Nihče* **(ni)* *včeraj* *nikogar* *videl.*
NI.person.NOM NEG.be.PRS.3SG yesterday NI.person.GEN see.PTCP
‘Nobody saw anyone yesterday.’

In this respect, morphologically negative pronouns in Slovenian, illustrated in (1a)–(1b), differ from negative pronouns in standard English. The grammaticality of an English negative pronoun does not depend on the presence of the clause negator, as shown in (2a), while the co-occurrence of two such negative pronouns within a clause produces the meaning of double negation, as shown in the paraphrase of (2b). Since Slovenian negative pronouns do not contribute logical negation on their own, and since they depend syntactically and semantically on the clause negator, they are classified as Negative Concord Items (henceforth NCIs), whereas the English items, which contribute to the meaning of negation, are classified as Negative Quantifiers (NQs) (Penka 2020: 1).

- (2) a. *Nobody came yesterday.*
b. *Nobody ate nothing yesterday.*
 = *Some people ate something yesterday.*

In Non-Strict NC languages like Italian and Spanish, there is a structural asymmetry in the pre-verbal and post-verbal positions of morphologically negative indefinite pronouns. If such a negative pronoun occurs in the pre-verbal position, it blocks the occurrence of the

¹ The authors acknowledge the financial support from the Slovenian Research Agency (research core funding No. P6-0218 for author 2, and P6-0436 & Z6-4616 for author 3). The authors would like to thank the anonymous reviewers and the editors for their insightful comments and suggestions, which have improved the quality and clarity of the chapter.

negator in the same clause (3a). If the negative pronoun occurs post-verbally, the clause negator cannot be dropped from the clause (3b).

- (3) a. *Nadie* (*no) *vino*.
 nobody NEG came
 ‘Nobody came.’
 (Spanish, Penka 2020: 4)
- b. *(No) *vino* *nadie*.
 NEG came nobody
 ‘Nobody came.’
 (Spanish, Penka 2020: 4)

If a pre-verbal negative pronoun co-occurs with a post-verbal one in a Non-Strict NC language, the structure is interpreted with a single negation reading (4), in contrast to English (2b).²

- (4) *Nadie* *comió* *nada*.
 nobody ate nothing
 ‘Nobody ate anything.’
 (Spanish, Penka 2020: 6)

Slovenian belongs to the group of Strict NC languages, together with most Slavic languages as well as Greek and Romanian (Penka 2020; Giannakidou 2000, 2020; Déprez 2000). The chief characteristic of Strict NC languages that distinguishes this group from the Non-Strict NC group is that the morphologically negative pronouns, i.e. NCIs, always have to occur with the clause negator, both in the pre-verbal and post-verbal positions (5).

- (5) a. *Janez* *(ni) *videl* *nikogar*.
 Janez NEG.be.PRS.3SG see.PTCP NI.person.GEN
 ‘Janez saw nobody.’
- b. *Nihče* *(ni) *videl* *Janeza*.
 NI.person.NOM NEG.be.PRS.3SG see.PTCP Janez.GEN
 ‘Nobody saw Janez.’

The only scenario where Slovenian negative pronouns seemingly occur without the clause negator is fragment answers, as in (6).

- (6) A: *Ali* *si* *kaj* *slišal*?
 Q be.PRS.2SG thing.ACC hear.PTCP
 ‘Did you hear anything?’
- B: *Ničesar*.

² This phenomenon is also known in the literature as the negative spread (den Besten 1986), and has been the basis for semantic analyses that treat morphologically negative pronouns as lexically ambiguous between negative quantifiers and semantically non-negative indefinite pronouns. In (4), for instance, the negative pronoun in the subject position, i.e. *nadie*, would be treated as a negative quantifier logically introducing the negation, whereas *nada* in the object position would correspond to a semantically non-negative indefinite pronoun.

NI.thing.GEN
 ‘Nothing.’

However, we will claim that there is no reason to assume that Slovenian morphologically negative pronouns are in any way semantically negative, so cases such as (6) constitute an instance of elision where the negator gets elided together with the TP (see Giannakidou 2006 for further explanation). Instead, we will claim that Slovenian NCIs are simple quantificational pronouns with an uninterpretable negative feature that needs to be checked by the matching interpretable feature on the negator, the general idea being that NC is a type of syntactic agreement between the morphologically negative pronoun and the clause negator (cf. Zeijlstra 2012). In addition, we show that, according to our data, Slovenian NCIs should be analysed as universal quantifiers rather than simple Heimian indefinites or underlying existentials, and we provide evidence for this conclusion in Section 2.1.2. Our proposal is thus closely aligned with that of Abels (2005), who also claims that Slavic negative pronouns are universal quantifiers. However, it is noteworthy that the question whether NCIs (or other such polarity-dependent expressions) are quantificational or not does not seem to be settled in the literature (cf. Giannakidou 2006, 2020).

Apart from NCIs, Slovenian has two series of indefinite pronouns displaying the characteristics of Negative Polarity Items (henceforth NPIs): the bare series and the *koli*-series, illustrated in (7). They are closely related to NCIs and can often be found in similar environments, though with different licensing requirements.

- (7) a. *Ali si koga / kogarkoli slišal?*
 Q be.PRS.2SG person.ACC / person.koli.ACC hear.PTCP
 ‘Have you heard anyone?’
- b. *Nisem *koga / kogarkoli slišal.*
 NEG.have.PRS.1SG person.GEN / person.koli.GEN hear.PTCP
 ‘I haven’t heard anyone.’
- c. *Slišal sem *koga / *kogarkoli.*
 hear.PTCP have.PRS.1SG person.GEN / person.koli.GEN
 Intended: ‘I have heard someone.’

Detailed analyses of NPIs in English, Greek, Italian, Spanish and other languages (e.g. Ladusaw 1980; Giannakidou 1998; Israel 2011; Chierchia 2013) have shown that these items are similar to NCIs in that they are infelicitous unless they co-occur with some kind of propositional operator (7c). In contrast to NCIs, they can also be licensed by weaker non-veridical operators (7a). In this chapter, we will focus on the interaction of Slovenian NCIs and NPIs with the clause-mate negator *ne*. We will show that Slovenian NPIs exhibit the Bagel Problem, a phenomenon typical of Slavic NC languages. We will try to account for the Bagel Problem by outlining the main syntactic, semantic and pragmatic characteristics of Slovenian NPIs before providing a derivational account for the licensing of NCIs and the two NPI series in clauses containing the sentential negator *ne*.

The present chapter is composed of three main sections. Section 2 presents various aspects of negation in Slovenian, focusing on the syntactic and semantic properties of both the clause negator *ne* (‘NEG’) and *ni*-pronouns, which are Slovenian NCIs. Section 3 focuses on the Bagel Problem: after presenting this phenomenon in Slovenian, we try to account for it by comparing the syntactic, semantic and pragmatic features of Slovenian NCI and NPI pronouns. Finally, in Section 4, we propose a new classification of Slovenian NCI and NPI

pronouns according to Haspelmath’s implicational map (1997); our classification presents an alternative to the already existing classification proposed by Willis (2013). Section 5 closes the chapter.

2 Syntactic and semantic properties of negation in Slovenian

2.1 The clause negator *ne* (‘NEG’)

In Slovenian, there is only one syntactic clause negator, the particle *ne*, which we gloss as ‘NEG’.

- (8) *Odrasli metulji nikoli ne obiskujejo cvetov.*
 adult butterfly.NOM.PL NI.time NEG visit.PRS.3PL flowers.GEN.PL
 ‘Adult butterflies never visit flowers.’

In Standard Slovenian, the clause negator *ne* is unstressed in neutral and/or unmarked environments, as illustrated in (8). In these cases, the negative particle displays the characteristics of verbal proclitics, occupying a strictly adjacent position to the finite verbal form. Due to this fact, Toporišič (2000: 671) analyses the clause negator as the final element of the Wackernagel clitic cluster preceding the finite verb. However, Orešnik (1985–86: 213), as well as Milojević-Sheppard & Golden (2000: 96), points out that the proclitic *ne* should not be treated as a Wackernagel clitic, since it (i) can occur outside the Wackernagel clitic cluster (9a), and (ii) together with the finite verb functions as a host to a Wackernagel clitic cluster (9b). Furthermore, in the case of the present tense forms of the verbs *biti* ‘to be’, *imeti* ‘to have’ and *hoteti* ‘to want’, the clause negator and the finite verbal form undergo morphological merger (9c).

- (9) a. *Janez mu ga včasih ne posodi.*
 Janez he.CL.DAT.SG it.CL.ACC.SG sometimes NEG lend.PRS.3SG
 ‘Sometimes, Janez does not lend it to him.’
- b. [*Ne dam*] *ti ga.*
 NEG give.PRS.1SG you.CL.DAT.SG it.CL.ACC.SG
 ‘I won’t give it to you.’
 (Milojević-Sheppard & Golden 2000: 96 (11))
- c. *O Grkih nimajo nobenih podatkov.*
 about Greeks.LOC.PL NEG.have.PRS.3PL NI.kind.of.GEN.PL data.GEN.PL
 ‘They have no data about the Greeks.’

In the cases of VP-preposing and VP-ellipsis in negated sentences, illustrated in (10a) and (10b) respectively, special stress is placed on the clausal negator. Consequently, the adjacency with the verbal element is no longer possible.³ This also applies to negator-verb coalesced forms (10c). The strict adjacency is also no longer required if the negated clause contains only non-finite verbal forms (10d)–(10e).

³An anonymous reviewer suggests that in (10a) and (10b) *ne* is likely to receive sentence stress because it cannot form a constituent with the finite element of the VP, which moves together with the rest of the VP to the left periphery.

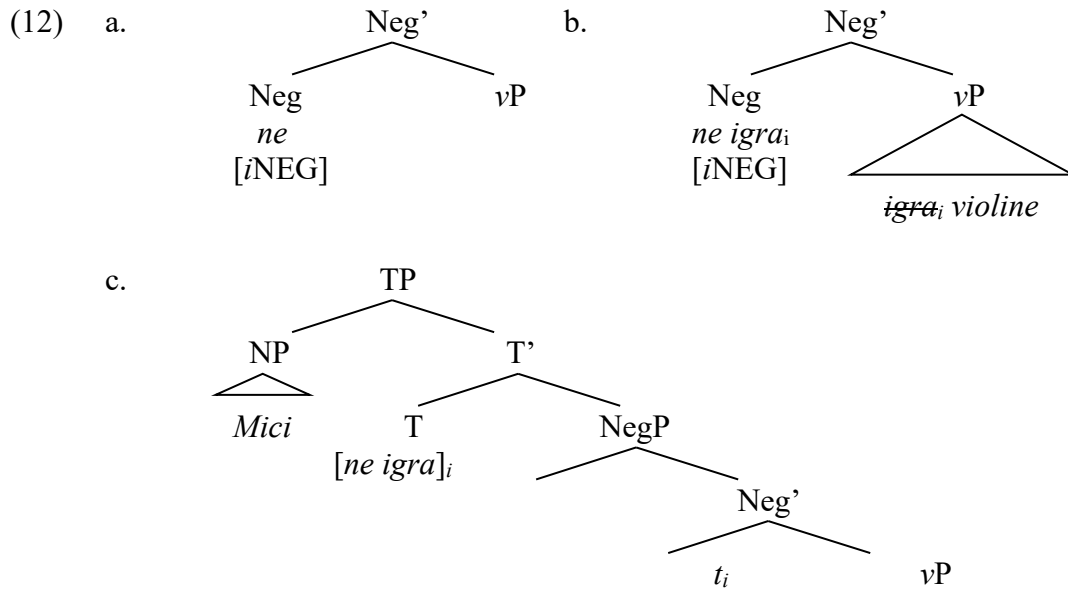
- (10) a. *Dam toliko ne, posodim pa.*
 give.PRS.1SG so.much NEG lend.PRS.1SG but
 ‘I won’t give so much, but I can lend it.’
 (Golden 2000: 44 (79))
- b. *Mačka slišim, vidim pa ne.*
 cat.ACC.SG hear.PRS.1SG see.PRS.1SG but NEG
 ‘I can hear the cat, but I cannot see it.’
- c. *Imam ne, pa bom imel.* vs.
 have.PRS.1SG NEG but be.FUT.1SG have.PTCP
 ‘I don’t have it now, but I will.’
 (Toporišič 2000: 497)
- Nimam, bom pa imel.*
 NEG.have.PRS.1SG be.FUT.1SG but have.PTCP
 ‘I don’t have it now, but I will.’
- d. *V težkih časih je treba tekmovalcu*
 in difficult time.LOC.PL be.PRS.3SG necessary competitor.DAT.SG
- pomagati, ne pa ga teptati.*
 help.INF NEG but he.ACC.SG trample.INF
 ‘In difficult times, the competitor needs to be helped, not suppressed.’
- e. *Prosim, ne se smejati.* vs.
 please NEG RFL laugh.INF
- Prosim, ne smej se.*
 please NEG laugh.IMP.2SG RFL
 ‘Please, don’t laugh.’

2.1.1 The syntax and interpretability of *ne* ‘NEG’

As seen above, the clause negator *ne* can negate any syntactic structure on its own, and when unstressed, displays the characteristics of a verbal proclitic, attaching to the finite verb. In line with the analyses of clitic-type negators (Rivero 1991; Haegeman 1995; Zanuttini 1997, among others), as well as taking into account different stages of Jespersen’s cycle, Ilc & Milojević-Sheppard (2003, 2005, 2007) argue that the clausal negator *ne* carries the interpretable negative feature [*i*NEG] and heads the NegP (12a). The clause negator and the finite verb merge in the course of verb movement to Neg (12b). After the two elements have merged, the unit [Neg+V] is accessible to further computational steps as a single syntactic element (12c), as can be easily observed in the case of the (optional) movement of [Neg+V] across the grammatical subject in questions (11b).

- (11) a. *Mici ne igra violine.*
 Mici.NOM.SG NEG play.PRS.3SG violin.GEN.SG
 ‘Mici does not play the violin.’
- b. *Ali ne igra Mici violine?*

Q NEG play.PRS.3SG Mici.NOM.SG violin.GEN.SG
 ‘Doesn’t Mici play the violin?’



We have already shown that the negative particle *ne* ‘NEG’ can also be stressed in discourse-marked environments such as VP-preposing, illustrated in (10a), and VP-ellipsis, illustrated in (10b). In these cases, *ne* functions as an independent syntactic element, again in the head of the NegP position. The derivation of the structures in (10) differs from the one presented in (12) in that the finite verb does not head-move to Neg to form a [Neg+V] cluster. The structures in (10) are crucial for understanding the derivation of Slovenian negative sentences, since they clearly show that the unit [Neg+finV] is formed at the level of syntax – the availability of the unmarked *nimam* ‘NEG have’ vs. the marked *imam ne* ‘have NEG’ in (10c) supports the claim that at the beginning of the computation, the lexical items *imam* and *ne* are separate items, joined in syntax into [Neg+finV].

2.1.2 The clause negator *ne* ‘NEG’ and the syntactic behaviour of NCIs

Slovenian displays several series of what is traditionally labelled as indefinite pronouns, which are all derived from interrogative pronouns. By and large, these pronouns are polarity-sensitive, since their grammaticality requires the presence of a proper licenser (for an overview of the various licensing conditions, see Section 3). According to the traditional grammar of Slovenian (Toporišič 2000), one of these indefinite pronoun series, the *ni*-pronouns, can only be used with the clause-mate sentential negator, which qualifies them as NCIs.⁴ Data from the *Corpus of Written Standard Slovenian Gigafida 2.0* (Krek et al. 2019)⁵ confirm that Slovenian speakers predominantly use these pronouns in the scope of the clause-mate negator (13). Examples of *ni*-pronouns used in the scope of the anti-veridical preposition

⁴ *Ni*-pronouns have been derived from interrogative pronouns by the prefixation of *n(i)*-, which has developed from the Proto-Slavic negative even-particle **ni* ‘not even’. The NCI *noben*, used in (9c), developed by the prefixation of the now obsolete word *obeden* (where the prefixed preposition *ob* was historically interpreted ‘without’, but lost this meaning, and *eden* ‘one’) with *n-*, see Snoj (2016).

⁵ The corpus *Gigafida 2.0* is predominantly composed of a variety of written texts that have been proofread. We therefore believe that it offers a representative sample of what can be considered modern Standard Slovenian. For more information about the corpus and its structure, see Krek et al. (2020).

brez ‘without’ (14a), in the scope of the complex anti-veridical conjunction *ne da* ‘without’ (14b), and in comparative structures (14c), are also from *Gigafida 2.0*, which indicates that some speakers use these pronouns in a slightly more relaxed way than prescribed by the traditional grammar.⁶ There are no examples of *ni*-pronouns used in affirmative statements, i.e. examples without any anti-veridical operators taking scope over *ni*-pronouns (15).⁷

- (13) *Z nikomer ne govori.*
with NI.person.INS NEG speak.PRS.3SG
‘He/she speaks with nobody.’
- (14) a. *Odide brez nobenega pogovora.*
leave.PRS.3SG without NI.kind.of.GEN.SG discussion.GEN.SG
‘He/she leaves without any discussion.’
- b. *Odide, ne da bi z nikomer govoril.*
leave.PRS.3SG NEG that COND with NI.person.INS speak.PTCP
‘He leaves without speaking with anyone.’
- c. *Govori bolje kot nihče.*
speak.PRS.3SG better than NI.person.NOM
‘He/she speaks better than anyone.’
- (15) **Govori z nikomer.*
speak.PRS.3SG with NI.person.INS
Intended: ‘He/she speaks with nobody.’

⁶ Out of 1,176,389 concordance lines in *Gigafida 2.0* illustrating the use of Slovenian *ni*-pronouns, only 166 show a *ni*-pronoun used in the scope of the anti-veridical preposition *brez* ‘without’, 2 in the scope of the anti-veridical conjunction *ne da* ‘without’, and 940 in comparative structures. In the latter case, the vast majority of examples contain the phrase *bolj(š)e kot nič* ‘better than nothing’ and *manj kot nič* ‘less than nothing’, in which the *ni*-pronouns could be considered as independent lexical items that, consequently, cannot be treated as NCIs at all (see Ilc 2019: 126).

An anonymous reviewer notes that they find examples (14a)–(14c) odd. We do, too; nevertheless, they are attested across a variety of written published sources that otherwise conform to the norms of the standard language, i.e. if we examine the retrieved concordances and even the wider co-text, nothing else stands out as an instance of non-standard usage.

⁷ Admittedly, examples in which *ni*-pronouns occur in affirmative sentences can be found in *Gigafida 2.0*. Sentences (i)–(ii) below, both from *Gigafida 2.0*, exemplify such use. However, these are examples of the so-called independent lexical items, which are derived from *ni*-pronouns, but which no longer display pronominal characteristics (see also Ilc 2019: 126). This claim is supported by the fact that the *ni*-words in the examples below are preceded by modifiers that do not typically precede actual pronouns. The *ni*-word in (i) is used as an adjective indicating a poor quality or an inconsiderable amount of something; if the *ni*-word were a pronoun, an actual NCI, it would not be compatible with the adverbial modifier *žalostno* ‘sadly’. A similar state of affairs is illustrated in (ii), where the *ni*-word is used as a noun referring to a void. The modifier of the *ni*-word is the adjective *čisti* ‘complete, pure’; if the *ni*-word in this example were an NCI pronoun, it would not be compatible with a modifying adjective, but rather with the adverb *čisto* ‘absolutely, totally’.

- (i) *Kako žalostno nikakršen je čut za sočloveka!*
how sadly NI.kind.of.NOM.SG.M be.PRS.3SG sense.NOM.SG for fellow.man
‘How sadly insignificant is the empathy for a fellow man!’
- (ii) *V glavi imam čisti nič.*
in head have.PRS.1SG complete.NOM.SG.M NI.thing.NOM.SG
‘There is a complete void in my head.’

Ilc & Milojević-Sheppard (2005, 2007) analyse the derivation of negative sentences containing NCIs from the perspective of the feature-checking mechanism involving the interpretable [*i*NEG] feature on the negator and the uninterpretable [*u*NEG] feature on the NCIs. In particular, they claim that multiple negative expressions form a cluster, and Multiple Agree (in the sense of Hiraiwa 2001) is established between the clausal negator and all NCIs simultaneously at the same derivational point (16b). This proposal faces a theoretical problem since the operation Agree as originally proposed by Chomsky (1999) can be established only between a higher-lying probe with the unvalued uninterpretable feature and a lower-lying goal with the interpretable feature. In Ilc & Milojević-Sheppard’s (2005, 2007) analysis, the situation is reverse: the NCIs with the [*u*NEG] belong to the thematic layer of projections and are thus c-commanded by the negator with the [*i*NEG]. For this reason, the authors propose that the negator also carries the unvalued [Attract-All] feature (in terms of Bošković 1999), whose requirement is to attract all negative features simultaneously at the same stage of the derivation (16b).

- (16) a. *Peter ne pove nikomur ničesar.*
 Peter NEG tell.PRS.3SG NI.person.DAT NI.thing.GEN
 ‘Peter doesn’t tell anyone anything.’
- b. [_{NegP} *ne*_[*i*NEG] *pove* ... [_{VP} *nikomur*_[*u*NEG] ... *ničesar*_[*u*NEG]]]

Another solution to the same problem can be found in Zeijlstra’s (2012: 541) redefinition of Agree, according to which Agree is established between the elements with matching features, whereby the element with the interpretable feature c-commands the element with the uninterpretable feature – exactly the same configuration as can be observed in (16b).

The analysis put forth by Ilc & Milojević-Sheppard (2005, 2007) for Slovenian, however, differs from Zeijlstra’s (2004) account of negators in Strict NC languages, according to which both the negator and the NCIs are specified for the [*u*NEG], and the NegP contains a phonologically null negative operator *Op* with the [*i*NEG] checking the unvalued [*u*NEG] features of both the negator and the NCIs. We do not follow Zeijlstra’s (2004) proposal, as we find it intuitively problematic to consider the negator, whose function is to negate, semantically non-negative, only to be replaced by a phonologically null element whose semantic negative value is interpretable.⁸ This approach suggests that the negator in Strict NC languages is pleonastic/expletive. We agree with Giannakidou (2020: 19), who claims that “such an assumption is in conflict with what we know about negation”. In particular, it is incompatible with the observation that cross-linguistically, negation is always morpho-syntactically marked (Giannakidou 2020).

We now turn to the quantificational properties of Slovenian NCIs. Giannakidou (1998) proposes several tests for identifying the quantificational import of a pronoun. A pronoun has characteristics of universal quantifiers as long as it can form fragment answers and be compatible with modifiers such as *almost* and *absolutely*.⁹ If the pronoun can be bound in donkey sentences, and allows for predicative uses, it is an existential quantifier (Giannakidou 1998: 63–69). According to these criteria, Slovenian NCIs mostly display characteristics of universal quantifiers. They are (i) acceptable in fragment answers (17a), (ii) compatible with

⁸ For a similar observation, see Tsedryk (2023) (this volume).

⁹ It is doubtful whether the tests are indicative of universal quantifiers or just of expressions whose denotation is based on expressing plurality and/or an upper bound set (see Horn 2000 and Giannakidou 2001). As will become clear in Section 3.3, the behaviour of Slovenian *koli*-pronouns seems to support the latter suggestion.

skoraj ‘almost’ (17b), and (iii) not bound in donkey sentences (17c). They can be used as predicate nominals (17d), which seemingly supports their analysis as existential quantifiers.¹⁰ However, note that the NCI in (17d) does not express the fact that Janez is not a doctor. Rather, it is used to express the speaker’s *negative evaluation* of Janez’s skills as a doctor. As noted by Haspelmath (1997: 186–192), indefinite pronouns that undergo pragmatic enrichment such as the one displayed in example (17d) can be used in a wider set of environments than their pragmatically unenriched counterparts. This may be the reason why the NCI is used in the predicative position in example (17d).

- (17) a. A: *Ali koga vidiš?*
 Q person.ACC see.PRS.2SG
 ‘Do you see anyone?’
- B: *Nikogar.*
 NI.person.GEN
 ‘Nobody.’
- b. *Ti ne vidiš skoraj nikogar.*
 you NEG see.PRS.2SG almost NI.person.GEN
 ‘You see almost nobody.’
- c. **Če nikogar_i ne vidiš,*
 if NI.person.GEN NEG see.PRS.2SG
- mu_i povej, da sem tu.*
 he.DAT.SG tell.IMP.2SG that be.PRS.1SG here
 Intended: ‘If you see nobody_i, tell them_i I’m here.’
- d. *Janez ni noben zdravnik.*
 Janez.NOM NEG.be.PRS.3SG NI.kind.of.NOM.SG doctor.NOM.SG
 ‘Janez is no doctor.’

According to Abels (2005: 21–25), the fact that NCIs cannot act as antecedents for donkey pronouns (17c) constitutes especially strong evidence in favour of the idea that such pronouns have inherent universal force in semantics. Universal quantifiers, unlike existential ones, are clause-bounded (Giannakidou 2006: 343),¹¹ so they cannot move (via quantifier

¹⁰ Ilc (2019: 130) notes that the validity of the predicate nominal test is debatable, as already acknowledged by Giannakidou (2006).

¹¹ Note that a non-NPI existential pronoun in an embedded clause can be interpreted as taking scope over a quantifier introduced in the matrix clause (i), while a universal pronoun, being clause-bounded, only allows the narrow scope reading (ii).

- (i) *Vsi profesorji mislijo, da je neki študent pameten.*
 all professor.NOM.PL think.PRS.3PL that be.PRS.3SG some student.NOM smart
 a. ‘For some student, all the professors think he’s smart.’
 b. ‘For every professor, there is one student that the professor thinks is smart.’
- (ii) *Neki profesor misli, da so vsi študenti pametni.*
 some professor.NOM.SG think.PRS.3SG that be.PRS.3PL all student.NOM.PL smart.PL
 Possible: ‘There is a professor who thinks that all students are smart.’
 Impossible: ‘For all students, there is a professor who thinks they are smart.’

raising) out of the *if*-clause to the matrix position where they could bind an indefinite donkey pronoun like *mu* in (17c). Based on these data, we conclude that Slovenian NCIs behave like universal quantifiers.¹² Note, however, that they are not just universal quantifiers: they are additionally constrained because of their [uNEG] feature (see example (16b) above). It is likely that they undergo scope freezing because of the interaction between the syntax and semantics that is otherwise not typical of regular quantifying expressions such as *everyone*.

Further evidence for treating Slovenian NCIs as universal quantifiers can be found in relation to the so-called Expletive Negation construction (henceforth EN, see Horn 2010; Delfitto 2020, among others). As was also noted for other Slavic languages (e.g. Brown & Franks 1995; Abels 2005 for Russian), Slovenian EN assigns the Genitive of Negation (henceforth GoN) in its scope, but fails to licence NCIs, as exemplified in (18).

- (18) *Bojim se, da niso že vsega /*
 fear.PRS.3SG RFL that NEG.be.PRS.3PL already everything.GEN /

**ničesar pojedli.*
 NI.thing.GEN eat.PTCP
 Intended: ‘I am afraid that they might have already eaten everything.’

We assume that the reason for this asymmetry between the expletive and standard clause negation lies in their configurational differences, as proposed by Abels (2005). In his analysis, clause negation is interpreted in the NegP, whereas the locus of the EN interpretation

¹² It is noteworthy that the exact quantificational status of the Slavic NCIs is still debatable. Some authors (Abels 2005, for instance) claim that they are always universal, some argue that depending on the context/syntactic environment, their quantificational force can be either universal or existential (Giannakidou 2006; Tsedryk 2023, this volume), while others see NCIs as not quantificational, analysing them as (Heimian) indefinites (Penka 2020). Our data and analysis suggest that Slovenian NCIs by and large show the properties of universal quantifiers. This is further supported by the observation that indefinites are insensitive to scope islands, in contrast to quantifiers (see Abusch 1993). Note that in embedded contexts the NCI in (ii) patterns with a regular universal quantifier in (i), rather than with an indefinite (iii):

- (i) *Študent je sprožil govorico,*
 student be.PRS.3SG trigger.PTCP rumour
da je bil vsak učitelj aretiran.
 that be.PRS.3SG be.PTCP every teacher arrested
 a. ‘A student started the rumour that every teacher had been arrested.’
 b. Impossible: ‘For every teacher, a student started the rumour that they (the teacher) had been arrested.’
- (ii) *Študent je sprožil govorico,*
 student be.PRS.3SG trigger.PTCP rumour
da noben učitelj ni bil aretiran.
 that NI.person.NOM teacher NEG.be.PRS.3SG be.PTCP arrested
 a. ‘A student started the rumour that no teacher had been arrested.’
 b. Impossible: ‘There is a teacher for whom a student started the rumour that they (the teacher) had not been arrested.’
- (iii) *Študent je sprožil govorico,*
 student be.PRS.3SG trigger.PTCP rumour
da učitelj ni bil aretiran.
 that teacher NEG.be.PRS.3SG be.PTCP arrested
 a. ‘A student started the rumour that there was a teacher who had not been arrested.’
 b. ‘A student started the rumour that it was not the case that any teacher had been arrested.’
 c. ‘There is a teacher for whom a student started the rumour that they (the teacher) had not been arrested.’

is in higher functional domains, most likely within the CP layer of projections (see Cinque 1999). Abels (2005: 65) argues that NCIs need to be syntactically licensed in Spec-Head relationship with the clause negator and as universal quantifiers must scope over the negator in semantics, yielding $\forall\neg\phi$. According to the author, this configuration can only be established if the NCI c-commands the negator (at least) at LF (i.e. $\forall\neg\phi$). However, in the case of EN, the negator is merged way above the NegP and, therefore, does not enter into a local Spec-Head relation with the lower-lying universally interpreted NCIs, and consequently the NCIs cannot take negation in its scope at LF, resulting in $\neg\forall\phi$ rather than $\forall\neg\phi$.¹³

3 Negative dependencies in Slovenian

As already pointed out in Section 1, indefinite pronouns in different languages may form different kinds of dependencies in negative contexts. While NCIs typically require licensing by the clausal negator, NPIs accept a wider range of licensors. Building on Ladusaw's (1980) seminal work on NPIs and Zwarts' (1998) classification of NPIs, Giannakidou (1998) presents a hierarchy of NPI-licensing propositional operators based on their logical properties (19). According to this hierarchy, antimorphic operators (20) form the strongest negative context. Downward entailing (henceforth DE) operators (21) and non-veridical operators (22) form the increasingly weaker negative contexts, respectively.

(19) Hierarchy of negative polarity contexts (after Giannakidou 1998: 110–117, 156–157):

antimorphic \subseteq downward entailing \subseteq non-veridical

(20) An operator α is antimorphic iff
 $\alpha(A \vee B) \leftrightarrow \alpha(A) \wedge \alpha(B)$, and $\alpha(A \wedge B) \leftrightarrow \alpha(A) \vee \alpha(B)$
 (Giannakidou 1998: 157)

(21) An operator α is downward entailing iff
 $\alpha(A \vee B) \rightarrow \alpha(A) \wedge \alpha(B)$
 (Giannakidou 1998: 157)

(22) An operator α is non-veridical iff
 $\alpha(p) \not\Rightarrow p$ in some epistemic model $M(x) \in c$ (where c stands for context)
 (Giannakidou 1998: 112)

¹³ In other words, in Abel's (2005) approach, the negator in Slavic structures like (18) is also logically negative (it is just interpreted higher in the structure so that it does not negate the embedded proposition), which means that the term “expletive negation” is misleading in this case. Furthermore, EN structures like (18) contain an additional modal component with which the negator interacts – for instance, Yoon (2011: 95) argues that the negator is a mood marker in EN constructions, constituting a special subcase of the subjunctive – the so-called evaluative subjunctive – which is used to present a given proposition as (un)likely, (un)desirable, (im)polite, etc. It is possible that such use of the negator is different from the use in EN constructions in French, in which it truly seems to be without semantic import (i).

(i) *Je crains que ma mère ne vienne.*
 I fear PRS.1SG that my mother NEG come.SBJV.3SG
 ‘I fear that my mother comes.’
 (French)

Examples (19'), (20'), and (21') show that sentential negation is antimorphic, the quantifying pronoun *few* DE, and the modal verb *can* non-veridical.

(20') *I don't eat chocolate or crisps.* \leftrightarrow *I don't eat chocolate and I don't eat crisps.*
I don't eat chocolate and crisps. \leftrightarrow *I don't eat chocolate or I don't eat crisps.*
I don't eat chocolate. \rightarrow *I eat chocolate.*

(21') *Few people eat chocolate or crisps.* \leftrightarrow / \rightarrow *Few people eat chocolate and few people eat crisps.*
Few people eat chocolate and crisps. \leftrightarrow / \rightarrow *Few people eat chocolate or few people eat crisps.*
Few people eat chocolate. \rightarrow *People eat chocolate.*

(22') *I can eat chocolate or crisps.* \leftrightarrow / \rightarrow *I can eat chocolate and I can eat crisps.*
I can eat chocolate and crisps. \leftrightarrow / \rightarrow *I can eat chocolate or I can eat crisps.*
I can eat chocolate. \rightarrow *I eat chocolate.*

If an NPI allows licensing by a logically weaker operator, it is also expected to allow licensing by a logically stronger one (see Zwarts 1998; Giannakidou 1998). All NPIs are therefore supposed to be licensed by the clause-mate negator, which is logically the strongest operator according to the hierarchy shown in (19). In NC languages, this expectation, however, systematically fails to be fulfilled. In Slavic languages such as Russian and Polish (see Pereltsvaig 2006; Błaszczak 2003, 2008), only NCIs can be licensed by the clause-mate negator. Pereltsvaig (2006) names this phenomenon the Bagel Problem and attributes it to morphological blocking, which prevents morphologically non-negative pronouns from being licensed by the clause-mate sentential negator.

Since Slovenian is an NC language, we expect it to exhibit the Bagel Problem. In order to show that it does, we first need to identify Slovenian pronouns that behave like NPIs. In Section 3.1, we show that Slovenian has two series of NPI pronouns, the bare and the *koli*-series. In Section 3.2, we discuss the Bagel Problem: the failure of NPIs to be licensed by the (non-veridical) clause-mate negator, which is expected to be present in NC languages. Even though Slovenian NPIs may co-occur with the clause-mate negator, they do display the Bagel Problem. Bare pronouns appear to avoid the direct scope of the clause-mate negator, while *koli*-pronouns can only be used in its direct scope when producing emphatic statements. In Section 3.3, we aim to account for the Bagel Problem in Slovenian by focusing on the distinctive characteristics of Slovenian NPI pronouns, which make them crucially different from Slovenian NCIs. While bare pronouns are referentially vague, *koli*-pronouns require total variation. They therefore have the potential to trigger scalar reasoning, which accounts for their emphatic character in the scope of the clause-mate negator. After outlining the main features of Slovenian NPIs, we show the differences in the syntactic derivation and semantic composition between the Slovenian NCI and NPI pronouns.

3.1 Slovenian NPIs: a quick overview

Slovenian has two series of indefinite pronouns that display dependency on non-veridical contexts or a subset thereof – the bare series, and the *koli*-series. Since Slovenian indefinite pronouns have not been systematically investigated so far, we first need to show that the bare and the *koli*-series display the distinctive features of NPIs.

Giannakidou (1998 and subsequent work) observes that NPI pronouns are incapable of introducing referents in the real world. Interpretatively, this holds for both bare and *koli*-

pronouns, i.e. their use is felicitous only if the speaker is unable to identify the referent of the pronoun. The anti-specificity test, applied to Slovenian in (23), is due to Aloni & Port (2006: 8).

- (23) *Želim govorniti s katerim / katerimkoli*
 wish.PRS.1SG speak.INF with kind.of.INS.SG / kind.of.koli.INS.SG
- študentom. #Ime mu je Janez.*
 student.INS.SG name.NOM.SG he.DAT.SG be.PRS.3SG Janez.NOM
- Intended: ‘I wish to speak with some student. His name is Janez.’

Bare pronouns require the presence of a modal operator in order to be acceptable. Thus, in (24) the speaker does not only express the inability to identify the referent, but also the uncertainty whether the event actually took place. The modal operator is not overtly expressed, but is clearly present, which is indicated by the (only available) paraphrase in (24a). The paraphrase in (24b), with the intended episodic (i.e. veridical) interpretation, is not available. As soon as the context forces the veridical interpretation of the sentence containing a bare pronoun, the use of the latter is ungrammatical (25).

- (24) Context: I heard the phone ring. I picked it up when the caller had already hung up. Then I said to my colleague who was standing next to me:

Kakšen študent je klical.
 kind.of.NOM.SG student.NOM.SG be.PRS.3SG call.PTCP

a. Available: ‘It is possible that some student or another called.’ (I am guessing about the identity of the caller; the caller could have been a student.)

b. Unavailable: ‘Some student or another called.’ (I know that the caller was a student.)

- (25) Context: I picked up the phone and identified the caller.

a. **Kakšen študent je klical.*
 kind.of.NOM.SG student.NOM.SG be.PRS.3SG call.PTCP

Intended: ‘Some student or another called.’

b. *Kakšen študent je klical.* →
 kind.of.NOM.SG student.NOM.SG be.PRS.3SG call.PTCP
 ‘Some student or another may have called.’

Študent je klical.
 student.NOM.SG be.PRS.3SG call.PTCP

‘A student called.’

(Slovenian)

Due to the modal environment in which they obligatorily appear, Slovenian bare pronouns are incapable of introducing specific referents in the real world. Thus, they are totally incompatible with any method of referent identification: description, naming, or ostension. The identification test below is adapted from Aloni & Port (2006: 8).

- (26) *Moram srečati kakšnega profesorja.*
 must.1SG meet.INF kind.of.ACC.SG professor.ACC.SG

#*Je* *direktor* *inštituta,* *a* *ne* *vem,*
 be.3SG director.NOM.SG institute.GEN but NEG know.PRS.1SG

kako *mu* *je* *ime.*
 how he.DAT be.PRS.3SG name.NOM

Intended: ‘I have to meet some professor or another. He is the director of the institute, but I don’t know his name.’
 (Slovenian)

Koli-pronouns are as unacceptable in non-modalized contexts as bare pronouns unless they appear in DE environments. The sentence in (27) can only be analysed as episodic, i.e. veridical; consequently, the use of the *koli*-pronoun is ungrammatical. In (28), where the modal meaning is explicitly indicated, the *koli*-pronoun becomes grammatical.

(27) Context: I picked up the phone and identified the caller.
 **Klical* *je* *katerikoli* *študent.*
 call.PTCP be.PRS.3SG kind.of.koli.NOM.SG student.NOM.SG
 Intended: ‘I recognized the caller. Some student called.’

(28) *Lahko bi klical katerikoli študent.*
 easily COND call.PTCP kind.of.koli.NOM.SG student.NOM.SG
 ‘Any student could have called.’

The ungrammaticality of bare and *koli*-pronouns in veridical contexts shows that these pronouns are indeed NPIs. This means that they are likely to exhibit the Bagel Problem, to which we now turn.

3.2 The Bagel Problem

The Bagel Problem is a phenomenon in which NCI and NPI pronouns exhibit complementary distribution. The research conducted so far has shown that this phenomenon tends to appear in Strict NC languages, where NCI pronouns are typically licensed by the (antimorphic) clause-mate sentential negator, whereas NPI pronouns occur in the scope of all the other DE operators. As shown in (19) above, antimorphic contexts form a subset of DE contexts. The graphic representation of the distribution of NCI and NPI pronouns in Fig. 1 therefore resembles a bagel.¹⁴

¹⁴ Pereltsvaig (2006) does not mention non-veridical contexts with respect to the Bagel Problem, which may seem counterintuitive given Giannakidou’s hierarchy (1998) shown in (19) above. However, it needs to be pointed out that non-veridical environments typically license the so-called epistemic indefinite pronouns (see, among others, Aloni & Port 2006; Alonso-Ovalle & Menéndez-Benito 2010). The latter express the speaker’s inability to fully identify the referent, thereby revealing the speaker’s epistemic state. Only some epistemic indefinite pronouns are licensed in DE environments – if they are, they belong to NPIs. The reason why Giannakidou (1998) includes non-veridical contexts in the discussion of NPIs is thus to account for the fact that a portion of NPIs allow licensing by non-DE non-veridical operators; these pronouns simultaneously allow licensing in DE contexts. If a pronoun is licensed by non-DE non-veridical operators while rejecting DE operators, it cannot be called an NPI.

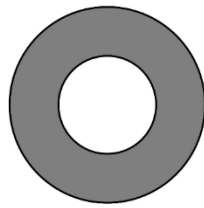


Figure 1. A graphic representation of the distribution of NCI and NPI pronouns in languages exhibiting the Bagel Problem

The Bagel Problem in Russian is described in Pereltsvaig (2006),¹⁵ where NCIs are shown to be licensed by the clause-mate negator, which, however, fails to license the NPI *libo*-pronouns (29). Pereltsvaig attributes the Bagel Problem to morphological rather than semantic blocking, as Russian NCIs are ungrammatical not only in plain DE contexts (30a), but also in the scope of the antimorphic preposition *bez* ‘without’ (30b), where their *libo*-counterparts are to be used instead. Both series of pronouns are ungrammatical in affirmative sentences (31).

- (29) *On nikogo / *kogo-libo ne vstretil.*
 he NI.person / person-libo NEG meet.PST
 Intended: ‘He didn’t meet anyone.’
 (Russian, modelled on Pereltsvaig 2006: 171 (39a–b))

- (30) a. *Nemnogie studenty čitali *nikakoj / kakoj-libo žurnal.*
 few students read.PST NI.kind / kind-libo journal
 Intended: ‘Few students read any journal.’
 (Russian, modelled on Pereltsvaig 2006: 155 (3c); 157 (10d))

- b. *Ivan opozdal na urok *{ni bez kakoj} /*
 Ivan come.late.PST to class NI without kind

{bez kakoj-libo} pričny.
 without kind-libo reason
 Intended: ‘Ivan came to class late for no reason.’
 (Russian, modelled on Pereltsvaig 2006: 165 (30); 166 (33))

- (31) **Ja videl ničego / čto-libo.*
 I see.PST NI.thing / thing-libo
 Intended: ‘I saw nothing/something.’
 (Russian, modelled on Pereltsvaig 2006: 155 (2); 156 (8))

Since Slovenian is a Strict NC language, we expect it to exhibit the Bagel Problem. This hypothesis seems to be countered by the grammatical examples in which, in addition to *ni*-pronouns (NCIs), bare and *koli*-pronouns can occur with the clause-mate sentential negator

¹⁵ For an extensive discussion of the Bagel Problem in Polish, see Błaszczak (2003, 2008). For an analysis of the Bagel Problem in East Slavic languages (Belarusian, Russian and Ukrainian), see Tsedryk (2023) (this volume).

(32)–(34). *Koli*-pronouns tend to carry sentence stress in such an environment (indicated in block capitals below), unless there is an NCI already present in the sentence.¹⁶

(32) *Ana ni imela nobenega bankovca.*
 Ana NEG.be.PRS.3SG have.PTCP.SG.F NI.kind.of.GEN.SG banknote.GEN.SG
 ‘Ana had no banknote.’
 $\forall x[\text{banknote}(x) \rightarrow \neg \text{have}(\text{Ana}, x)]$ ¹⁷

(33) *Ana ni imela*
 Ana NEG.be.PRS.3SG have.PTCP.SG.F

(*sploh*) *KAKRŠNEGAKOLI bankovca.*¹⁸
 at.all kind.of.koli.GEN.SG banknote.GEN.SG
 ‘Ana didn’t have ANY kind of banknote at all.’
 $\neg \exists x[\text{banknote}(x) \wedge \text{have}(\text{Ana}, x)]$ ¹⁹

(34) *Ana ni imela kakšnega bankovca.*
 Ana NEG.be.PRS.3SG have.PTCP.SG.F kind.of.GEN.SG banknote.GEN.SG

a. ‘It is not possible Ana had any banknote.’
 $\neg \diamond \exists x[\text{banknote}(x) \wedge \text{have}(\text{Ana}, x)]$

b. ‘It is possible there is a banknote that Ana didn’t have.’
 $\diamond \exists x[\text{banknote}(x) \wedge \neg \text{have}(\text{Ana}, x)]$

As opposed to NCIs, *koli*-pronouns sound emphatic when used in the scope of the clause-mate sentential negator. The speakers use them when reacting to an (explicit or implicit) expectation that the non-negated proposition is true. In (33), the speaker appears to reject the interlocutors’ expectation that there was, in fact, at least some money in the wallet. The *koli*-pronoun is used to emphasize that the unexpected state of affairs holds, signalling that it is the entire spectrum of alternatives, the less prototypical ones included, that is rejected.²⁰

In (33), the *koli*-pronoun does not scope above the negative operator, even though its emphatic character could indicate that it takes wide scope at LF.²¹ We see this when inserting the emphasising particle *sploh*. The particle always emphasises the item it precedes, and since it is an NPI, it cannot attach to items that are not in the scope of a negative (or another DE)

¹⁶ As shown in Ilc (2019), NCIs invariably demand to be placed in focus; *koli*-pronouns, on the other hand, do not seem to impose this. The interaction between sentence stress and the acceptability of *koli*-pronouns will need to be investigated more closely in future research.

¹⁷ The reasons for treating Slovenian NCIs as universal quantifiers are presented in Section 2.1.2.

¹⁸ While we provide an example with an adjectival *koli*-pronoun followed by a nominal phrase, which distributes over kinds, examples with nominal *koli*-pronouns, which distribute over things and individuals, are acceptable in this environment as well.

(i) *Ana s seboj ni prinesla sploh ČESARKOLI.*
 Ana with herself NEG.be.PRS.3SG have.PTCP.SG.F at.all thing.koli.GEN.SG
 ‘Ana didn’t bring with her ANYTHING at all.’

¹⁹ The reasons for treating both series of Slovenian NPIs as existential quantifiers will be presented in Section 3.3.

²⁰ See Błaszczak (2008) for a similar observation about the Polish *kolwiek*-pronouns.

²¹ We thank an anonymous reviewer for this observation.

operator. The bare pronoun in (34) can, on the other hand, also scope above the negator. It requires a modal environment to be used felicitously, as indicated in (34b). As soon as the modal interpretation of the sentence with the bare pronoun is precluded by the context (i.e. the interpretation that the speaker is unable or unwilling to assert the proposition without any reservations), the use of the pronoun becomes infelicitous altogether (35).

- (35) *Pogledal sem v denarnico. Bila je*
 look.PTCP be.PRS.1SG in wallet.ACC.SG.F be.PTCP.SG.F be.PRS.3SG
prazna. V njej ni imela nobenega /
 empty.SG.F in she.LOC.SG NEG.be.PRS.3SG have.PTCP NI.kind.of.GEN.SG/
KAKRŠNEGAKOLI / #kakšnega bankovca.
 kind.of.koli.GEN.SG / kind.of.GEN.SG banknote.GEN.SG
 ‘I looked into her wallet. It was empty. She did not have any/ANY kind of banknote in it.’

In examples such as (36), bare pronouns are always interpreted as having the narrow scope. By contrast, the double interpretation with the bare pronoun scoping either above or below the negative operator re-emerges as soon as the modifier is omitted.²² *Koli*-pronouns do not seem dependent on the presence of the modifier, compare (36) and (37).

- (36) *Nikoli nisem videl česa / česarkoli*
 NI.time NEG.be.PRS.1SG see.PTCP thing.GEN/ thing.koli.GEN
tako neumnega.
 so stupid.GEN
 ‘Never have I seen anything so stupid.’
 a. Available: ‘For all times that we take, it was not the case that I saw anything so stupid.’
 b. Unavailable: ‘It is possible that there is something so stupid that I have never seen.’
- (37) *Nikoli nisem videl česa / česarkoli.*
 NI.time NEG.be.PRS.1SG see.PTCP thing.GEN / thing.koli.GEN
 a. Available for both pronouns: ‘For all times that we take, it was not the case that I saw anything.’
 b. Available for the bare pronoun only: ‘It is possible that there is something that I have never seen.’

We believe that it is the presence of the modifier that enables the narrow-scope interpretation of the bare pronoun. De Swart (1998) notes that a modifier in a phrase such as *tako neumnega* ‘so stupid’ in (36) above creates a comparison set which is evaluated against its alternatives. This brings about the positive implicature that the proposition is in fact true of a set of things or individuals, but not of the set outlined by the modified phrase. In the example above, the implicature is that the speaker has actually heard things, but of all the things that they heard,

²² In fact, the native speakers of Slovenian that we have consulted prefer the wide-scope interpretation of the unmodified bare pronoun in examples such as (37).

none was as ridiculous as the one they are discussing. While *koli*-pronouns do not seem dependent on the presence of the positive implicature, bare pronouns do.

The licensing differences between bare and *koli*-pronouns with respect to the clause-mate negator also transpire in the so-called modal existential *wh*-constructions (Grosu 2004; Šimik 2008), which in Slovenian consist of the verb *imeti* ‘to have’ and an infinitival complement, and which typically express possibility or availability.²³ While both bare and *koli*-pronouns can in principle be found in this kind of modal construction, only the former can be used in unembedded affirmative existential *wh*-constructions (38a), as confirmed by the data from the corpus *Gigafida 2.0*.²⁴ This further shows that it is not the modal operator introduced by the *wh*-construction that licenses the *koli*-pronoun in the scope of the clause-mate negator in example (38c), but rather the clause-mate negator itself. The situation is different with bare pronouns, which seem to be licensed by the modal operator present in the *wh*-construction.

- (38) a. *Imam kaj / *KARKOLI delati.*
 have.PRS.1SG thing.ACC / thing.koli.ACC work.INF
 Intended: ‘I have something to do.’
- b. *Vesel sem, če imam*
 happy.S be.PRS.1SG if have.PRS.1SG
 G
- kaj / KARKOLI delati.*
 thing.ACC / thing.koli.ACC work.INF
 ‘I am happy if I have something/anything to do.’
- c. *Nimam kaj / KARKOLI delati.*
 NEG.have.PRS.1SG thing.ACC / thing.koli.ACC work.INF
 Intended: ‘I don’t have anything to do.’

Given the data presented in this section, we can conclude that Slovenian bare pronouns are not licensed by the clausal negator at all. They exhibit the Bagel Problem, as they are acceptable in the scope of the clausal negator only if a modal operator is present in the structure or if they are modified, in which case a positive implicature is created that the proposition does, in fact, hold in some cases. Bare pronouns can also escape the negator’s scope. *Koli*-pronouns, on the other hand, can be licensed by the clause-mate sentential negator; they signal that the proposition does not hold for any kind of referential alternative of the pronoun at all, and are not sensitive to the positive implicatures created by their modifiers. They do exhibit the Bagel Problem in the sense that they cannot be used in the scope of the clausal negator unless the speaker wants to insist on taking all the alternatives into consideration. All things considered, the Slovenian data call for a relativized version of the

²³ As discussed in Šimik (2008), Czech also has polarity-sensitive bare pronouns (i.e. indefinite pronouns derived from interrogative pronouns by conversion) that typically occur in modal existential *wh*-constructions. The distribution of Czech pronouns, however, seems to be more restricted than that of Slovenian bare pronouns.

²⁴ The search query in (i) yields 88 examples of *koli*-pronouns used in modal existential *wh*-constructions. In none of these examples are *koli*-pronouns used in affirmative, non-embedded *wh*-constructions, though. The *wh*-constructions are embedded in the scope of DE operators: under the negator *ne* ‘NEG’, under the conditional operator *če* ‘if’ or in the restriction of a universal quantifier. The search query in (ii) yields 19,266 examples of bare pronouns used in modal existential *wh*-constructions. The random sample of 500 concordance lines contains 70 examples of bare pronouns not being used in the scope of DE operators, i.e. in affirmative statements.

Bagel Problem, as Slovenian NPIs are not as strictly blocked from the scope of the clause-mate negator as *libo*-pronouns are in Russian.²⁵

3.3 Towards accounting for the Bagel Problem: NCIs vs. NPIs

According to Giannakidou (1998), the distributional inequalities of NCIs and NPIs stem from their semantic differences. In this section, we therefore try to account for the behaviour of Slovenian NCIs and NPIs that we have outlined so far by presenting their syntactic, semantic and pragmatic features.

3.3.1 Characteristics of Slovenian NPIs

Both bare and *koli*-pronouns display the characteristics of existential quantifiers. They (i) cannot form fragment answers (39a), (ii) do not allow modification by *skoraj* ‘almost’ (39b), (iii) allow binding in donkey sentences (39c), and (iv) can be used predicatively (39d).²⁶

- (39) a. A: *Ali koga vidiš?*
 Q person.ACC see.PRS.2SG
 ‘Do you see anyone?’
- B: **Koga / *Kogarkoli.*
 :
 person.ACC / person.koli.ACC
 Intended: ‘Someone.’
- b. **Če skoraj koga / kogarkoli*
 if almost person.ACC / person.koli.ACC
- vidiš, povej.*
 see.PRS.2SG tell.IMP.2SG
 Intended: ‘If you see almost anyone, let me know.’
- c. *Če koga_i / kogarkoli_j vidiš,*
 if person.ACC / person.koli.ACC see.PRS.2SG
- mu_i / j povej, da sem tu.*
 he.DAT.SG tell.IMP.2SG that be.PRS.1SG here
 ‘If you see anyone_i, tell them_j I’m here.’
- d. *Vsak, ki je kakšen / kakršenkoli*
 everyone that.REL be.PRS.3SG kind.of.NOM / kind.of.koli.NOM
- šef, svojo institucijo vodi kot zemljiško gospodarstvo.*

i. [lemma="imeti"][lemma="karkoli"|lemma="kdorkoli"|lemma="kadarkoli"|lemma="kjerkoli"|
 lemma="kamorkoli"|lemma="koderkoli"|lemma="kakorkoli"] [tag="G..n.*"]

ii. [lemma="imeti"][lemma="kaj"|lemma="kdo"|lemma="kdaj"|lemma="kje"|lemma="kam"|lemma="
 kod"|lemma="kako"] [tag="G..n.*"]

²⁵ We thank an anonymous review for the information about Russian *libo*-pronouns.

²⁶ The tests for identifying the quantificational import of pronouns are taken from Giannakidou (1998: 63–69).

boss.NOM his.RFL institution manage.PRS.3SG like feudal property
 ‘Everyone who is any kind of boss manages their institution like a feudal property.’

While bare pronouns invariably keep the properties of existential quantifiers, the quantificational behaviour of *koli*-pronouns seems to vary, mirroring what Kadmon & Landman call “existential/universal flip-flop” (1993: 355) in their discussion of English *any*. *Koli*-pronouns acquire the characteristics of universal quantifiers especially when used with overtly expressed modal operators. In this kind of non-DE modal setting, they typically express unconstrained freedom of selection among all the referential alternatives (i.e. the interpretation $\forall a \wedge \forall b \wedge \forall c$; see the spell-out of this reading in (40a.B)). This makes them Free Choice Items (henceforth FCIs). In the Free Choice (henceforth FC) function, *koli*-pronouns acquire sentence stress (indicated in block capitals).²⁷ They (i) can form fragment answers (40a), (ii) accept modification by *skoraj* ‘almost’ (40b), and (iii) do not allow binding in donkey sentences (40c). When used as predicate nominals, they acquire the indiscriminative meaning, indicating that any identity can be attributed to a given individual (40d).²⁸

- (40) a. A: *Na igrišču so Marija, Janez in Peter.*
 on playground be.PRS.3PL Marija Janez and Peter

 Katerega od njih lahko vidiš?
 which.one.ACC from they.GEN.PL easily see.PRS.2SG
 ‘Marija, Janez and Peter are in the playground. Which one of them can you see?’

 B: *KATEREGAKOLI od njih.*
 kind.of.koli.ACC from they.GEN.PL
 ‘ANYONE of them.’ → FC reading: ‘I can see Marija **and** I can see Janez **and** I can see Peter.’
- b. *Vidiš lahko skoraj KATEREGAKOLI od njih.*
 see.PRS.2SG easily almost kind.of.koli.ACC from they.GEN.PL
 ‘You can see almost ANYONE of them.’
- c. **Če lahko vidiš KATEREGAKOLI_i od njih,*
 if easily see.PRS.2SG kind.of.koli.ACC from they.GEN.PL

 mu_i povej, da sem tu.
 he.DAT.SG tell.IMP.2SG that be.PRS.2SG here
 Intended: ‘If you can see ANYONE_i of them, tell them_i I’m here.’
- d. *Lahko je KDORKOLI.*
 easily be.PRS.3SG person.koli.NOM
 ‘It may be ANYONE.’

²⁷ The sentence stress typically correlates with FC, as noted in numerous works on this topic (see Hapelmath 1997 and Horn 2000, among others). As far as we know, no explanation has been given of this correlation.

²⁸ See Horn (2000) and Duffley & Larrivé (2012) for a discussion of the indiscriminative *just any* in English.

In non-modalized DE contexts, which constitute typical environments of NPIs (but not FCIs) and where we would expect NPI pronouns to behave like existential quantifiers, Slovenian *koli*-pronouns are compatible with *almost*-like modifiers (41a) and can form fragment answers (41b).²⁹

- (41) a. *Janez ni bil sposoben narediti*
 Janez NEG.be.PRS.3SG be.PTCP capable do.INF
skoraj ČESARKOLI.
 almost thing.koli.GEN
 ‘Janez was not capable to do almost ANYTHING.’
- b. A: *Nima prav.*
 NEG.have.PRS.3SG right
 ‘He/she isn’t right.’
- B: *O čem?*
 about what.LOC
 ‘About what?’
- A: *O ČEMERKOLI.*
 about thing.koli.LOC
 Intended: ‘About ANYTHING.’

Quantificational characteristics of Slovenian *koli*-pronouns seem to be dependent on the presence of sentence stress, which has been proposed as an overt marker of scalarity for English *any* (Krifka 1995; Duffley & Larrivéé 2010) and Greek NPIs (Giannakidou & Yoon 2016). Since scalarity has been claimed to be dependent on total variation, we will first see whether Slovenian NPI pronouns require total variation of alternatives or not.³⁰ An NPI requiring total variation demands that every alternative value in its domain be taken into consideration (42).³¹ An NPI requiring partial variation, i.e. a referentially vague NPI in terms of Giannakidou & Quer (2013), only imposes the availability of at least two alternative values in the domain of the pronoun (43).

- (42) $\forall d \in D_{\text{NPI}}. \exists w. P(d)(w)$ and P is only true for d in w , and for no other d' in w
 (after Giannakidou & Quer 2013: 129)

²⁹ In the sentences that follow, the *koli*-pronouns must carry sentence stress (indicated in block capitals), even though they are not used in the FC function.

³⁰ “Total variation” (Chierchia 2013) has also been known in the literature as “exhaustivity” (Giannakidou & Quer 2013; Giannakidou & Yoon 2016; Giannakidou 2018), “arbitrariness” (Duffley & Larrivéé 2010) and “indiscriminacy” (Horn 2000).

³¹ Total variation is not the same as universal quantification proper. If it were, FCIs would be freely interchangeable with universal pronouns without any change of meaning, contrary to fact. In (i) below, we cannot replace the FCI *karkoli* ‘anything’ with *vse* ‘everything’, without significantly changing the description of the task to be done (performing one freely chosen task, as opposed to performing all the tasks at hand).

- (i) *Naredi KARKOLI. ≠ Naredi vse.*
 do.IMP.2SG thing.koli.ACC.SG do.IMP.2SG everything
 ‘Do ANYTHING. ≠ Do everything.’

- (43) A sentence containing a referentially vague indefinite α will have a truth value iff:
 $\exists w_1, w_2 \in W: \llbracket \alpha \rrbracket^{w_1} \neq \llbracket \alpha \rrbracket^{w_2}$; where α is the referentially vague variable.
 (Giannakidou & Quer 2013: 142)

Giannakidou & Yoon (2016) show that Greek has a special series of indefinite pronouns called non-emphatic NPIs that are referentially vague. English *any*, on the other hand, proves to require total variation. A total variation item (i) is sensitive to modification by relative clauses in episodic contexts, (ii) allows for supplementary uses, where the pronoun widens the domain of interpretation introduced by the preceding phrase, and (iii) is degraded in the scope of universal modals (Giannakidou & Yoon 2016: 541–543). The Greek examples with the referentially vague pronouns *kanenas* and *kamia* in (44) show that these pronouns are incompatible with the contexts listed above, contrary to the English examples with *any* in (45).

- (44) a. **O Janis aghorase kanena vivlio pu vrike*
 the John bought.3SG kanena book REL.that found.3SG
stin aghora.
 in.the market
 Intended: ‘John bought any book that he found on the market.’
 (Greek, Giannakidou & Yoon 2016: 540 (57))
- b. #*Pare mia karta, kamia karta!*
 take.IMP.2SG one card kamia card
 Intended: ‘Pick a card, any card.’
 (Greek, Giannakidou & Yoon 2016: 541 (66))
- c. *I Ariadne prepri na pandrefti kanena dikigoro.*
 the Ariadne must marry.3SG kanena lawyer
 ‘Ariadne must marry some lawyer (or another). (to get out of financial trouble)’
 (Greek, Giannakidou & Yoon 2016: 542 (70a))
- (45) a. *John bought any book *(that he found).*
 (Giannakidou & Yoon 2016: 540 (56))
- b. *Pick a card, any card.*
 (Giannakidou & Yoon 2016: 541 (65))
- c. #*Ariadne must marry ANY doctor.*
 (Giannakidou & Yoon 2016: 541 (71a))

The examples in (46) suggest that *koli*-pronouns (but not bare pronouns) require total variation. They become acceptable in veridical contexts when subtriggered (46a), and allow for supplementary uses (46b). They can be used in the scope of universal modal verbs (46c), but not all speakers of Slovenian seem to accept them in this kind of context.³² Bare pronouns, on the other hand, are referentially vague: they are not felicitously used in contexts (46a)–(46b),

³² In the random sample from the corpus *Gigafida 2.0* that we consulted, there are examples of *koli*-pronouns co-occurring with universal modals. In the majority of them, *koli*-pronouns are not used in the scope of the universal modal, but rather scope over it. This indicates that the use of *koli*-pronouns in the scope of universal modals (even though not impossible) is not very common.

while being compatible with universal modal verbs (46c). Bare pronouns are also appropriate in the hide-and-seek scenario in (47), proposed by Alonso-Ovalle & Menéndez-Benito as a test for referentially vague expressions (2010: 6). Note that the use of the *koli*-pronoun in (47) is infelicitous.

- (46) a. Context: I have seen the contents of his shopping bag.
Kupil je #katero / KATEROKOLI
 buy.PTCP be.PRS.3SG kind.of.ACC.SG / kind.of.koli.ACC.SG
*knjigo, ki jo je našel.*³³
 book.ACC.SG that.REL she.ACC.SG be.PRS.3SG find.PTCP
 Intended: ‘He bought ANY book that he found.’
- b. *Vzemi karto, #katero /*
 take.IMP.2SG card.ACC kind.of.ACC.SG /
KATEROKOLI karto.
 kind.of.koli.ACC.SG card.ACC.SG
 Intended: ‘Pick a card, ANY card.’
- c. *Mora se poročiti s kakšnim /*
 must RFL marry.INF with kind.of.INS.SG /
#KAKRŠNIMKOLI³⁴ zdravnikom.
 kind.of.koli.INS.SG doctor.INS.SG
 Intended: ‘He/she must marry some doctor or another.’

- (47) Context: Marija, Janez, and Peter are playing hide-and-seek. Peter is hiding. Marija and Janez know that Peter is in the house; they also know that he is neither in the bathroom nor in the kitchen. Therefore, Marija can say:

Peter je v kateri /
 Peter be.PRS.3SG in kind.of.LOC.SG /
#KATERIKOLI od sob.
 kind.of.koli.LOC.SG from room.GEN.PL
 Intended: ‘Peter may be in any of the rooms.’

³³ An anonymous reviewer suggests the following rephrase of (46a):

- (i) *Kupil je, katerokoli knjigo je našel.*
 buy.PTCP be.PRS.3SG kind.of.koli.ACC.SG book.ACC.SG be.PRS.3SG find.PTCP
 ‘He bought whichever book he found.’

It is important to note, however, that in example (i) the *koli*-pronoun is used to introduce the so-called free relative. As such, sentence (i) does not exemplify a subtriggered FCI. It is beyond the scope of the present chapter to determine the relation between *koli*-pronouns used as introductory items in free relatives and *koli*-pronouns used as FCIs. For further information about the characteristics of free relatives, see Šimik (2016), who discusses Czech FCIs that behave similarly to Slovenian *koli*-pronouns.

³⁴ The sentence with the *koli*-pronoun is not so much a command as it is a permission for the woman to choose any doctor at all (the speaker suggests that any imaginable doctor is a viable candidate for the husband of the person in question).

The above data suggest that Slovenian bare pronouns are similar to the Greek NPIs mentioned above, as they express partial variation.³⁵ *Koli*-pronouns, on the other hand, express total variation, thus bearing similarity to English *any*.³⁶

Giannakidou (2001) and Giannakidou & Yoon (2016) claim that total variation and the FC reading (illustrated in (40a.B)) are one and the same feature of NPIs: “[w]e postulate exhaustive variation as a weaker requirement on *any*, i.e. as a conversational implicature instead of presupposition [...], and it is responsible for the FC readings of *any* in nonepisodic contexts. In extensional contexts, e.g. with episodic negation and questions, there are no worlds that can serve as i-alternatives, and the implicature is cancelled” (Giannakidou 2001: 725). While we agree that total variation is a prerequisite for the FC reading, we propose, however, that total variation is a non-cancellable feature of Slovenian *koli*-pronouns, as the latter always seem to embrace a wider set of alternatives than bare pronouns, even in extensional contexts mentioned by Giannakidou (2001).

That the totality of possible referents in a set is always taken into consideration in the case of *koli*-pronouns, but not in the case of bare pronouns, can be seen in (48)–(49). The *koli*-pronoun, despite not triggering the FC reading (note that it is used in a non-modalized DE context), allows the supplementary use in (48). If we reverse the order of the bare and the *koli*-pronoun, the sentence becomes significantly degraded, as the *koli*-pronoun embraces a wider set of alternatives, thereby entailing the alternatives introduced by the following bare pronoun (49).³⁷

- (48) *Priča je povedala, da s sistemom nikoli*
 witness be.PRS.3SG tell.PTCP that with system NI.time
ni bilo kakšnih, KAKRŠNIHKOLI težav.
 NEG.be.PRS.3SG be.PTCP kind.of.GEN kind.of.koli.GEN problems.GEN.PL
 ‘The witness said that the system never posed problems, ANY problems at all.’

- (49) *?*Priča je povedala, da s sistemom nikoli*
 witness be.PRS.3SG tell.PTCP that with system NI.time

³⁵ For an exhaustive analysis of the Greek data, see Giannakidou (1998).

³⁶ For a discussion of the English data, see Giannakidou (2001), and Giannakidou & Yoon (2016).

³⁷ The reader will have noticed that the bare pronoun in example (48) occurs in the scope of the clausal negator, which may seem contradictory to our claim in Section 3.2 that bare pronouns are not licensed by the clause-mate negator. However, we believe that what makes the bare pronoun in the above example acceptable is the presence of the NCI *nikoli* ‘never’. It is worth noting that we analysed a random sample of bare pronouns from *Gigafida 2.0* containing quite a few examples with bare pronouns used in the scope of the clause-mate negator. In the majority of these examples, bare pronouns co-occur with NCIs such as *nikoli* ‘never’ and the complex *even*-like coordinating conjunctions *niti...niti* ‘neither...nor’ as well as *ne...ne* ‘neither...nor’. If we remove these items from the original examples, the sentences become either degraded or the bare pronoun escapes the scope of the clause-mate negator (unless it is modified by a relative clause or an adjective; see Section 3.2), which again indicates that bare pronouns cannot be in the scope of the clause-mate negator without the presence of specific, additional contextual features. This phenomenon is reminiscent of the so-called “parasitic licensing” of NPIs, whereby an NPI that would normally not be acceptable in a given environment becomes legitimized when another (“normally” licensed) NPI is inserted in the clause (see Hoeksema 2007). If we perceive NCIs as a special subset of NPIs, we can thus explain the occurrence of Slovenian bare pronouns in the scope of the clause-mate negator by referring to parasitic licensing by NCIs. A possible reason why a group of Slovenian NCIs seem to parasitically license bare pronouns is their emphatic character. *Nikoli*, *niti...niti* and *ne...ne* all contain *even*-operators, which are responsible for scalar reasoning (see Heim 1984 and subsequent work building on it, e.g. Chierchia 2013). Research has shown that scalar reinforcement may facilitate the licensing of NPIs even in environments that are not DE and would therefore normally not be viable NPI contexts (see Horn 2016).

ni *bil* *KAKRŠNIHKOLI*, *kakšnih* *težav*.
 NEG.be.PRS.3SG be.PTCP kind.of.koli.GEN kind.of.GEN problems.GEN.PL
 Intended: ‘The witness said that the system never posed problems, any problems at all.’

Since the total variation expressed by *koli*-pronouns is not cancelled in extensional DE contexts such as (48), it is impossible that it is a conversational implicature.³⁸

The FC reading of *koli*-pronouns (i.e. the interpretation $\forall a \wedge \forall b \wedge \forall c$), on the other hand, does constitute a conversational implicature, emerging when a modal operator is present in the structure. Chierchia (2013) shows that the FC inference disappears when an item capable of generating it is used in a DE environment. The inference, however, may be induced even in DE environments, as long as there is an appropriate modal operator taking narrow scope with respect to the FC pronoun.³⁹ Thus in (50), we have a *koli*-pronoun in the (DE) restriction of a universal quantifier. Since there is no modal present in this sentence, the *koli*-pronoun does not give rise to the FC reading (i.e. it gives the reading $\forall b \forall c$); using the *koli*-pronoun the speaker nevertheless expresses that they have taken all the possible alternatives into consideration. In (51), where the modal adverb *lahko* ‘easily’ is inserted in the subordinate clause, the *koli*-pronoun generates the FC reading and obtains characteristics of FCIs. This explains why the main clause, suggesting everyone’s omnipotence, is infelicitous in (50), but completely acceptable in (51).

(50) #*Vsakdo*, *ki* *karkoli* *naredi*,
 everyone that.REL thing.koli.ACC do.PRS.3SG

je *vsemogočen*.
 be.PRS.3SG omnipotent

‘Everyone who does anything is omnipotent.’

→ Available (total variation, no FC reading): ‘Everyone who does a **or** b **or** c ...’

→ Unavailable (total variation, and FC reading): ‘Everyone who does a **and** b **and** c ...’

(51) *Vsakdo*, *ki* *lahko* *KARKOLI* *naredi*,
 everyone that.REL easily thing.koli.ACC do.PRS.3SG

je *vsemogočen*.
 be.PRS.3SG omnipotent

‘Everyone who can do ANYTHING is omnipotent.’

→ Unavailable (total variation, no FC reading): ‘Everyone who can do a **or** can do b **or** can do c ...’

→ Available (total variation and FC reading): ‘Everyone who can do a **and** can do b **and** can do c ...’

³⁸ It is quite possible that Polish *kolwiek*-pronouns bear similarity to Slovenian *koli*-pronouns in this respect. Błaszczak (2003, 2008) claims that *kolwiek*-pronouns sound emphatic in the direct scope of the negator (i.e. in a DE context), precisely because they put emphasis on the fact that each and every possible referent is taken into consideration. This may further suggest that total variation, at least in the case of Slovenian and Polish pronouns, should be kept apart from the FC interpretation.

³⁹ See Chierchia (2013) for an analysis of the factors conditioning the FC reading.

We have now seen that *koli*-pronouns require total variation, while bare pronouns do not. This means that only the former, but not the latter, can induce a scalar reading. An expression is scalar if it induces an ordering of the alternative values along a chosen dimension on a pragmatic scale (see Fauconnier 1975 and Israel 2011, among others). There are several features that set scalar and non-scalar NPIs apart. Scalar NPIs (i) have to provide information on the cause of the matrix proposition when used in the restriction of universal quantifiers (Heim 1984: 104–106), and (ii) are felicitous in contexts requiring the scalar evaluation of a state of affairs (Giannakidou & Yoon 2016: 527). The examples in (52) show that bare pronouns cannot receive the scalar interpretation; *koli*-pronouns are scalar only when they are stressed (the stressed pronouns are indicated in block capitals).

- (52) a. *Vsak, ki je KARKOLI naredil,*
 everyone that.REL be.PRS.3SG thing.koli.ACC do.PTCP
 {*bo nagrajen / #sovraži mačke*}.
 be.FUT.3SG reward.PTCP / hate.PRS.3SG cat.ACC.PL
 Intended: ‘Everyone who did ANYTHING at all {will be punished/hates cats}.’
- a’. *Vsak, ki je kaj / karkoli*
 everyone that.REL be.PRS.3SG thing.ACC / thing.koli.ACC
naredil, {bo nagrajen / sovraži mačke}.
 do.PTCP be.FUT.3SG reward.PTCP / hate.PRS.3SG cat.ACC.PL
 ‘Everyone who did anything {will be punished/hates cats}.’
- b. A: *So kdaj naredili vsaj najnujnejše?*
 be.PRS.3PL ever make.PTCP at-least most.important.ACC
 ‘Have they ever done at least the most important things?’
- B: *Nikoli niso naredili ČESARKOLI /*
 NI.time NEG.be.PRS.3PL make.PTCP thing.koli.GEN /
#česarkoli / #česa.
 thing.koli.GEN / thing.GEN
 Intended: ‘They have never done ANYTHING at all.’

The behaviour of Slovenian *koli*-pronouns mirrors that of English *any*, whose scalar interpretation has first been shown to be dependent on emphatic stress by Krifka (1995).⁴⁰ Duffley & Larrivé (2010) propose that the scalar interpretation of *any* emerges as an inference stemming from (i) the interaction of the underlying total variation,⁴¹ which is a latent semantic component of *any*, and (ii) stress, which is a sign of emphasis. By putting emphasis on an item expressing the irrelevance of identity, the speaker places the focus of attention on the marginal alternatives, which are otherwise less likely to be considered as viable options. Crucially, Duffley & Larrivé (2010) show that scalarity is not a necessary

⁴⁰ See also Haspelmath (1997) for an observation on the difference between stressed and unstressed *any*.

⁴¹ Instead of the term “total variation”, Duffley & Larrivé (2010) use the term “arbitrariness”.

component of pronouns expressing total variation. Rather, total variation is a necessary, not a sufficient, condition for the scalarity of *any* to come about.

Let us now return to the question of the quantificational import of *koli*-pronouns discussed above. We propose that the unstable quantificational properties, evidenced by the varying compatibility of *koli*-pronouns with the tests in (39)–(41) above, are due to the total variation expressed by these pronouns. When the total variation is emphasized, i.e. when *koli*-pronouns are stressed, they display characteristics of universal pronouns. Taking into account Horn’s (2000) and Giannakidou’s (2001) observation that the identification tests proposed for universal quantifiers may be applicable not only to universal quantifiers proper, but also to expressions highlighting a plurality and/or an upper bound, we believe that *koli*-pronouns are existential quantifiers producing a “mirage” effect of universality. This effect is generated when emphasis is placed on the total variation (i.e. plurality), which results in foregrounding an upper bound (i.e. the less prototypical/likely referential alternatives).

The stress-induced scalarity of Slovenian *koli*-pronouns is also the reason why these pronouns sound emphatic in the scope of the clause-mate negator. When the speakers want to sound neutral, they use NCIs in negative propositions. On the other hand, when they want to highlight the fact that the proposition is not true for any referent whatsoever, they use stressed *koli*-pronouns, which express total variation and trigger scalar reasoning by foregrounding the upper bound. In the following section, we show how the characteristics of Slovenian NCI and NPI pronouns presented so far are reflected in the syntactic derivation and semantic composition of the sentences in which these pronouns appear.

3.3.2 Syntactic and semantic analysis of Slovenian NCI and NPI pronouns

Taking stock, we have seen that Slovenian *ni*-, bare and *koli*-pronouns are incompatible with veridical (53), but compatible with non-veridical environments (54). In Standard Slovenian, *ni*-pronouns are only grammatical when used with the clause-mate negator (54c). While bare pronouns cannot be licensed by the clause-mate negator, *koli*-pronouns can, but they sound emphatic and need appropriate context to legitimize their use (see Section 3.2).

- (53) *Janez je včeraj *nikogar /*
 Janez be.PRS.3SG yesterday NI.person.GEN/ACC /
 *koga / *kogarkoli srečal.
 person.GEN/ACC / person.koli.GEN/ACC meet.PTCP
 Intended: ‘Yesterday, Janez met nobody/someone.’

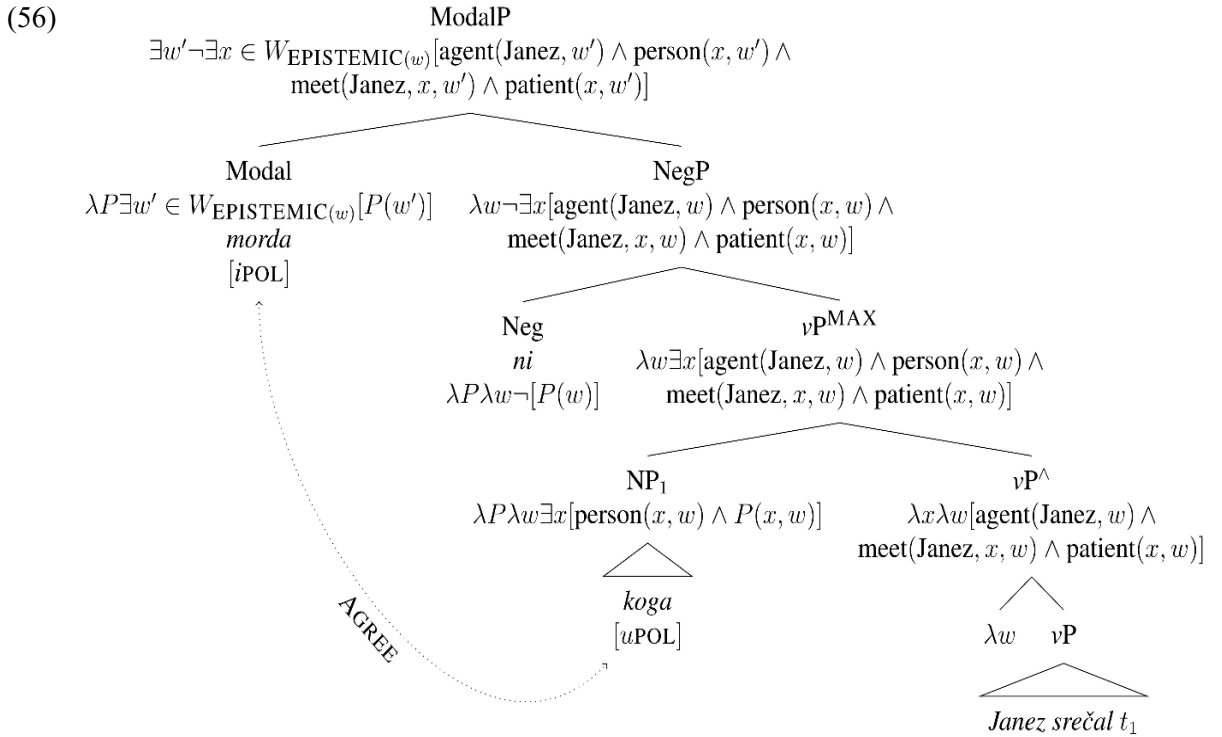
- (54) a. *Janez *(morda) ni koga srečal.*
 Janez possibly NEG.be.PRS.3SG person.ACC meet.PTCP
 ‘It is possible that there is someone that Janez did not meet.’
- b. *Janez ni (sploh) KOGARKOLI srečal.*
 Janez NEG.be.PRS.3SG (at.all) person.koli.GEN/ACC meet.PTCP
 C
 ‘Janez didn’t meet ANYONE at all.’
- c. *Janez ni srečal nikogar.*
 Janez NEG.be.PRS.3SG meet.PTCP NI.person.GEN/ACC
 ‘Janez met nobody.’

To account for the distribution of bare pronouns, we propose that they should be analysed as indefinite phrases with an uninterpretable polarity feature in syntax and a dependent world variable in semantics, following Giannakidou & Quer’s (2013) proposal. The denotation of the bare pronoun *kdo* is given in (54). Following Heim (1990), we assume that an indefinite NP introduces an existential quantifier that closes off the open individual variable in the semantic representation (the so-called E-type analysis of indefinites).⁴²

$$(55) \quad \llbracket kdo \rrbracket = \lambda P \lambda w \exists x [\text{person}(x, w) \wedge P(x, w)]$$

According to Giannakidou & Quer (2013: 132), the λ -bound world variable, which is not present in non-NPI indefinite pronouns such as Slovenian *nekdo* or English *someone*, is dependent, i.e. it must be semantically bound by a quantifier introduced elsewhere in the structure. In a felicitous sentence such as (54a), the quantifier gets introduced by the modal *morda* ‘possibly’, whereas no such quantifier over worlds is present in episodic sentences such as (53), hence the NPI’s infelicitous use. This explains the Bagel Problem exhibited by bare pronouns (see Section 3.2).

Under such an analysis of the bare pronoun *kdo*, sentence (54a) has the syntactic-semantic representation in (56).



The NPI *kdo* (which is inflected for the GoN, i.e. *koga*) originates as the vP internal complement of the predicate *srečati* ‘to meet’. Next, it undergoes quantifier raising and adjoins to vP[∧], which is the intensionally interpreted variant of vP (the trace left in the complement position gets interpreted as the *x* variable via predicate abstraction, which for space and relevance reasons we do not show in the tree). In this position, the bare pronoun takes the denotation of vP[∧] as its semantic argument and maps it onto a scope (i.e. the denotation of vP^{MAX}), where the hitherto open individual *x* variable is closed off by the

⁴² See Section 3.3.1 for discussion as to why bare pronouns are existential quantifiers.

existential quantifier that the pronoun introduces. Subsequently, the negator is merged. This introduces semantic negation to the logic form of the structure. However, at the level of the NegP, there is still an open world variable that needs to be saturated, which is why the negator is not a semantic licenser of the bare pronoun. Finally, the modal *morda* is merged. The modal semantically closes off the remaining open world variable with an existential quantifier and (by grossly simplifying the contribution of semantic components like the modal base, accessibility relation, and ordering source) adds the domain condition that the existentially quantified world w' is accessible from the (actual) world w on the basis of the epistemic modal base. The truth conditions of the entire sentence thus correspond to the paraphrase ‘It is possible (given what the speaker knows in the actual world) that Janez did not meet anyone’.

It has been observed in the literature (Chierchia 2013; Giannakidou & Quer 2013; Giannakidou 2018) that episodic sentences with NPIs similar to Slovenian bare pronouns are not merely semantically infelicitous, but syntactically ill-formed. This means that an episodic sentence feels considerably more degraded than a sentence in which a bare pronoun is used in an odd context, e.g. if the identity of the referent is known by the speaker. This holds for Slovenian bare pronouns as well (see the discussion on the anti-specificity of such pronouns, and compare examples (23) and (25) above). To account for this distinction, researchers (Chierchia 2013, and Giannakidou & Quer 2013) have proposed that referentially vague pronouns such as Slovenian bare pronouns are syntactically equipped with an uninterpretable polarity feature [μ POL]. To ensure a well-formed sentence, this feature needs to enter into a syntactic Agree relation with a higher c-commanding constituent, which in our case is the modal *morda*, bearing the interpretable version of the feature.⁴³ In other words, the lack of a constituent that licences the NPI semantically by quantifying over the world variable also incurs a syntactic violation because the uninterpretable feature remains unchecked by Agree (Giannakidou & Quer 2013: 128).

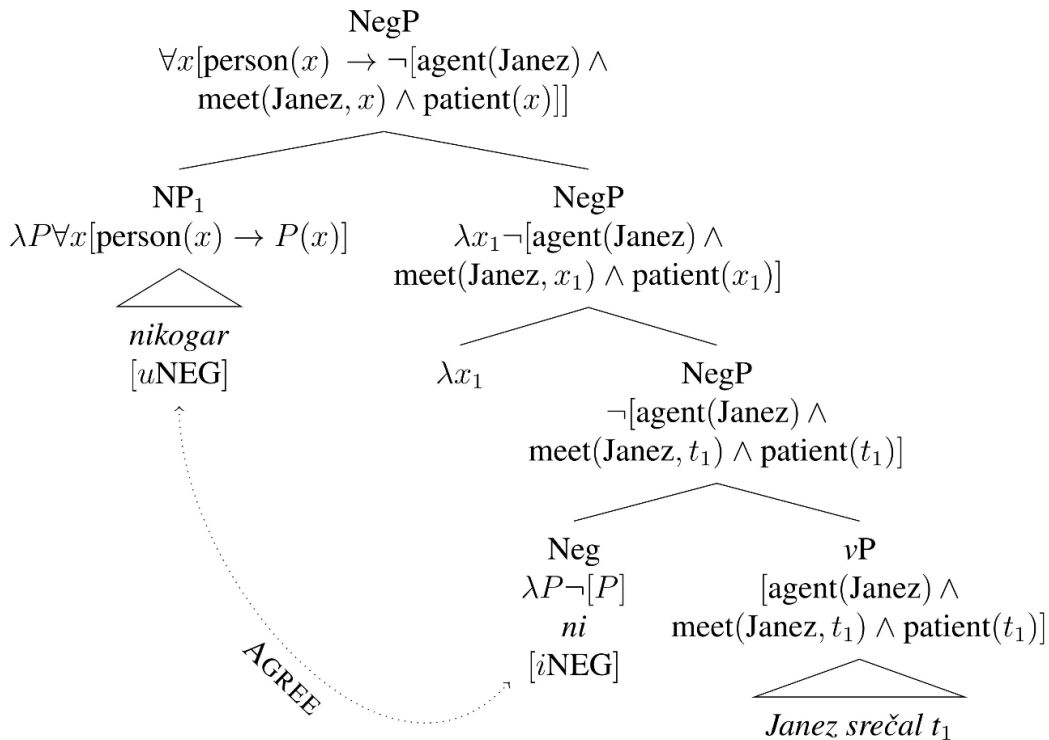
The data in (53)–(54) show that the *koli*-pronoun, like the bare pronoun, also needs to occur in the scope of a non-veridical licenser. Unlike the bare variant, the *koli*-pronoun can be licensed by the clause-mate negator and is capable of generating the FC reading in modal contexts. In this respect, its distribution is comparable to that of English *any*. Explaining the distribution of *any*, Giannakidou & Quer (2013: 132) propose that, unlike bare pronouns, “*any* does *not* contain a dependent world variable”, which is why this pronoun is grammatical in negated episodic sentences. The authors suggest that *any* contains a dependent individual variable that needs to be licensed by a DE operator: “the x variable [in *any*] [...] cannot be bound by a default existential, unless there is another non-veridical operator above the existential” (Giannakidou & Quer 2013: 132). We propose that the same holds for Slovenian *koli*-pronouns – they enter into a dependency relation with a c-commanding operator in the same way *koga* enters into such a relation with *morda* in (56). We do note, however, that such an account seemingly needs to stipulate the existence of several different types of polarity features (i.e. a type of polarity feature that is satisfied by any non-veridical licenser, and types of polarity features that are satisfied by different subsets of non-veridical licensers).

Thus, a *koli*-pronoun has the semantics of an existential quantifier with a person feature, given in (57).

$$(57) \quad \llbracket \text{kdorkoli} \rrbracket = \lambda P \exists x [\text{person}(x) \wedge P(x)]$$

⁴³The polarity feature is stipulated and is only an abstraction over whichever part of the feature bundle that constitutes the modal and semantically relates to non-veridicality is the actual matching feature that checks the corresponding uninterpretable feature on the pronoun.

(60)



In (60), the syntactic object *nikogar* undergoes quantifier raising and adjoins to the structure above the Neg head,⁴⁴ where it takes the NegP projection (which is a predicate abstract of the lowest NegP node) as its semantic argument and binds the open x variable with the universal quantifier that it introduces. Negation is thereby interpreted below the quantifier, scoping only over the embedded proposition. This corresponds to the paraphrase ‘For every person x , it isn’t the case that John met x ’, which is truth conditionally equivalent to the semantics with the existential quantifier and a wide scope negator of (58) with *kdorkoli*.⁴⁵ In addition, the NCI *nikogar*, bearing the uninterpretable Neg feature, enters into the Agree relation with the Neg head, as discussed in Section 2.1.

Ni- and *koli*-pronouns are thus semantically parallel, corresponding to a function that introduces either the existential (*koli*-pronouns) or universal (*ni*-pronouns) quantifier. The interpretative difference is in the non-asserted meaning, where *koli*-pronouns exhibit total variation. As shown in Section 3.3.1, total variation corresponds to the exhaustification of the domain of individuals. Empirically, this is manifested in the fact that NCIs, which like bare pronouns do not show total variation, tolerate exceptions, while *koli*-pronouns do not (61).

- (61) *Janez včeraj ni videl*
 Janez yesterday NEG.be.PRS.3SG see.PTCP

⁴⁴ Note that the NCI can remain in the sentence-final position, as in example (16a), repeated here in (i), despite obligatorily undergoing quantifier raising, as shown in (60). Following Marušič (2005), we assume that this is because the spell-out of the LF and PF phases is not simultaneous, quantifier raising being the canonical example of an item being pronounced structurally lower than it is interpreted. Of course, the same holds for the quantifier raising of bare and *koli*-pronouns in (56) and (58).

(i) *Peter ne pove nikomur ničesar.*
 Peter not tell.PRS.3SG NI.person.DAT NI.thing.GEN
 ‘Peter never tells anyone anything.’

⁴⁵ The semantic composition of (60) is basically the same as the one discussed for Greek NCIs in Giannakidou (2006: 345).

nikogar / #KOGARKOLI *razen* *Kristine*.
 NI.person.GEN / person.koli.GEN except *Kristina*.GEN
 ‘Yesterday, Janez did not see anyone except Kristina.’

As total variation displayed by *koli*-pronouns is retained in extensional DE environments such as the scope of a negator in an episodic sentence (see Section 3.3.1), we assume that it is encoded as a presupposition rather than a conversational implicature⁴⁶ in the lexical entry of the NPI. Taking both the asserted and non-asserted meaning components into account, the NPI *kdorkoli* has the revised lexical semantics in (62).

$$(62) \quad \llbracket kdorkoli \rrbracket = \lambda P \exists x [\text{person}(x) \wedge P(x)]: \forall x \in D_{\text{NPI}}. \exists w. P(x)(w) \text{ and } P \text{ is only true for } x \text{ in } w, \text{ and for no other } x' \text{ in } w$$

The part after the colon corresponds to the non-asserted meaning, i.e. the presupposition of total variation given in (42) and formalized by Giannakidou & Yoon (2013: 129). The chief interpretative difference between the NPI *kdorkoli* and the NCI *nihče* is that the latter is a total function without special domain conditions, while the former is a partial function requiring that for every individual *x* in the domain of quantification, there must be a possible world *w* satisfying the asserted property (i.e. all domain alternatives must be taken into account). This explains the intolerance of exceptions in (61).

4 Slovenian NCIs and NPIs on the implicational map (Haspelmath 1997)

It is important to note that the distributional characteristics of Slovenian NCI and NPI pronouns have already been outlined within Haspelmath’s (1997) cross-linguistic functional typology of indefinite pronouns. Based on a relatively large sample of world languages, Haspelmath (1997: 64) distinguishes nine different functions (uses) of indefinite pronouns: specific known, specific unknown, irrealis non-specific, question, conditional, indirect negation, direct negation, comparative and free choice. An indefinite pronoun is considered to assume a function if its use is grammatical and if it yields the expected meaning in a given context. What is more, the pronoun may only perform functions that are contiguous on the implicational map.

An attempt at a schematic presentation of the distributional pattern of Slovenian indefinite pronouns has already been made in Willis (2013), see Fig. 2 below.

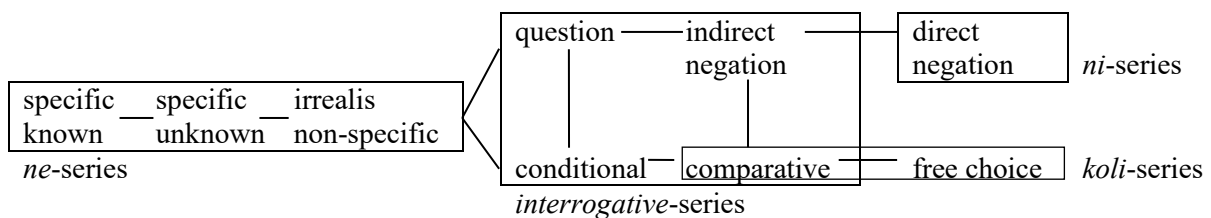


Figure 2. The implicational map for the functions of Slovenian indefinite pronouns according to Willis (2013: 394)

⁴⁶ Discussing the semantics of English *any*, Giannakidou & Yoon (2016) suggest that the total variation expressed by this pronoun is a conversational implicature.

Since Slovenian bare and *koli*-pronouns have not yet been systematically and extensively studied, we have examined their actual use in Standard Slovenian on the basis of the data from the *Corpus of Written Standard Slovenian Gigafida 2.0*. We have analysed random samples consisting of 700–800 randomly selected concordance lines,⁴⁷ illustrating the use of every existing bare and *koli*-pronoun in Slovenian.

As can be seen on Willis’ map above, both the bare (i.e. the *interrogative*-series) and the *koli*-series are excluded from the category of direct negation. Based on the corpus data, as well as the description of the Bagel Problem (Section 3.2) and the licensing features of Slovenian *koli*-pronouns (Section 3.3), we conclude that the *koli*-series could be included in the category of direct negation, as it allows licensing by the clause-mate negator, provided that the speaker wants to suggest that all the alternatives have indeed been taken into consideration. This is again illustrated in (grammatical) example (63).

- (63) *Ni* *bilo* *nobenega* *pritiska*
 NEG.be.PRS.3SG be.PTCP NI.kind.of.GEN.SG pressure.GEN
- od* *koderkoli*.
 from place.koli
 ‘There was no pressure from anywhere at all.’

In addition to the comparative and the free choice functions, Slovenian *koli*-pronouns are also commonly used in typical NPI contexts, i.e. in antecedents of conditionals (64), questions (65), complements of indirectly negative expressions (66). These environments are equally suitable for bare pronouns (64)–(66).

- (64) *Če koga* / *kogarkoli* *vidiš,* *povej*.
 if person.ACC / person.koli.ACC see.PRS.2SG tell.IMP.2SG
 ‘If you see anyone, let me know.’
- (65) *Si koga* / *kogarkoli* *videl?*
 be.PRS.2SG person.ACC / person.koli.ACC see.PTCP
 ‘Have you seen anyone?’
- (66) *Dvomim,* *da si* *koga* / *kogarkoli* *videl*.
 doubt.PRS.1SG that be.PRS.2SG person.ACC / person.koli.ACC see.PTCP
 ‘I doubt that you have seen anyone.’

A relatively small portion of the corpus data shows that some speakers use *koli*-pronouns to express uncertainty (not the freedom of choice). This means that the irrealis non-specific function is (albeit more rarely) performed by these pronouns:

- (67) *Morda jo* *morilec* *čaka* *skrit*
 maybe she.ACC murderer wait.PRS.3SG hide.PTCP
- nekje* *v omari,* *pod posteljo* *ali kjerkoli*.

⁴⁷ The reason why our random samples slightly differ in size is that Slovenian bare, interrogative, and even certain relative pronouns are all tagged as interrogative pronouns in *Gigafida 2.0*. It was thus necessary for us to manually select the relevant examples in order to focus only on a particular type of pronouns included in such a disparate random sample.

somewhere in closet under bed or somewhere
 ‘Maybe the murderer waits for her hidden somewhere in the closet, under the bed or somewhere.’

Willis (2013) attributes the comparative function to bare and *koli*-pronouns. The data, however, suggest that only *koli*-pronouns yield the following interpretation predicted by Haspelmath (1997): every possible alternative denoted by the indefinite pronoun in the comparative clause has a lower degree of a given property than the entity referred to in the main clause.⁴⁸

(64) *Vidim bolje kot kdorkoli drug.*
 see.PRS.1SG better than person.koli.NOM else.NOM
 ‘I see better than anyone else.’

(65) *Vidim bolje kot kdo drug.*
 see.PRS.1SG better than person.NOM else.NOM
 a. ‘There may be a person such that I see better than that person.’
 b. ‘I can say that I see better than most people.’

Given the distribution of anti-specific indefinite pronouns in Standard Slovenian (i.e. bare and *koli*-pronouns), we propose a correction of the implicational map à la Haspelmath in Fig. 3.

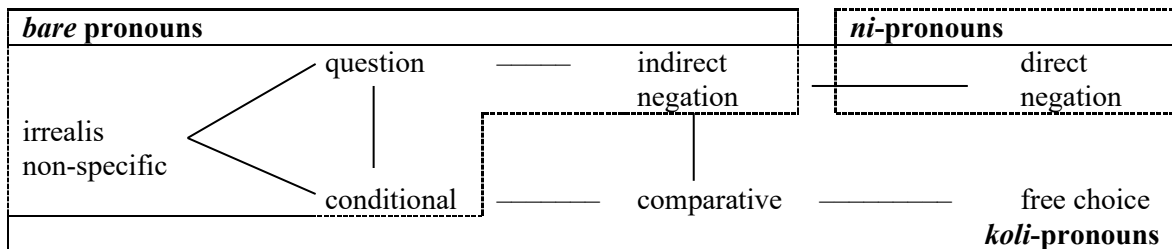


Figure 3. The implicational map for the functions of Slovenian anti-specific indefinite pronouns based on the data from the corpus *Gigafida 2.0*

To sum up, we see that in Standard Slovenian, *koli*-pronouns have a wider range of uses than predicted by Willis (2013). Bare pronouns, on the other hand, do not perform the comparative function, but are completely acceptable (and, in fact, most frequently used) in irrealis non-specific contexts.

5 Conclusion

The aim of this chapter was to discuss Negative Concord phenomena in Slovenian. The first part of the chapter focused on the syntactic and interpretative properties of the negator *ne* and Slovenian morphologically negative pronouns (NCIs). Morpho-syntactically, the negator *ne* turns out to be a clitic which, however, is not part of the Wackernagel clitic cluster, but rather undergoes syntactic merger with the finite constituent of the extended verbal projection to form a complex Neg head. In terms of syntactic-semantic features, the negator bears an interpretable [*i*NEG] feature with which it checks the uninterpretable variant of this feature on

⁴⁸ NCIs are not acceptable in the comparative clauses.

NCIs. According to our data, Slovenian NCIs should be analysed as semantically non-negative indefinite pronouns that lexically correspond to simple universal quantifiers which are additionally constrained due to their [uNEG] feature. It is likely that they undergo scope freezing because of the interaction between the syntax and semantics that is otherwise not typical of regular universally quantifying expressions.

The second part of the chapter focused on the Bagel Problem in Slovenian. Apart from the NCIs, Slovenian has two additional series of pronouns, bare and *koli*-pronouns. These are licensed by a wider set of non-veridical operators, which makes them Negative Polarity Items (NPIs). We showed that bare pronouns differ from *koli*-pronouns in that they are not licensed by the clause-mate negator, even though the latter is the strongest non-veridical operator, expected to license all NPIs. Bare pronouns thus exhibit the Bagel Problem, whereas *koli*-pronouns do so only partly, i.e. they are acceptable in the scope of the clause-mate negator, provided that the context legitimizes their use. The Slovenian data therefore show that the Bagel Problem should be relativized, as non-NCI pronouns are not blocked from the scope of the clause-mate negator as strictly as, for instance, in Russian. Drawing on a previous proposal in the literature on NPIs, we explained the Bagel Problem in Slovenian by suggesting that bare pronouns, unlike *koli*-pronouns and the NCIs, have an ⟨s⟩-type variable in their semantic set-up that needs to be bound by a modal operator merged higher in the structure. We also showed that both types of Slovenian NPIs lexically correspond to existential quantifiers with an obligatorily non-specific reference, while the chief interpretative difference between them is the fact that *koli*-pronouns exhibit total variation, which is lexicalized as a constraint on the pronoun's domain of quantification. Lastly, we proposed a new implicational map showing the interpretative functions of Slovenian NCI and NPI pronouns.

References

- Abels, Klaus. 2005. “Expletive Negation” in Russian: A Conspiracy Theory. *Journal of Slavic Linguistics* 13(1). 5–74.
- Abusch, Dorit. 1993. The scope of indefinites. *Natural Language Semantics* 2. 83–135. <https://doi.org/10.1007/BF01250400>
- Aloni, Maria & Angelika Port. 2006. Epistemic indefinites cross-linguistically. In Elfner, Emily & Martin Walkow (eds.) *NELS 36: Proceedings of the 36th Annual Meeting of the North East Linguistic Society*, 1–14. Amherst: University of Massachusetts.
- Alonso-Ovalle, Luis & Paula Menéndez-Benito. 2010. Modal Indefinites. *Natural Language Semantics* 18. 1–31.
- den Besten, Hans. 1986. Double Negation and the Genesis of Afrikaans. In Muysken, Pieter & Norval Smith (eds.) *Substrata versus Universals in Creole Genesis: Papers from the Amsterdam Creole Workshop*, 185–230. Amsterdam/Philadelphia: John Benjamins Publishing Company.
- Blaszczak, Joanna. 2003. Explaining the “Bagel Problem”: The Case of Polish *kolwiek*-NPIs. In Browne, Wayles, Ji-Yung Kim, Barbara H. Partee & Robert Rothstein (eds.) *Formal Approaches to Slavic Linguistics 11: The Amherst Meeting*, 121–140. Ann Arbor, MI: Michigan Slavic Publications.
- Blaszczak, Joanna. 2008. The puzzle of *kolwiek*-pronouns in Polish. In Jacques Jayez & Lucia M. Tovena (eds.) *Free Choice: Facts, Models and Problems. Workshop Proceedings, 20th European Summer School in Logic, Language and Information*, 3–12. Hamburg: ESSLI.
- Bošković, Željko. 1999. On multiple feature checking: Multiple wh-fronting and multiple head movement. In Epstein, Samuel David & Norbert Hornstein (eds.) *Working Minimalism*, 159–187. Cambridge, MA: The MIT Press.
- Brown, Sue & Steven Franks. 1995. Asymmetries in the Scope of Russian Negation. *Journal of Slavic linguistics* 3(2). 239–287.
- Chierchia, Gennaro. 2013. *Logic in Grammar: Polarity, Free Choice, and Intervention*. Oxford: Oxford University Press.
- Chomsky, Noam. 1999. Derivation by Phase. *MIT Occasional Papers in Linguistics* 18. Cambridge, MA: The MIT Press.
- Cinque, Guglielmo. 1999. *Adverbs and Functional Heads. A cross-Linguistic Perspective*. Oxford: Oxford University Press.
- Delfitto, Denis. 2020. Expletive Negation. In Déprez, Viviane & Maria Theresa Espinal (eds.), *The Oxford Handbook of Negation*, 255–268. Oxford: Oxford University Press. <https://doi.org/10.1093/oxfordhb/9780198830528.013.9>.
- Déprez, Viviane. 2000. Parallel (A)Symmetries And The Internal Structure Of Negative Expressions. *Natural Language & Linguistic Theory* 18. 253–342.
- Duffley, Patrick J. & Pierre Larrivée. 2010. Anyone for non-scalarity? *English Language and Linguistics* 14(1). 1–17. <https://doi.org/10.1017/S1360674309990402>.
- Duffley, Patrick J. & Pierre Larrivée. 2012. Collocation, interpretation and explanation: The case of *just any*. *Lingua* 122. 24–40. <https://doi.org/10.1016/j.lingua.2011.10.008>.
- Fauconnier, Gilles. 1975. Polarity and the Scale Principle. In *Proceedings of Chicago Linguistic Society 11*, 188–199. Chicago: Chicago Linguistic Society.
- Giannakidou, Anastasia. 1998. *Polarity Sensitivity as (Non)Veridical Dependency*. Amsterdam: John Benjamins.
- Giannakidou, Anastasia. 2000. Negative...Concord? *Natural Language and Linguistic Theory* 18. 457–523. <https://doi.org/10.1023/A:1006477315705>.

- Giannakidou, Anastasia. 2001. The Meaning of Free Choice. *Linguistics and Philosophy* 24. 659–735. <https://doi.org/10.1023/A:1012758115458>.
- Giannakidou, Anastasia. 2006. N-words and negative concord. In Everaert, Martin & Henk van Riemsdijk (eds.) *The Wiley Blackwell Companion to Syntax*. vol. 3, 327–391. Malden, MA: Blackwell Publishing.
- Giannakidou, Anastasia. 2018. A critical assessment of exhaustivity for Negative Polarity Items: The view from Greek, Korean, Mandarin, and English. *Acta Linguistica Academica* 65(4). 503–545. <https://doi.org/10.1556/2062.2018.65.4.1>.
- Giannakidou, Anastasia. 2020. Negative Concord and the nature of Negative Concord Items. In Déprez, Viviane & Maria Theresa Espinal (eds.) *The Oxford Handbook of Negation*, 458–478. Oxford: Oxford University Press. <https://www.oxfordhandbooks.com/view/10.1093/oxfordhb/9780198830528.001.0001/oxfordhb-9780198830528>.
- Giannakidou, Anastasia & Josep Quer. 2013. Exhaustive and non-exhaustive variation with free choice and referential vagueness: Evidence from Greek, Catalan, and Spanish. *Lingua* 126. 120–149. <https://doi.org/10.1016/j.lingua.2012.12.005>.
- Giannakidou, Anastasia & Suwon Yoon. 2016. Scalar marking without scalar meaning: Nonscalar, nonexhaustive *even*-marked NPIs in Greek and Korean. *Language* 92(3). 522–556. <https://doi.org/10.1353/LAN.2016.0047>.
- Golden, Marija. 2000. *Teorija opisnega jezikoslovja. 1. skladnja*. [Theory of descriptive linguistics. 1. syntax]. Ljubljana: Filozofska fakulteta.
- Grosu, Alexander. 2004. The syntax-semantics of modal existential *wh*-constructions. In Tomić, Olga M. (ed.) *Balkan Syntax and Semantics*, 405–438. Amsterdam: John Benjamins.
- Haegeman, Liliane. 1995. *The syntax of negation*. Cambridge: Cambridge University Press.
- Haspelmath, Martin. 1997. *Indefinite pronouns*. Oxford: Oxford University Press.
- Heim, Irene. 1984. A Note on Negative Polarity and Downward Entailingness, *North East Linguistics Society* 14(1). 98–107. <https://scholarworks.umass.edu/nels/vol14/iss1/8>.
- Heim, Irene. 1990. E-Type Pronouns and Donkey Anaphora. *Linguistics and Philosophy* 13. 137–177. <https://doi.org/10.1007/BF00630732>.
- Hiraiwa, Ken. 2001. Multiple Agree and the Defective intervention Constraint in Japanese. In Matushansky, Ora, Adam Szczegielniak, Albert Costa, Javier Martin-Gonzalez & Lance Nathan (eds.) *Proceedings of the 1st HUMIT Student Conference in Language Research (HUMIT2000)*. MIT Working Papers in Linguistics 40. 67–80. Cambridge, MA: The MIT Press.
- Hoeksema, Jack. 2007. Parasitic licensing of negative polarity items. *The Journal of Comparative Germanic Linguistics* 10(3). 163–182. <https://doi.org/10.1007/s10828-007-9012-y>.
- Horn, Laurence R. 2000. Any and (-)ever: Free choice and free relatives. In Wyner, Adam Z. (ed.) *The Proceeding of the Fifteenth Annual Conference*, 71–111. Haifa: The Israel Association for Theoretical Linguistics.
- Horn, Laurence R. 2010. Multiple negation in English and other languages. In Horn, Laurence R. (ed.) *The Expression of Negation*, 111–48. Berlin and New York: Mouton de Gruyter.
- Horn, Laurence R. 2016. Licensing NPIs: Some Negative (and Positive) Results. In Larrivé, Pierre & Chungmin Lee (eds.) *Negation and Polarity: Experimental Perspectives. Language, Cognition, and Mind, volume 1*, 281–305. Cham: Springer. https://doi.org/10.1007/978-3-319-17464-8_12.
- Ilc, Gašper & Milena Milojević-Sheppard. 2003. Verb movement in Slovenian: A comparative perspective. *STUF – Language Typology and Universals* 56(3). 266–286.

- Ilc, Gašper & Milena Milojević-Sheppard. 2005. Negative pronouns in Slovene: a minimalist account. *Linguistica*. 45(1). 107–120.
- Ilc, Gašper & Milena Milojević-Sheppard. 2007. Slovene Negative Pronouns as N-words. In Kosta, Peter & Lilia Schürcks (eds.) *Linguistics Investigations into Formal Description of Slavic Languages*, 205–215. Frankfurt am Main: Peter Lang.
- Ilc, Gašper. 2019. *Aspects of Negation in English and Slovenian*. Ljubljana: Znanstvena založba Filozofske fakultete.
- Israel, Michael. 2011. *The Grammar of Polarity: Pragmatics, Sensitivity, and the Logic of Scales*. Cambridge: Cambridge University Press.
- Kadmon, Nitrit & Fred Landman. 1993. Any. *Linguistics and Philosophy* 16(4). 353–422.
- Krek, Simon, Tomaž Erjavec, Andraž Repar, Jaka Čibej, Špela Arhar Holdt, Polona Gantar, Iztok Kosem, Marko Robnik-Šikonja, Nikola Ljubešić, Kaja Dobrovoljc, Cyprian Laskowski, Miha Grčar, Peter Holozan, Simon Šuster, Vojko Gorjanc, Marko Stabej & Nataša Logar. 2019. *Corpus of Written Standard Slovene Gigafida 2.0*. Slovenian language resource repository CLARIN.SI. <http://hdl.handle.net/11356/1320>.
- Krek, Simon, Špela Arhar Holdt, Tomaž Erjavec, Jaka Čibej, Andraž Repar, Polona Gantar, Nikola Ljubešić, Iztok Kosem & Kaja Dobrovoljc. 2020. Gigafida 2.0: The Reference Corpus of Written Standard Slovene. In Nicoletta Calzolari et al. (eds.), *Proceedings of the 12th Language Resources and Evaluation Conference*, 3340–3345. European Language Resources Association.
- Krifka, Manfred. 1995. The semantics and pragmatics of polarity items. *Linguistic Analysis* 25. 209–257.
- Ladusaw, William. 1980. *Polarity Sensitivity as Inherent Scope Relations*. *Outstanding Dissertations in Linguistics*. New York: Garland Publications.
- Marušič, Franc. 2005. *On non-simultaneous phases*. PhD dissertation. Stony Brook University.
- Milojević-Sheppard, Milena & Marija Golden. 2000. Imperatives, negation and clitics in Slovene. *Razprave [Razred 2]* 17. 93–109.
- Orešnik, Janez. 1985–86. O naslonskem nizu v knjižni slovenščini. [Clitic cluster in Standard Slovenian]. *Jezik in slovstvo* 31. 213–215.
- Penka, Doris. 2020. Negative Indefinites and Negative Concord. In Gutzmann, Daniel, Cecile Meier, Hotze Rullmann & Thomas E. Zimmerman (eds.) *The Wiley Blackwell Companion to Semantics*, 1–23. New York: Wiley.
- Pereltsvaig, Asya. 2006. Negative Polarity Items in Russian and the Bagel Problem. In Przepiorkowski, Adam & Sue Brown (eds.) *Negation in Slavic*, 153–178. Bloomington: Slavica Publishers.
- Rivero, Maria-Luisa. 1991. Long head movement and negation: Serbo-Croatian vs. Slovak and Czech. *The Linguistic Review* 8. 319–351. <https://doi.org/10.1515/tlir.1991.8.2-4.319>.
- Snoj, Marko. 2016. *Slovenski etimološki slovar*. Online edition. www.fran.si.
- de Swart, Henriëtte. 1998. Licensing of negative polarity items under inverse scope. *Lingua* 105(3–4). 175–200. [https://doi.org/10.1016/S0024-3841\(98\)00021-7](https://doi.org/10.1016/S0024-3841(98)00021-7).
- Šimik, Radek. 2008. On a non-canonical polarity sensitive *wh*-item in Czech. In Jayez, Jacques & Lucia M. Tovenca (eds.) *Free Choice: Facts, Models and Problems. Workshop Proceedings, 20th European Summer School in Logic, Language and Information*, 35–42. Hamburg: ESSLLI.
- Šimik, Radek. 2016. On the semantics of Czech free relatives. *Linguistica Brunensia* 64(1). 109–129.
- Toporišič, Jože. 2000. *Slovenska Slovnica*. [Slovenian grammar]. Maribor: Obzorja.

- Tsedryk, Egor. 2023. Negative Concord in East Slavic: Looking into the core of the Bagel Problem. In Dalmi, Gréte, Jacek Witkoś & Piotr Ceglowski (eds.) *Strict Negative Concord in Slavic and Finno-Ugric. Licensing, Structure and Interpretation*, 000–000. Boston/Berlin: Walter de Gruyter Inc.
- Willis, David. 2013. Negation in the History of the Slavonic Languages. In Willis, David, Christopher Lucas & Anne Breitbarth (eds.) *The History of Negation in the Languages of Europe and the Mediterranean. Volume I: Case Studies*, 341–398. Oxford: Oxford University Press.
- Yoon, Suwon. 2011. *'Not' in the Mood: the Syntax, Semantics and Pragmatics of Evaluative Negation*. Chicago: The University of Chicago Dissertation.
- Zanuttini, Raffaella. 1997. *Negation and Clausal Structure. A comparative Study of Romance Languages*. New York/Oxford: Oxford University Press.
- Zeijlstra, Hedde. 2004. *Sentential Negation and Negative Concord*. Utrecht: LOT Publications.
- Zeijlstra, Hedde. 2012. There is only one way to agree. *The Linguistic Review* 29(3). 491–539. <https://doi.org/10.1515/tlr-2012-0017>.
- Zwarts, Frans. 1998. Three Types of Polarity. In Hamm, Fritz & Erhard Hinrichs (eds.) *Plurality and quantification*, 177–238. Dordrecht: Kluwer.