A typology of negative indefinites

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1.1 Introduction

Negative indefinites (NIs) are indefinite terms specialized for expressing nonexistence, e.g. English *nothing, anything*, Hindi *kuch bhii*, Japanese *nanimo*, Russian *ničego*, *čego-libo*, Spanish *nada*. In this paper, I argue for a two-type crosslinguistic typology of NIs: most NIs across languages have the semantics of scalar indefinites, though a few are negative quantifiers.

Let us first restrict this study by defining NIs as follows.

(1) a. *negative indefinite* (NI): a determiner, nominal, or adverbial indefinite term that is used in expressions of nonexistence.
b. *expression of nonexistence*: a proposition that there are no entities of type *Q* fitting description *P*, schematizeable as ¬∃x.[Q(x)&P(x)].

Take for example the following parallel sentences from English, Spanish, and Russian, with paraphrase. I will return to these languages throughout the paper. NIs are bolded, and NI licensors are in small caps and bolded.

(2) a. George does**N'T** know **anything**. (English)
b. Jorge **NO** sabe **nada**. (Spanish)
c. Georgij **NE** znajet **ničego**. (Russian)

(3) ¬∃x.[*thing*(x) & *George-knows*(x)]
'There is no *x* such that *x* is a thing and George knows *x*.'

Languages typically have one or more NI series, such as those from English, Spanish, and Russian below. Each is named for its determiner member. (Spanish *cualquier* and Russian *ljuboj* are not NIs, but will concern the typology.)

(4) a. English NI series
no series: *no, nothing, no one* / *nobody, nowhere, never*
any series: *any, anything, anyone* / *anybody, anywhere, ever*
b. Spanish NI series
ningún series: *ningún, nada, nadie, en ninguna parte, nunca*
(***cualquier*** series: *cualquier, cualquier cosa*, etc.)
c. Russian NI series
nikakoj series: *nikakoj, ničto, nikto, nigde, nikogda*
kakoj-libo series: *kakoj-libo, čto-libo, kto-libo, gde-libo,* etc.
(***ljuboj*** series: *ljuboj, čto ugodno, kto ugodno, gde-ugodno*, etc.)

1.2 Proposal

Generally speaking, I see two main views in the literature on NIs as to how many types of NIs there are, and how these types are distinguished. I will call these the *strong NQ view* and the *weak view*. The strong NQ view holds that all NIs are *negative quantifiers* (Zanuttini 1991, Haegeman 1995, Brown 1999). The weak view sees many types of NIs, distinguished by their functions (Kahrel 1996, Haspelmath 1997). While the weak view seems to miss important generalizations, the strong view overlooks a significant split in the class of NIs.

I propose a *strong scalar view*, holding that most NIs across languages are *scalar indefinites* (SIs), though a few must be considered negative quantifiers (NQs). Under this view, I classify the NI series seen so far as in (5).

(5)

a.	**scalar indefinites**	English *any* Spanish *ningún, cualquier* Russian *nikakoj, kakoj-libo, ljuboj*
b.	**negative quantifiers**	English *no*

I will show that the strong scalar view has several advantages. First, it predicts the range of NI systems attested across languages. Second, it derives most NI properties just from their inherent semantics, particularly the morphology and variation attested in scalar indefinites. Third, it embeds scalar indefinites within the more general class of *polarity items*, relying on semantics independently needed to explain the behavior of polarity items across languages.

1.3 Plan

The plan of the paper is as follows. I discuss NQs in Section 2 and SIs in Section 3. I show how these types are distinguished by their surface properties, and argue for semantics that predict the surface properties of these types.

Section 4 discusses some problems for the strong scalar view. In all cases, I argue that the two-type strong scalar typology can be maintained. In Section 5, I discuss empirical typological support for the strong scalar typology, comparing its predictions to those of three other recently proposed typologies: Bernini & Ramat 1996, Kahrel 1996, and Haspelmath 1997. Section 6 concludes.

2 Negative quantifiers

In this section, I summarize the distinguishing surface properties of negative quantifiers (NQs), then adopt a semantics for them that yields these properties. The English *no* series will serve to exemplify NQ behavior.

2.1 Properties of negative quantifiers

The first important distinguishing property of NQs is that they express nonexistence with no support from verbal negation or any other overt licensor. I take this to indicate that NQs have inherent negative meaning.

(6) a. We hear **no** noise.
b. *We do**N'T** hear **no** noise.

SIs, by contrast, must be licensed. Here, terms from the English *any*, Spanish *ningún*, and Russian *nikakoj* series (all SIs) are licensed by negation.

(7) a. We do**N'T** hear **any** noise.
#We hear **any** noise. (*nonexistence reading not possible*)
b. Nosotros **NO** oímos **ningún** ruido.
*Nosotros oímos **ningún** ruido.
c. My **NE** slyšim **nikakix** zvukov.
*My slyšim **nikakix** zvukov.

In fact, NQs themselves are capable of licensing SIs, as in (a) below. Compare (b), where the same SIs are licensed instead by negation.

(8) a. **NO ONE** gives **anything** for free to **anyone anywhere**.
b. They do**N'T** give **anything** for free to **anyone anywhere**.

The second important distinguishing property of NQs is that multiple occurrences of NQs induce *multiple negation* readings with each other (a) and with verbal negation (b). In multiple negation, two cooccurring, inherently negative elements yield a positive reading.

(9) a. **No one** saw **nothing**.
¬∃y.¬∃x.[*person*(y) & *thing*(x) & *saw*(x)(y)]
'There is no person *y* such that there is no thing *x* such that *y* saw *x*. In other words, everyone saw something.'
b. We did**N'T** see **nothing**.
¬.¬∃x.[*thing*(x) & *we-saw*(x)]
'It is not the case that there is no *x* such that *x* is a thing and we didn't see *x*. In other words, we saw something.'

2.2 A semantic analysis of negative quantifiers

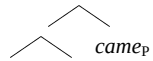
Here I adopt a semantics for NQs. We have seen that NQs have the properties that they are not licensed by verbal negation or any other operator, and that they induce multiple negation with each other and with verbal negation.

Following what I take to be the popular view in the literature, I assume for the English determiner NQ *no* a semantic representation as a generalized quantifier. That is, *no* quantifies over the relationship between two properties.

(10) [[no]] = λQλP[¬∃x.Q(x)&P(x)]

By this denotation, *no* in the sentence ***No** robot came* composes with its description *Q* and predicate *P* as in (a) below, yielding the interpretation in (b).

(11) a.



b. [[no (robot)$_Q$ (came)$_P$]]
= λQλP[¬∃x.Q(x)&P(x)] [λx.*robot*(x)] [λx.*came*(x)]
= ¬∃x.[*robot*(x) & *came*(x)]
'There is no *x* such that *x* is a robot and *x* came.'

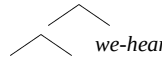
For NQs that are not determiners, but full phrases — e.g. *nothing*, *no one*, *never* — I assume representations like that for *no*, but with the *Q* property specified to quantify over things, people, places, or times (not shown).

2.3 Negative quantifier licensing and interpretation

Here, I show how this semantics yields NQs' surface properties. Recall that NQs have the properties that they are not licensed by negation or any other operator, and that they induce multiple negation with each other and with negation.

First, as a result of the semantics adopted here, NQs require no licensor. Their nonexistence reading comes from the quantification inherent in them.

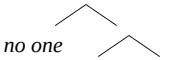
(12) a. We hear **no** noise.
b.



c. [[no (noise)$_Q$ (we-hear)$_P$]]
= λQλP[¬∃x.Q(x)&P(x)] [λx.*noise*(x)] [λx.*we-hear*(x)]
= ¬∃x.[*noise*(x) & *we-hear*(x)]
'There is no *x* such that *x* is a noise and we hear *x*.'

Also as a result of this semantics, two cooccurring NQs yield multiple negation.

(13) a. **No one** saw **nothing**.
b.



c. [[no one (nothing (saw)$_P$)]]
= [[no one]] λP[¬∃x. *thing*(x) & P(x)] [λxλy.*saw*(x)(y)]
= λP[¬∃y. *person*(y) & P(y)] λy[¬∃x. *thing*(x) & *saw*(x)(y)]
= ¬∃y.¬∃x.[*person*(y) & *thing*(x) & *saw*(x)(y)]
'There is no person *y* such that there is no thing *x* such that *y* saw *x*. In other words, everyone saw something.'

3 Scalar indefinites

I have proposed that most NIs across languages are scalar indefinites (SIs). In this section, I summarize the properties distinguishing SIs from NQs, and argue for a semantics for SIs as nonspecific scalar indefinites. The English *any*, Spanish *ningún*, and Russian *nikakoj* series will exemplify SI behavior.

3.1 Properties of scalar indefinites

First, as we have seen, SIs differ from NQs in that they must be licensed either by negation or some other polarity item-licensing context (characterized by Ladusaw 1979 as *downward-entailing* contexts). The preposition *without* is an example of a polarity item-licensing context that is not negation.

(14) a. We came **WITHOUT any** excuse.
b. Nosotros vinimos **SIN ninguna** excusa.
c. My prišli **BEZ kakogo-libo** povoda.

The second property distinguishing SIs from NQs is that SIs do not inherently express nonexistence. Multiple occurrences of SIs yield single-negation readings both with each other (a) and with verbal negation (b).

(15) a. They do**N'T** give **anything** for free to **anyone anywhere**.
Ellos **NO** dan **nada** gratis a **nadie** en **ninguna parte**.
Oni **ničego nikomu nigde NE** dajut besplatno.
b. We do**N'T** hear **any** noise.
Nosotros **NO** oímos **ningún** ruido.
My **NE** slyšim **nikakix** zvukov.

(16) a. $\neg\exists x\exists y\exists z.[thing(x) \,\&\, goal(y) \,\&\, place(z) \,\&\, they\text{-}give\text{-}for\text{-}free(x)(y)(z)]$
'There are no *x*, *y*, *z* such that they give *x* for free to *y* at *z*.'
b. $\neg\exists x.[noise(x) \,\&\, we\text{-}hear(x)]$
'There is no *x* such that *x* is a noise and we hear *x*.'

Third, in addition to their nonexistence reading, or *negative polarity* reading, some SIs (e.g. English *any*) also have available a *free choice* reading in upward-entailing contexts. This reading is schematizeable as $\forall x.[Q(x)\rightarrow P(x)]$.

(17) a. Polk would use **any** trick.
$\forall x.[trick(x) \rightarrow Polk\text{-}would\text{-}use(x)]$
'For every *x*, if *x* is a trick, then Polk would use *x*.'
b. **Any** owl hunts mice.
$\forall x.[owl(x) \rightarrow hunts\text{-}mice(x)]$
'For every *x*, if *x* is an owl, then *x* hunts mice.'

The Hindi *bhii* series shows a similar versatility between the negative polarity reading (a) and the free choice reading (b).

(18) a. Maĩ-ne **zaraa bhii** khaanaa **NAHĨĨ** khaayaa. (Hindi)
I -ERG ***any*** *food* ***NEG*** *ate*
'I didn't eat any food.' (Lahiri 1995:171)
b. **Koii bhii** ulluu čuuhõ-kaa šikaar kartaa hai.
any *owl mice hunts AUX*
'Any owl hunts mice.' (Lahiri 1995:183)

(19) a. $\neg\exists x.[food(x) \,\&\, I\text{-}ate(x)]$
'There is no *x* such that *x* is food and I ate *x*.'
b. $\forall x.[owl(x) \rightarrow hunts\text{-}mice(x)]$
'For every *x*, if *x* is an owl, then *x* hunts mice.'

3.2 A semantic analysis of scalar indefinites

The *scalar indefinite analysis* (Fauconnier 1975a, 1975b, 1978, Lee & Horn 1994, Israel 1996) predicts SIs' properties just from these terms' inherent semantics. Adapting these authors' versions of the scalar indefinite analysis, I propose that an SI denotes an endpoint *m* of a presupposed pragmatic scale *S* of individuals — which may be entities, kinds, or quantities (Lee & Horn 1994) — ordered according to how likely it is that some property *P* holds of them.

(20) Definition
a. ***pragmatic scale***: a set S ordered according to some property P such that (i) $\forall x,y\in S$, if $x>y$ then P(x) is more likely than P(y), and (ii) S has a top $a\in S$ and/or a bottom $z\in S$, such that $\forall x\in S.a\geq x\geq z$.
b. x_1 x_2 x_3 x_4 x_5
• ——— • ——— • ——— • ——— •
bottom *top*

Because of how the scale *S* is ordered, when a sentence containing an SI asserts *P(m)*, this induces a universal entailment that *P* holds of all members of the scale. Downward entailing contexts then yield negative polarity readings

(21) a. We do**N'T** hear **any** noise.
b. *any noise* = m = x_5 (the *most* likely amount of noise for us to hear)
c. x_1 x_2 x_3 x_4 x_5
• ——— • ——— • ——— • ——— •
← *direction of entailment* *m*

Upward-entailing contexts yield free choice readings.

(22) a. **Any** owl hunts mice.
b. *any owl* = m = x_1 (the *least* likely kind of owl to hunt mice)

c. x_1 x_2 x_3 x_4 x_5

• ——— • ——— • ——— • ——— •

m *direction of entailment* →

I offer this formal definition of *any*, closely following Lee & Horn 1994.

(23) [[any]] = λQλP: presupposition: [[∃S. S is an order on Q] & [∃m∈ S.∀x∈ S.P(m)⊃P(x)]]. assertion: [P(m)].

Crucially, this presupposition and assertion yield the entailment ∀x∈ S.P(x). Since the members of *S* and *Q* are the same (by the definition of pragmatic scale), this entailment is equivalent to ∀x.[Q(x)→P(x)], which is both the schema for the free choice reading, and a possible schema for the negative polarity reading. The important result is that this entailment yields both readings.

3.3 SI licensing and interpretation

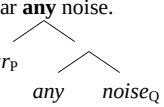
Here, I show how the scalar indefinite analysis predicts SIs' distinct properties. Recall that SIs have the properties that they must be licensed, that they do not induce multiple negation readings, and that some SIs can get free choice readings.

First, though SIs presuppose a pragmatic scale, the context must ensure that the entailment goes in the right direction along the scale. Therefore, SIs' negative polarity and free choice readings must be licensed by contexts that are downward entailing and upward entailing, respectively.

(24) Negative polarity reading

a. We don**'t** hear **any** noise.

b.

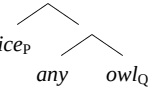


c. [[any (noise)$_Q$ (we-don't-hear)$_P$]]
= [[any]] [λx.*noise*(x)]$_Q$ [λx.*we-don't-hear*(x)]$_P$
= presupposition: there is a scale *S* on *noise* with top *m* (the most likely quantity of noise for us to hear), such that ∀x∈ S *we-don't-hear*(m) entails *we-don't-hear*(x); assertion: *we-don't-hear*(m); entailment: ∀x∈ S *we-don't-hear*(x).
'All quantities of noise *x* are such that we don't hear *x*.'

(25) Free choice reading

a. **Any** owl hunts mice.

b.

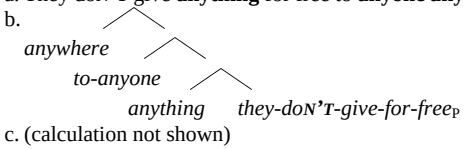


c. [[any (owl)$_Q$ (hunts-mice)$_P$]]
= [[any]] [λx.*owl*(x)]$_Q$ [λx.*hunts-mice*(x)]$_P$
= presupposition: there is a scale *S* on *owl* with bottom *m* (the least likely kind of owl to hunt mice) such that ∀x∈ S *hunts-mice*(m) entails *hunts-mice*(x). assertion: *hunts-mice*(m); entailment: ∀x∈ S *hunts-mice*(x).
'All kinds of owls *x* are such that *x* hunts mice.'

Second, under the scalar indefinite analysis, the property of SIs that they do not induce multiple negation results from the fact that they have no inherent negative force. The negative force in the negative polarity reading comes rather from a downward entailing expression (such as negation) in the SI's *P* argument.

(26) a. They don**'t** give **anything** for free to **anyone anywhere**.

b.



c. (calculation not shown)

Third, recall that some SIs, like English *any* and Hindi *bhii*, can get free choice readings. This is straightforwardly predicted by the analysis of *any* worked out so far. Under this analysis, both the negative polarity and free choice readings involve scalar entailment, differing only in the direction of entailment. Our current definition of *any* therefore yields both readings, as we have seen.

The scalar indefinite analysis is also supported by the morphology of many SIs across languages, which consist of a normal indefinite or generic noun plus a scalar emphatic (Lee & Horn 1994, Haspelmath 1997). Moreover, the mechanism of scalar entailment is independently needed for the semantics of other expressions, including English *even* (Horn 1969, Lee & Horn 1994) and entailing superlatives (Fauconnier 1975a, 1975b, 1978).

Last, the scalar indefinite analysis is really an analysis of all polarity items, allowing us to subsume SIs within this larger theory (Israel 1996).

4 Problems

The semantics proposed so far for SIs runs into some immediate typological problems. In the following sections, I discuss three major problems.

4.1 The FCI / NPI distinction

Unlike SIs like English *any* and Hindi *bhii*, NIs like Spanish *ningún* and Russian *nikakoj* cannot get free choice readings. Rather, Spanish and Russian use the *cualquier* and *ljuboj* series, respectively, in free choice contexts (b).

(27) a. We don't hear **any** noise.
Nosotros no oímos **ningún** / #**cualquier** ruido.
My ne slyšim **nikakix** / ***ljubyx** zvukov.
b. **Any** owl hunts mice.
Cualquier / #**ninguna** lechuza caza ratones.
Ljubaja / ***nikakaja** sova oxotitsja na myšej.

This is easily explained by extending the semantics developed so far for SIs. Let us recognize two subtypes: *negative polarity items* (NPIs) and *free choice items* (FCIs). These have the same semantics as SIs, except that in languages that distinguish them, NPIs denote the *tops*, and FCIs the *bottoms* of pragmatic scales. That is, plain SIs (a), NPIs (b), and FCIs (c) differ only in their presuppositions.

(28) a. [[any]] = λQλP: presupposition: [[∃S. S is an order on Q] & [∃m∈ S.**∀x∈ S.P(m)⊃P(x)**]]. assertion: [P(m)].
b. [[ningún]] = λQλP: presupposition: [[∃S. S is an order on Q] & [∃m∈ S.**∀x∈ S.m≥x**]]. assertion: [P(m)].
c. [[cualquier]] = λQλP: presupposition: [[∃S. S is an order on Q] & [∃m∈ S.**∀x∈ S.m≤x**]]. assertion: [P(m)].

This is essentially the view of both Israel and Haspelmath.

(29) a. Israel 1996: "low scalar emphatics are NPIs ... high scalar emphatics are PPIs [positive polarity items]" (627); "NPIs will be licensed and PPIs blocked in just those environments that reverse the direction of entailments in a scalar model" (646).
b. Haspelmath 1997: "free-choice indefinites express the low point on a non-reversed scale, whereas negative polarity indefinites express the low point on a reversed scale" (117).

NPIs and FCIs are then predicted to be in complementary distribution (in languages that distinguish them), NPIs being felicitous only in *downward-entailing* contexts, and FCIs only in *upward-entailing* contexts. Plain SIs, by contrast, like English *any* and Hindi *bhii*, are felicitous in both contexts.

4.2 *Nothing ~ nada ~ ničego*

I have proposed that English *nothing* is an NQ, while Spanish *nada* and Russian *ničego* are not. This seems contrary both to normal translation and to native speaker intuitions that these are all equivalent.

Indeed, they are equivalent in their use as negative elliptical replies. In fact, Bernini & Ramat 1996 adopt this as the criterion for their NQ status.

(30) a. What do you want to eat? —**Nothing**.
¿Qué quieres comer? —**Nada**.
Čto ty xočešj jestj? —**Ničego**.
b. What are you doing? —**Nothing**.
¿Qué haces? —**Nada**.
Čto ty delaješj? —**Ničego**.

But in non-elliptical negative replies, *nada* and *ničego* pattern with English *anything*, particularly in their cooccurrence with verbal negation.

(31) a. What do you want to eat? —I do**N'T** want to eat **anything**.
¿Qué quieres comer? —**NO** quiero comer **nada**.
Čto ty xočešj jestj? —Ja **NE** xoču **ničego** jestj.
b. What are you doing? —I'm **not** doing **anything**.
¿Qué haces? —**NO** hago **nada**.
Čto ty delaješj? —Ja **ničego NE** delaju.

I suggest that *nada* and *ničego* are more similar to *anything* in their inherent semantics. What *nada* and *ničego* have in common with *nothing* is just that they are *contextually negative*, though they are not *inherently negative*.

(32) a. ***contextually negative***: used exclusively or almost exclusively in expressions of nonexistence.
b. ***inherently negative***: inherently expressing negative universal quantification.

This is supported by a generalization on Haspelmath's 40-language survey.

(33) a. Haspelmath 1997: "If an indefinite series that is used in the direct-negation function is not used in any other function, it may be used elliptically with a negative interpretation" (197).
b. paraphrase: If an NI is used only in expressions of nonexistence, it can be used as a negative elliptical reply.

I contend that *nada* and *ničego* can be used as negative ellipical replies because they are contextually negative, not because they are NQs. Under the scalar indefinite analysis, then, which of a particular language's NIs are used in negative elliptical replies depends on the oppositions within its system of NIs.

4.3 SIs that can occur without a licensor

Under the scalar indefinite analysis, the negative meaning in expressions of nonexistence comes from the licensing context. However, Spanish SIs express nonexistence without the support of a licensor when they occur before the verb.

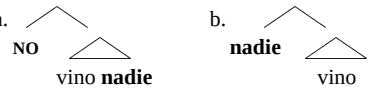
(34) a. I did**N'T** see **any** rabbit.
Yo **NO** vi **ningún** conejo. ←
Ja **NE** videl **nikakogo** krolika.
b. **No** sailor smoked.
Ningún marinero (***NO**) fumó. ←
Nikakoj morjak **NE** kuril.

This is true of Spanish, Portuguese, and Italian. The generalization is that n-words in these languages cooccur with negation *except* when preverbal.

(35) a. **Nadie** vino. (Spanish)
NO vino **nadie**.
b. **Ninguém** veio. (Portuguese)
NÃO veio **ninguém**.
c. **Nessuno** è venuto. (Italian)
NON è venuto **nessuno**.
'No one came.'

Proponents of the strong NQ view hold that n-words in these languages are NQs (Zanuttini 1991, Haegeman 1995, Brown 1999), while others believe them to be NPIs (Bosque 1980, Laka 1990, Ladusaw 1992, Laka 1994). I support the latter view. Specifically, I propose that verbal negation in these languages is a *construction*, where either the normal verbal negator (a) or a contextually negative n-word (b) occupies the preverbal position of negation.

(36) a. b.



I do not attempt here to more precisely identify the syntactic position of negation, but I will offer a few of the arguments in favor of the semantics of this analysis. First, the fact that n-words in Southern Romance are *contextually negative* (as defined earlier) makes their role in negation plausible. Second, Southern Romance n-words are useable in a few environments other than expressions of nonexistence, which is a property of NPIs rather than NQs. Spanish n-words are used also in comparatives, and Italian n-words in questions.

(37) a. Son más fuertes que **ningún** otro partido. (Spanish)
'They're stronger than **any** other team.'
b. Has visto **nessuno**? (Italian)
'Have you seen **anyone**?'

Third, this preverbal/postverbal asymmetry appears to be a step in a general historical process that turns NQs into NPIs (Haspelmath 1997). The following examples show that in Old Russian, words of the *nikakoj* series that are now NPIs once varied in their cooccurrence with negation (compare a to b and c).

(38) a. **Ničego** že sja bojatj bêsi, tokmo kresta. (Old Russian)
nothing PT REFL fear demons except cross
'Demons fear nothing except the cross.'
b. jako svojego **nikto** že **NE** xulitj
because own **no one** PT **NEG** abuse
'because no one abuses his own'
c. i **NE** idjaše s nimi **nikto** že
and **NEG** went with them **no one** PT
'and no one went with them'
(Křížková 1968:24)

5 Testing the typology

In this section, I discuss empirical typological support for the NI typology proposed here, and compare it to other recently proposed typologies.

5.1 Empirical support

Here I compare the proposed typology to what is actually attested, stating generalizations over Haspelmath's 1997 40-language survey of indefinites. The most common NI system appears to be a two-series system with an NPI series and an FCI series, as in Spanish — as we have seen — and e.g. Japanese.

(39) a. Gattu wa **nanimo** sitte i **-nai** (Japanese)
Guts TOP **nothing** know AUX-**NEG**
'Guts doesn't know anything.'
b. **Daredemo** onazi koto o suru hazu da
Anyone same NMZR ACC do supposed COP
'Anyone would do the same.'

The scalar indefinite analysis predicts that there should also be plain SIs like English *any* that get both negative polarity and free choice readings. These are well attested, if not common (12 out of Haspelmath's 40 languages; see below). The strong view does not predict this type, and the weak view misses the generalization that plain SIs subsume many NI functions, and ought therefore to have the same or similar semantics to NPIs and FCIs.

(40) Languages with plain SIs in Haspelmath's sample (12/40)
Ancash Quechua *-pis*, English *any*, French *que ce soit*, Hausa *koo*, Hindi/Urdu *bhii*, Irish *ar bith* / *aon*, Kannada *-uu*, Mandarin *rènhé*, Portuguese *qualquer*, Swahili CL-*o* CL-*ote*, Turkish *herhangi*, Yakut *-da*

Under the strong scalar view, SIs and NQs are under no cooccurrence restrictions. It is therefore not a problem that NQs are rare, attested in only a few exotic languages (see below).

(41) a. Haspelmath (6/40): Dutch *niets*, English *no*, German *kein*, Icelandic *enginn*, Latin *numquam*, Swedish *ingen*
b. Kahrel (5/40): Chukchi, Dutch, Evenki, Mangarayi, Nama

The rarity of NQs relative to SIs seems odd under the strong NQ view that all NIs are NQs. Under the weak view, where NIs are differentiated by their functions, NQs are not distinguished from NPIs that are restricted to expressions of nonexistence. This fails to predict that only NQs yield multiple negation.

The scalar indefinite analysis also predicts plain SIs and NPIs to be compatible with other downward entailing contexts besides expressions of nonexistence. Haspelmath's survey shows that this is indeed the case.

Lastly, the strong scalar typology makes no predictions about the cooccurrence of different types. Since the NPI / FCI distinction depends on the inherent semantics of these subclasses, rather than on oppositions within systems, this allows for systems with e.g. either of NPIs or FCIs without the other. This appears to occur in Irish, which evinces the plain SI *ar bith*/*aon* series and NPI *dada* series, with no corresponding FCI series.

5.2 Other typologies

Let us look briefly at three other recently proposed NI typologies. Bernini & Ramat 1996 emphasize the importance of oppositions within systems, basing their canonical types N, A, and S on English *no*, *any*, and *some*, respectively.

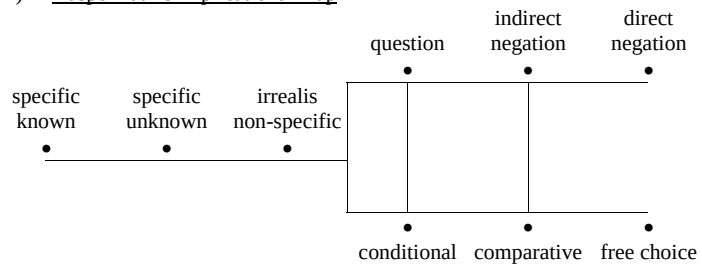
(42) a. ***type N***: used in negative elliptical replies.
b. ***type A***: used in positive or negative questions.
c. ***type S***: used in positive replies.

Kahrel 1996 emphasizes the constructions in which NIs occur.

(43) Kahrel 1996: three types of NIs
a. *type 2*: negation plus special indefinite
Decl E: X: NEG e: P_{VERB} (ix_i: Q)$_{ARG}$
b. *type 3*: special negative indefinite without negation
Decl E: X: e: P_{VERB} ($\varnothing x_i$: Q)$_{ARG}$
c. *type 4*: negation plus special negative indefinite
Decl E: X: NEG e: P_{VERB} ($\varnothing x_i$: Q)$_{ARG}$

Haspelmath 1997 differentiates indefinites by their functions.

(44) Haspelmath's implicational map



None of these approaches achieves the generalizations over licensing and interpretation possible under the scalar indefinite analysis, which predicts both the licensing and interpretation of NIs from their inherent semantics. In addition, all three of these typologies conflate NQs and NPIs, which I have shown must be distinguished. NQs yield multiple negation, and NPIs are often used in contexts other than expressions of nonexistence. Last, neither Kahrel nor Haspelmath reduces NIs to two main types, as the strong scalar typology does.

6 Conclusion

I have proposed a typology of negative indefinites that recognizes just two main semantic types: scalar indefinites and negative quantifiers. I defended the typology against three apparent problems. Lastly, I compared it to the NI systems attested across languages, as well as to three other recent typologies, arguing that the proposed typology makes desirable generalizations, while at the same time distinguishing different types where their behavior warrants it.

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