Negative Interrogatives *and Whatnot* *The Conversion of Negation in Indo-European*

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Abstract

The present article examines the attenuation and conversion of outer and inner negations under interrogative scope (interrogative negation). Interrogative scope over outer and inner negations triggers network processes at the interface of syntax, semantics and pragmatics, which may in the long run result in the bleaching of their negating function. This explains the crosslinguistically frequent homophony of negations with non-negating particles, conjunctions and complementizers. I discuss four mechanisms, the Asking > Calling-into-Question Implicature (§§ 2, 3), the Asking-for-Confirmation Implicature (§§ 2, 3), the Affirmative-Negative Equivalence under Disjunction (§ 4), and the Litotes Effect (§ 5).

Keywords

inner and outer negated polar questions – high and low negation – expletive negation – rhetorical and non-rhetorical questions – Asking > Calling-into-Question Implicature – Asking-for-Confirmation Implicature – Litotes Effect in negated interrogative-exclamatives – interrogative negation > polar question particle, modal/discourse particle, causal conjunction, negated conditional conjunction, disjunctive particle

* A preliminary version of Section 3 of this article was presented at the EPHE in Paris on March 29, 2016, and of Sections 1–4 at the 23rd LIPP Symposium in Munich on July 7, 2016. I am indebted to both audiences, including Michèle Fruyt, Pierre Flobert, Romain Garnier, Claire Le Feuvre, Daniel Petit, Georges-Jean Pinault in Paris, and Christian Lehmann, Volker Gast in Munich, for discussion. Thanks also to Ronald Kim, Dieter Gunkel, Benedikt Peschl, and two anonymous reviewers for help and advice. Any remaining infelicities and flaws in the published version of this article are of course to be blamed on me alone.

1 Introduction

Grammaticalization not only targets lexemes but also grammatical words, causing them to abandon their original function and acquire a new grammatical function. The process of grammaticalization is necessarily gradual in nature,¹ and may continue even after the lexeme-to-grammeme shift with the further grammaticalization of grammemes, “advancing ... from a grammatical to a more grammatical status” (Kuryłowicz 1965:69 = 1975:52). The common denominator of grammaticalization, whether from lexeme to grammeme or from grammeme₁ to grammeme₂, is the emergence of a new form-function relation, which is typically (but not necessarily) accompanied by a decrease in autosemantic meaning and increase in synsemantic function. A case in point and the topic of the present article is the (re)grammaticalization of negations, which may descend from lexemes or adverbial NPs (e.g. PIE acc. sg. **ne h₂o_iu* ‘not in one’s lifetime’ > Ancient Greek οὐ, Latin acc. sg. *non passum* ‘not a step’ > French *ne pas*), but whose grammaticalization potential does not come to an end with this development. On the contrary, negations may undergo further grammaticalization and lose their negating function altogether.

In this article, I lay out the three main pathways of development for the grammaticalization of negations. Negation under interrogative scope (= ?Neg, or in logical form $[Q[-[p]]]$) may turn into a) positive, negative or neutral polar question markers; b) modal particles, discourse particles or causal conjunctions; or c) via a negative conditional conjunction into a disjunctive conjunction. When placed under interrogative scope, negations typically incur the attenuation and eventually the loss of their negating function, and may in the end even assume an affirmative function. In all three cases, the source-target development is associated with a loss of negative semantics and an increase in synsemanticity.² The pathway leading from interrogative negations to polar question markers explains why polar question markers and negations often appear as homophones or allomorphs of each other, cf.

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- 1 As stressed by Meillet already in 1912, the transition from autosemantic to synsemantic words comprises many intermediate degrees. [“il y a tous les degrés intermédiaires entre les mots principaux et les mots accessoires.” (Meillet 1912:388 = 1921:135 = 2015:213)].
 - 2 Polar question markers, causal conjunctions, and disjunctive conjunctions (e.g. Lat. *=ne*, Engl. *because, if not/or*) are synsemantic in that they cannot constitute a phrase, sentence or utterance by themselves, being barred from elliptical use, while negation under interrogative scope may be used elliptically and bear sentential status (e.g. PIE copula-less nominal clause **ne?* ‘isn’t it?’, ‘if [it is] not’).

- (1) Interrogative negation > polar question marker (?NEG>Q), cf. Heine and Kuteva 2002:216 f., e.g.,
 Turkish, negation *me*, question particle *mi*:

Geldiniz mi?
 come:PST.2PL Q
 'Did you come?' (Wendt 1972:303)

Turkish yes/no-question marker *mi* (A-not-A construction):

kadın tarlaya git-ti-mi git-me-di-mi
 woman:NOM field:DAT go:PST-Q go-NEG-PST-Q
 'Did the woman go to the field or didn't she go?'

The exemplification of (1) may be studied in greater detail in various Indo-European languages. An example is the Latin polar question particle =*n(e)*, whose etymological identity with the inherited negation Latin *ne* can be substantiated by syntactic and pragmatic reconstruction, as will be demonstrated in §3 below.

- (2) Latin polar question particle =*n(e)*, homophonous with inherited (lexicalized) negation *ne*, as in *ne=uter* 'neither one', *ne=fas* 'not lawful'.

cognosci=n tu me saltem, Sosia?
 recognize:PRS.2SG=Q you:NOM me:ACC at_least Sosia:VOC
 'Don't you at least recognize me, Sosia?' (Pl. *Amph.* 822)

Cf. the French translation equivalent with the negation as a tag question:

Toi au moins, tu me reconnais, non, Sosie? (tr. R. Garnier, p.c.)

It is worth noting that it is not the negation in isolation that undergoes conversion to a polar interrogative; rather, it is the negated utterance that is targeted by the change. The conversion of the negation is thus not a word-level phenomenon, but occurs on the clause level.³ In addition to viewing grammatical-

3 In the same vein Meillet (1912): It is not words in isolation that undergo grammaticalization, but rather the manner of collocating words which furnishes the starting point for the development of a grammatical construction. ["Les mots ne sont du reste pas seuls à être sujets

TABLE 1 *Negation conversion: diachronic paths and synchronic gradience (polysemy)*
Negation attenuation and de-interrogativization (+)

→				
	Interrogative scope over negation			
1a	[Q[Neg _{High}]]	> Q(affirmative answer bias) > Q(assertive question marker)	> affirm. modal particle, causal conjunction	§ 2
1b		> Q(negative answer bias) > Q(dubitative question marker)		§§ 2, 3
1c		> Q(neutral)		§ 3
2	[Q[Neg _{High}]]	> neg.conditional conjunction	> disjunctive conjunction	§ 4
3	[What[Neg _{Low}]]	> Nothing[Neg _{Low}] negation attenuation and de-interrogativization	> Everything	§ 5

ization as both a word- and phrase/clause-level phenomenon, it is furthermore necessary to take pragmatic mechanisms into account.⁴ The present article presents three cases studies which demonstrate that the generalization of certain pragmatic mechanisms is in fact the decisive pivot for the shift from a negation to a nonnegative interrogative particle, an affirmative particle or causal conjunction. These three cases studies document three diachronic pathways of development and manifest themselves in the guise of synchronic gradience, as summarized in Table 1.

à devenir des éléments grammaticaux; la façon de grouper les mots peut aussi devenir un procédé d'expression grammaticale" (Meillet 1912:400 = 1921:147 = 2015:225)].

- 4 As also seen by Meillet in advocating a usage-based model of analogical innovations: the innovation of grammatical forms (like that of analogical forms) has its basis in the usage of language and is an immediate and natural consequence thereof. ["Ce type d'innovations résulte d'ailleurs, comme les innovations analogiques, de l'usage qui est fait de la langue; il en est conséquence immédiate et naturelle" (Meillet 1912:387 = 1921:133 = 2015:211)].

In what follows, I will exemplify and document the mechanisms of negation attenuation in both older and modern Indo-European languages, including Latin, Ancient Greek, Vedic, Tocharian, Lithuanian, and Russian, as well as the non-Indo-European Turkish. Section 2 examines correlations between negation placement and question type and offers an account for the attenuation of negation by negation fronting in affirmative-bias questions. Section 3 scrutinizes the development of fronted high negations into markers of affirmative and negative answer bias questions as well as neutral polar question markers.⁵ Section 4 deals with the transition from interrogative negation to negated conditional conjunction to disjunctive particle. Finally, Section 5 examines the attenuation of inner negations in exclamative-interrogatives and the eventual backgrounding of the negating function under the Litotes Effect.

2 Negation Attenuation by Negation Fronting in Affirmative-Bias Questions

Several older Indo-European languages, including Latin, Ancient Greek, Vedic, and Tocharian, attest a form-function correlation of negation placement with the functional dichotomy of Information Question versus Rhetorical Question. In polar interrogatives, these languages allow the fronting of the negation from default preverbal position into focused sentence-initial position (the Specifier of a *wh*-Focus Phrase), thus creating a formal contrast between high- and low-negation polar questions. Functionally, low-negation polar questions correlate with information questions, and high-negation polar questions correlate with affirmative-bias (or rhetorical) questions, as in the Latin examples (3a) and (3b). (3a) is a low-negation information question, as can be inferred from the fact that it is followed by a negative answer.

- (3) a. Latin, inner negated polar question, regular low negation (cf. Pinkster 2015:730), non-rhetorical

iis=ne rebus manus adferre non_{Low}
 this:ABL.PL=Q thing:ABL.PL hand:ACC.PL lay.on:PRS.INF NEG

5 See below Sections 3.1–3: The Latin polar question marker =*ne*; 3.4: Ancient Greek ἄρα οὐ/μή; 3.5: Tocharian B interrogative *mapi*; 3.6: Modern Lithuanian interrogative *nejaūgi*; 3.7: Russian interrogative *neuželi*; 3.8: Turkish interrogative *mi*.

dubitasti a quibus etiam oculos
 doubt:PRF.2SG from which:ABL.PL too eye:ACC.PL
cohibere te religionum iura cogeabant?
 divert:PRS.INF you:ACC rite:GEN.PL law:NOM.PL force:IMPF.3PL
 'Is it the case that you did not refrain from laying your hands on these things from which the religious rites forced you to divert even your eyes?'
 [Negative answer:] *tametsi ne oculis quidem captus in hanc fraudem tam sceleratam ac tam nefariam dedisti.*
 'No, to the contrary, not even captured by your eyes did you commit yourself to this criminal and so ruthless crime.' (Cic. Verr. 2,4,101)

By contrast, (3b) exemplifies a high-negation affirmative-bias question.

- (3) b. Latin, outer negated polar question, fronted high negation, rhetorical

[Affirmative answer bias question]
non_{High}=ne eum graviter tulisse arbitramini ...?
 NEG=Q he:ACC seriously take:PRF.INF think:PRS.2PL.MP ...
Quod enim ...
 For namely ...
 'You certainly don't think he regretted ..., do you? For ...' (Cic. Verr. 2,5,170)

[Command by question]
non_{High} manum abstines, mastigia?
 NEG hand:ACC take.off:PRS.2SG whip:VOC
 'Won't you take your hands off, you scoundrel?' = 'Hands off!' (Ter. Ad. 781)

[Assertive question]
non_{High} est iudicatus hostis
 NEG AUX:PRS.3SG judge:PRF.PTCP.MP enemy:NOM
Antonius?
 Antonius:NOM
 'Hasn't Antonius been declared an enemy?' (Cic. Phil. 7,13)

The correlation of high negation and rhetorical (non-information-soliciting) function in Latin is not an isolated phenomenon. On the contrary, it can be shown to be operative across several older Indo-European languages such as

Ancient Greek, Vedic, and Tocharian.⁶ All of these languages, including Latin, conform to the OV constituent order type (Latin and Ancient Greek in a more relaxed fashion, Vedic and Tocharian more rigidly) and have pragmatic subrules for negation fronting. All these languages attest a possible contrast between low negation in information-soliciting questions and high negation in rhetorical affirmative-bias questions. This contrast points to negation fronting as the triggering factor for the attenuation of the negation. But what is the precise mechanism?

In order to answer this question, some preliminary remarks on negation and question type are required. In the following, I propose to derive the bias function of high-negation polar questions compositionally from the hierarchically ordered interaction of three nested components: a) the interrogative operator scoping over b) the fronted negation, which in turn scopes over c) the core proposition, or schematically

- (4) [interrogative operator[fronted negation[core proposition]]],
in logical form = $[Q[\neg[p]]]$.

On the basis of data from several older Indo-European languages, I argue for the existence of a mechanism consisting of the interaction of the semantic and pragmatic parameters of the core proposition with the interrogative operator. This mechanism triggers either a Calling-into-Question Implicature of the interrogative operator *Q*, yielding an affirmative bias question, or an Asking-for-Confirmation Implicature of the interrogative operator *Q*, yielding a negative bias question. I further propose that the calculation of affirmative or negative bias is anchored in the semantic-pragmatic rating of the core proposition as expected (= Common Ground) or counterexpectational (not Common Ground). This hypothesis is supported by data from a range of older Indo-European languages as well as Turkish (§§ 3.3–8).

2.1 *INPQs and ONPQs*

The core of the bias-generating mechanism in high-negation questions is the distinction between inner negated polar questions (= INPQ) and outer negated polar questions (= ONPQ). On a functional level, the contrast between low negation in information questions and high negation in rhetorical questions may

6 Additional evidence from Hittite, which shows the same correlation, will be dealt with in Hackstein 2017 (fthc.).

be identified with the fundamental distinction between inner negated polar questions and outer negated polar questions. Ladd (1981), Buring & Gunlogson (2000) and Hartung (2006) demonstrated for English and German that negated polar questions must be subdivided into two functionally discrete types: INPQs, which are information-seeking questions, and ONPQs, which do not seek to retrieve propositional content, but rather to prompt an interaction signal on an illocutional level. While the negation in INPQs is proposition-internal, the negation in ONPQs is proposition-external, scoping over the entire proposition.

- (5) a. INPQ: proposition-internal negation, e.g.,

Schmeckt es dir nicht?

= *Ist es der Fall, dass es dir nicht schmeckt?*

'Is it the case that you don't like your meal?'

formally: [Q[p]] (p = *dass es dir nicht schmeckt* 'that you don't like your meal')

The speaker assumes that the interlocutor does not like his meal and wants to know whether this assumption holds true.

- (5) b. ONPQ: proposition-external negation, e.g.,

Kannst du nicht aufpassen?!

= *Ist es nicht der Fall, dass du aufpassen kannst?*

'Is it not the case that you can pay attention?'

formally: [Q[¬[p]]] (p = *dass du aufpassen kannst* 'that you cannot pay attention').

As pointed out by Ladd, Buring & Gunlogson, and Hartung, INPQs and ONPQs may be formally indiscriminate and ambiguous in German and English, cf. e.g. Ladd (1981:164):

- (6) a. INPQ: *Isn't there a vegetarian restaurant around here?*
 = I suspect there's no vegetarian restaurant around here:
Is it the case that there is no vegetarian restaurant around here?
- (6) b. ONPQ: *Isn't there a vegetarian restaurant around here?*
 = I believe there should be a vegetarian restaurant around:
Isn't it the case there is a vegetarian restaurant around here?
 (Can you confirm I'm right and that there is one?)

But INPQs and ONPQs may be optionally differentiated by lexical and syntactic means. For instance, German uses negation incorporation and the negation adjective *kein* for INPQs, but the negation adverb *nicht* instead for ONPQs. In the examples below, (7a) shows negation incorporation, while (7b) exhibits negation extraction and raising, which is excluded from declaratives and licensed only in interrogatives (cf. Meibauer 1990:446).

- (7) a. INPQ: *Gibt es **kein** vegetarisches Restaurant in dieser Ecke?*
 (7) b. ONPQ: *Gibt es hier **nicht** ein vegetarisches Restaurant in dieser Ecke?*
 (Büring & Gunlogson 2000:4)

Similarly, English uses *either* in INPQs, but *too* in ONPQs (cf. Hartung 2006:3).

- (8) a. INPQ: *Isn't Jane coming either?*
 = *Am I right Jane won't be there either?*, involving the negative epistemic implicature that the speaker suspects Jane won't be there either (Romero & Han 2004:641)
 = German inner negated: *Ist es denn der Fall, dass Jane auch nicht kommt?*
 (8) b. ONPQ: *Isn't Jane coming too?*
 = *Can you confirm I'm right and Jane will be there too?*, involving the positive epistemic implicature that the speaker believed or expected that Jane is coming (Romero & Han, loc. cit.)
 = German outer negated: *Ist es denn nicht der Fall, dass Jane auch kommt?*

2.2 INPQs ~ Low Negation; ONPQs ~ High Negation

In contrast to Modern English and German, older Indo-European languages draw on structural syntactic parameters and distinguish INPQs and ONPQs by the placement of the negation, correlating INPQ with low negation and ONPQ with high negation (Hackstein 2013, 2014, 2016). A similar correlation, involving the preposing of the negation in rhetorical questions, was independently observed by Romero & Han (2004:613–616) for English, German, Spanish, Bulgarian, Greek, and Korean, and by Munshi & Bhatt (2009) for Kashmiri. The mechanism and explanation behind this correlation are as follows.

- (9) The movement of the negation into sentence-initial focus position (Spec, *wh*-Focus Phrase) enhances its scope over the entire proposition (sen-

tential negation, $\neg p$). This rule applies to interrogatives and declaratives alike, cf. for declaratives:

Latin

Non et legatum argentum est et non est legata

NEG and bequeathed silver:NOM is and NEG is bequeathed
numerata pecunia.

counted:NOM money:NOM

'It is not the case that both silver was bequeathed and coin was not bequeathed.' (Cic. *Top.* 53; Devine and Stephens 2013:359)

Vedic

ná hí paśávo ná bhuñjanti

NEG CAUS.PTCL animal:NOM.PL NEG aid:PRS.3PL

'For it is not the case that domestic animals are not of use.' (MS 1.10.7,1; Delbrück 1888:542, Amano 2009:361)

- (9) a. As in declaratives, so also in interrogatives, negation fronting instantiates the maximization of the negation scope and converts the negation into a sentential negation ($\neg p$).
- (9) b. Additionally, in interrogatives, the left-peripheral movement of the negation (high negation) resembles *wh*-movement in that it moves the negation into the specifier slot of the *wh*-Focus phrase, thereby placing the negation under interrogative scope. This is where pragmatics come into play.

2.3 *ONPQs ~ High Negation → Asking > Calling-into-Question Implicature*

The placement of high sentential negation under interrogative scope sets off an implicature. When the core proposition is expectational and positively rated, asking for $[\neg p]$ is interpreted as calling into question $[\neg p]$, thereby marking $[\neg p]$ as counterexpectational and canceling the high negation. A strong assertion of $[p]$ results by polarity reversal (Interrogative Negation Reversal), see below §§ 3.2 ff.

2.4 *ONPQs ~ High Negation → Asking-for-Confirmation Implicature*

In contrast, a counterexpectational negatively rated core proposition under outer negation and interrogative scope invites a different implicature, the Asking-for-Confirmation Implicature. The expectation for something negative

TABLE 2 *Negation placement and functional properties of negation*

	Inner negated Polar Q information-soliciting questions	Outer negated Polar Q conducive and assertive questions	Literature
Scope of negation	proposition-internal negation	proposition-external negation; propositional negation	Ladd 1981, Büring & Gunlogson 2000
Negation placement	low negation	high negation	Romero & Han 2004:613–616, Munshi & Bhatt 2009, Hackstein 2013
Pragmatics	‘open’ question: information-soliciting, no answer bias	‘closed’ question: not information- soliciting, solely illocutional: prompting an affirmative/negative interaction signal on the part of the interlocutor	Hackstein 2014, 2016

not to become true shifts the question in the direction of a negative-answer bias question or dubitative question (see below §§ 3.2 ff.). In sum, for both question types in older Indo-European languages, i.e., inner negated polar questions and outer negated polar questions, the following matrix of correlating parameters results.

2.5 *Alternative Explanations for the Counterassertiveness of Rhetorical Questions*

An alternative model for deriving the counterassertiveness of rhetorical questions invokes the pragmatic principle of informativeness,⁷ which is commonly advocated in this context by the secondary literature, cf. Meibauer 1990:458 and Han 2002:214 f. In short, the principle of informativeness states that if the

7 I.e., the first part of the Gricean Maxim of Quantity: Make your contribution as informative as informative as required.

speaker believes in p , then it is more informative for her or him to ask in the negative form $[Q[\neg[p]]]$ about the issue under discussion than in the positive form $[Q[p]]$. Or to use an example, it is more informative to inquire *Wouldn't you be upset?* than inquiring in the affirmative *Would you be upset?*, if one rates a given situation as annoying and therefore as expected to be annoying. Under the preconception of the situation as expected to be annoying, the affirmative question *Would you be upset?* would be senseless. In sum, however, deriving the counterassertiveness of rhetorical questions from the principle of informativeness seems more complicated than deriving it simply from the Asking > Calling-into-Question Implicature. But on purely logical grounds, the two approaches, the Asking > Calling-into-Question Implicature and the principle of informativeness, do not exclude each other and may in fact both be operative at the same time.

Another alternative approach, advocated by Repp (2013) and Romero (2015), hypothesizes a (modal) Common-Ground operator *FALSUM*, which under interrogative scope activates an epistemic answer bias towards p . However, the data presented below in §§ 3.3–8 demonstrate that high-negation polar questions, although predominantly associated with affirmative bias, may also convey negative answer bias. In order to explain this, I propose to localize the anti-Common-Ground marking function not in the high negation but in the Interrogative Operator, which may assume either of two modal functions (affirmative/negative answer bias) by implicature. Pivotal is the semantic-pragmatic rating of the core proposition as expected (= positively rated Common Ground) or unexpected (= negatively rated anti-Common Ground; see below § 3.2). Common Ground core propositions $[p]$ trigger the Calling-into-Question Implicature of the Interrogative Operator scoping over $[\neg p]$, yielding an affirmative bias question, whereas non-Common Ground core propositions assign the Asking-for-Confirmation Implicature to the Interrogative Operator scoping over $[\neg p]$, yielding a negative answer bias question (see below §§ 3.3–8).

2.5.1 Ancient Greek

2.5.1.1 *Inner Negated Polar Questions and Outer Negated Polar Questions*

Like Latin, Greek couples inner negated polar questions with low negation and outer negated polar questions with high negation. Inner negated polar questions with low negation solicit information from the addressee and prompt answers, as illustrated by (10a). In contrast, outer negated polar questions are associated with high negation and encode affirmative answer bias, cf. (10b).

- (10) a. Ancient Greek, inner negated polar question, low negation (on the default preverbal negation position with pragmatically conditioned

subrules, cf. Kühner and Gerth 1904:179; chunked negation-verb collocations, on which see Schwyzer 1950:593f., hint at an inherited rule), non-rhetorical

[Socr.] ἄρα πρὸς θεῶν εὖ λέγοντος οὗ νυνδὴ
Q by god:GEN.PL well speaking:GEN which:GEN just
ἐμνήσθημεν τοῦ Δελφικοῦ γράμματος
mention:AOR.PASS.1PL ART:GEN Delphian:GEN inscription:GEN
οὐ_{Low} συνίεμεν;
NEG understand:PRS.1PL

‘But by the gods, **is it the case that** we do **not** understand the Delphian inscription that we have just mentioned?’

[Alc.] Τὸ ποῖόν τι διανοοῦμενος λέγεις, ὦ Σώκρατες;
‘How come you ask this, o Socrates?’ (Plat. *Alc.* i 132c–d)

[Socr.] ἄρα τὸ ὁρᾶν οὐκ_{Low} αἰσθάνεσθαι
Q ART:ACC see:INF:ACC NEG perceive:INF:ACC
λέγεις καὶ τὴν ὄψιν αἰσθῆσιν;
say:PRS.2SG and ART:ACC sight:ACC perception:ACC
‘**Is it the case that** you say that seeing is **not** perceiving and sight [not] perception?’

[Theaet.] Ἔγωγε.
‘That’s what I say.’ (Plat. *Theaet.* 163d)

(10) b. Ancient Greek, outer negated polar question, high negation, rhetorical

οὐ_{High} νύ ποθ’ ὑμῖν
NEG now ever you:DAT.PL
Ἑκτωρ μηρί’ ἔκχε βοῶν
Hektor:NOM part:ACC.PL burn:AOR.3SG bull:GEN.PL
αἰγῶν=τε τελείων;
goat:GEN.PL=and blemishless:GEN.PL
‘**Has it never been the case that** Hector burned for you the thighs of perfect bulls and goats?’ (Hom *Il.* 24.33f.; Schwyzer 1950:629)

2.5.1.2 [Q[-[empty p]]] >> *Affirmative Particle, Causal Conjunction*
Stressed οὐκ_{oun} introduces affirmative bias questions (Kühner & Gerth 1904: 166f., Schwyzer 1950:587–589), cf.

- (11) a. οὐκουν_{High} δίκαιον τὸν σέβοντ' εὐεργετεῖν;
 NEG.thus just:NOM ART:ACC worship:PRS.PTCP.ACC do.good:INF
 'Wouldn't it be just to do good to somebody by whom one is wor-
 shipped?' (A. Eu. 725; Schwyzer 1950:588)

As a marker of affirmative bias questions, Ancient Greek οὐκουν shows two signs of an incipient transition to an affirmative-conclusive modal particle οὐκοῦν. First, the pragmatization of οὐκουν as an affirmative marker is accompanied by its destressing, which in turn is marked by proclitic accent protraction per Hackstein 2011. Second, destressed proclitic οὐκοῦν has extended its use to non-interrogative contexts; see Schwyzer 1950:588 f. and cf. the following passage, where οὐκοῦν affirms an imperative:

- (11) b. οὐκοῦν_{High} ἤδη πεπαίσθω μετρίως ἡμῖν
 PROCL.NEG.thus already play:PRF.IMP.3SG.MP enough we:DAT
 τὰ περὶ λόγων.
 ART:NOM.PL.N about word:GEN.PL
 'So let our kidding about the words now be enough!' (Plat. *Phdr.* 278b;
 Kühner and Gerth 1904:165, Schwyzer 1950:589)

2.5.2 Vedic

2.5.2.1 Inner Negated Polar Questions and Outer Negated Polar Questions

Vedic, too, uses the placement of the negation to make a formal distinction between inner negated polar questions and outer negated polar questions.

- (12) a. Vedic, inner negated polar question, low negation (by default placed preverbally, cf. Delbrück 1888:542), non-rhetorical

bahūnāṃ vai nāmāni vidma átha nas
 many:GEN.PL PTCL name:ACC.PL know:PRF.1PL and we:GEN
 téna te ná_{Low} grhītá bhavanti
 that:INS they:NOM NEG held:NOM.PL become:PRS.3PL
 'We know the names of many, and are they not thereby held by us?'
 = 'And is it the case that they are not held by us?' (śBM 4.6.5.3)

- (12) b. Vedic, outer negated polar question, high negation, rhetorical

na-hí_{High} śma yád dha ... purá... śárdhām
 NEG-CAUS.PTCL PTCL COMP PTCL ... since.long throng:ACC.PL

ṛtásya *jínvatha*
 sacred.truth:GEN drive:PRS.2PL

'For isn't it the case, o you, that you as ever before drive on the troops of the sacred truth?' (RV 8,7,21)

2.5.2.2 [Q[-[empty p]]] >> *Affirmative Particle, Causal Conjunction*

Like Ancient Greek οὐκ, Vedic *nánu* has extended its use from a rhetorical high negation question particle (13a) to an affirmative modal particle that is also used in non-interrogative contexts, e.g. in a directive sentence (13b).

(13) a. (*sa pitaram ait tam pitābravān*

'He went to his father. He asked him.)

*nanu*_{High} *te* *putraka-adūgr* *ity*
 NEG.PTCL\Q they:NOM son:VOC_give:AOR.3PL\Q QUOT

Have they not, my dear son, given you (the reward)?

adur eva ma ity abravīt

He said, "They have given me (it)."' (AB 5.14; Aufrecht p. 135, tr. Haug p. 232)

(13) b. *abruvan* *nanu*_{High} *no* *yajña'*

say:AOR.3PL NEG.PTCL we:DAT sacrifice:LOC

ābhajata ... *eva* *no* *'pi yajñe*
 partake:PRS.IMP.2PL ... indeed we:DAT too sacrifice:LOC

bhāga *iti*
 share:NOM QUOT

'They said: But surely let us also have our share in the sacrifice! ... We too have our share in the sacrifice!' (ŚBM 3,6,2,17; accents omitted)

2.5.3 Tocharian

2.5.3.1 *Inner Negated Polar Questions and Outer Negated Polar Questions*

Like Latin, Ancient Greek and Vedic, Tocharian has functionalized the placement of the negation to distinguish inner negated non-rhetorical from outer negated rhetorical questions, correlating low negation with non-rhetorical information questions and high negation with rhetorical conducive or assertive questions (cf. Hackstein 2013:112).

(14) a. East Tocharian, inner negated polar question, low negation (with default preverbal position, cf. Sieg et al. 1931:318; Adams 2015:58 merges high and low negation), non-rhetorical

hai tālo, k_uciṃ naṣt aśśi? talke
 hello miserable:VOC incapable:NOM be:PRS.2SG Q sacrifice
māṃñe okāk tränktsi mā_{Low} kärsnāt?
 hall including speak:INF NEG know:PRS.2SG
 ‘Hey, miserable one! Are you perhaps incapable?’ ‘Is it the case that you cannot even utter the word “sacrificial hall”?’ (YQ 1.17 [1.5] a7, Ji, Winter, and Pinault 1998:40 f., cf. Pinault 2002:322)

- (14) b. East Tocharian, outer negated polar question, high negation, rhetorical

tämne mā_{High} te näs śmā(wā)
 so NEG Q I:NOM sit:PST.1SG
 ‘Didn’t I sit like that?’ (A91 b5)

mā_{High} te tam ñi śtmo
 NEG Q then I:DAT stand.PST.PTCP.NOM.SG.M
 ‘Didn’t he then stand right next to me?’ (A342a2)

2.5.3.2 [Q[-]] >> *Affirmative Particle, Causal Conjunction*

Like Ancient Greek οὐκ and Vedic *nánu*, West Tocharian *mapí* has undergone the pragmatization from an affirmative bias interrogative particle (15a) to an affirmative modal particle.

- (15) a. *mapí kca sū cämpan=m(e) laklene waste?*
 NEG somehow he:NOM can:PRS.3SG=us distress:LOC refuge:NOM
 ‘Can’t he somehow be a refuge in our distress?’
 = ‘Yes, of course he can.’ (B77.1; Peyrot 2013:364, cf. § 3.5 below)

As in the case of Ancient Greek interrogative οὐκ → modal particle οὐκοῦν, West Tocharian interrogative (*mā + pi* →) interrogative particle *mapí* shows destressing (proclitic accent protraction; destressed /a/ is graphically marked as ⟨a⟩ or ⟨ä⟩ in standard West Tocharian texts). Unlike Greek and Vedic, however, West Tocharian has gone one step further in converting *mapí* into a causal conjunction (15b).

- (15) b. *papāṣṣorñe eñcitar māpi lyñit=(t)ve*
 proper.conduct:ACC accept:OPT.2SG.MP NEG.PTCL escape:OPT.2SG
läklemem.
 suffering:ABL
 ‘You ought to obey the proper conduct! For you ought to escape from [all] suffering!’ (B295b6)

In short, negation fronting in interrogatives instantiates the maximization of the scope of negation, and its reversal by the Asking>Calling-into-Question Implicature.

3 Can('t) Polar Question Markers Descend from Negations? Positive and Negative Core Propositions under Question

An instructive case study of a fronted negation in outer negated polar questions undergoing a change to a biased and eventually neutral polar question particle is the clitic interrogative particle Latin *=ne*.

3.1 *Latin Polar Question Marker =ne < PIE Negation *ne?*

The development of the inherited Latin negation particle *ne* (superseded by *nōn*, but preserved in univerbations like *ne-fās*, *ne-uter*, see *ThLL* IX.1 Fasc. 7,482, s.v. 3. *ne* particula) into the Latin polar question particle *=ne* has long been claimed, but this claim has always been controversial. It has been advocated by Hofmann et al. (1972:87*) and Dunkel (2014 11:546) and was taken into consideration by Eichner (1971:41 n. 35, comparing Lat. *=ne* and Hitt. *nekku*). However, the development was called into question by Bodelot (2011:147, citing Bader 1973:39f.): “Le rapprochement de *-ne* interrogatif latin (525) d'un *ne* négatif proto-indo-européen est loin d'être sûr.” Bader identified the Latin interrogative *=ne* not with the negation **ne*, but with a homophonous derivative **ne* ‘there, then’ of the demonstrative pronoun **eno-*, *ono-* ‘that one’, as in Thess. Gk. ὅ-νε = ὅ-δε, Lat. *egō-ne*, *super-ne*, **post-ne* > *pōne*, Arm. *a-n-d* ‘there’, or Lith. *anàs*, *añs*, OCS *onŭ*. Likewise undecided are the etymological dictionaries. Whereas Walde & Hofmann (1938) and Ernout & Meillet (1959) were sceptical, more optimism was voiced by de Vaan (2008:403, s.v. “*-ne* ‘then? or, whether’ [ptcle.]”): “May ultimately be the same word as PIE **ne* ‘not’. The scepticism towards this view uttered in WH and EM is excessive.”

The question of whether or not the Latin interrogative particle derives from the negation has remained unsettled because no criteria other than phonological reconstruction were available to evaluate the hypothesis. The phonological reconstruction of Latin *=ne* and its phonological compatibility with the negation do not suffice to prove the hypothesis, given the presence of a homophonous demonstrative **-ne* (interrogative ‘then’). However, there now exists evidence of a different (non-phonological) sort to substantiate the identification of Latin interrogative *=ne* with the inherited negation PIE **ne*.

3.2 *New Criteria for Detecting Negation-Based Polar Question Markers: Affirmative or Negative Answer Bias Depending on Expectancy Rate of Core Proposition*

One indication of the negation origin of the polar question marker is the following. Old Latin employs the phraseological affirmative-bias question *vide=n* (*vides=ne?*) ‘don’t you see?’ (16a), which recurs in Classical Latin, where it appears in a linguistically renewed form as (16b) *non vides?* This strongly suggests that its Old Latin antecedent *=ne* was a negation too.

- (16) a. *Vide=n_{High} benignitates hominum ut periere et prothymiae?*
 ‘Can’t you see how goodness and magnanimity have gone down the tube?’ (Pl. *Stich.* 633)

Vide=n_{High} hostis tibi adesse tuoque tergo obsidium?
 ‘Don’t you see that enemies are already behind your back?’ (Pl. *Mil.* 219)

- (16) b. *non_{High} vides, Luculle, a te id ipsum natum ...?*
 ‘Don’t you see, Lucullus, that it started from you ...?’ (Cic. *de leg.* 3,13)

non_{High} vides ... hoc eum diserte scribere ...?
 ‘Don’t you see that he writes that clearly ...?’ (Cic. *Verr.* 2,3,126)

Another strong indication of the negation origin of the Latin polar question marker *=ne* is the fact that in Old Latin it functions as a complementizer not solely in neutral questions, but also in questions biased towards positive or negative answer. Crucially, the bias function is typical of negation-based question markers. Negation-based question markers complementize affirmative or negative answer bias questions depending on whether the core proposition of the question belongs to the Common Ground, is expectational and hence positively rated, or does not belong to the Common Ground, is counterexpectational and hence negatively rated. The core is the concept of expectancy, which when applied to core propositions of negated questions provides the most precise and least complicated vantage point from which to calculate the rhetorical or non-rhetorical meaning of negated questions. Expectancy is an epistemic base category, according to which core propositions of negated questions can be subdivided into “expected” on the one hand, including the overlapping concepts of propositions that are “to be expected” (e.g. *be ashamed*), “desirable” (e.g. *be healthy*), or “generally positively rated” (e.g. *be successful*); and “not expected” on the other, including the overlapping concepts of propositions that are “not to be expected, having a negative connotation” (e.g. *be shameless*),

“undesirable” (e.g. *be sick*), or “generally negatively rated” (e.g. *have debt*). The rating of core propositions according to these two poles of expectancy emerges either (1) from the core propositions themselves, if they are self-evaluative as in the foregoing examples; or (2) from the context in the case of non-self-evaluative kernels like *be present* (negative: *a danger is present*; positive: *many supporters are present*); or (3) from interaction of self-evaluative kernels with the situational context (e.g. *consuming sugar* may be contextually positive as a positive and necessary component of nutrition, or negative in the case of diabetes). For this article, I have selected textual examples containing self-evaluative core propositions, which ensure the least ambiguous calculation of the meaning of negated questions. By contrast, other approaches to the calculation of meaning have been proposed and applied to non-self-evaluative kernels, such as the concept of “utility” (van Rooj & Šafářová 2003:298–301) and the concept of “intent” (Romero & Han 2004:640–643), both of which are however less clear-cut than the “expectancy” values of self-evaluative kernels.

Under the dichotomy of positively rated (expected, Common Ground) versus negatively rated (counterexpectational, anti-Common Ground) core propositions, there are two semantic-pragmatic mechanisms that cause Old Latin questions with Latin *=ne* to take on an affirmative or negative answer bias. The first is that high interrogative negation (in ONPQs) scoping over a positively rated core proposition makes an affirmative answer bias question.

(17) ONPQ: Positive core proposition (expectational, Common Ground) >> affirmative answer bias (affirmative question):

- a) Take a positively rated/expectational core proposition,
e.g. positive/expectational *p* = *save money*.
- b) The negation of a positively rated core proposition is counterexpectational,
e.g. $[\neg[\text{positive } p = \text{save money}]]$ = counterexpectational,
- c) and interrogative scope over a counterexpectational proposition adds the Asking > Calling-into-Question function to the Interrogative Operator *Q* and the notion of counterexpectancy to the negation of the core proposition, thereby reversing the negation,
e.g. $[Q[\neg[\text{positive } p]]] = [Q[\text{not save money}]] = [\text{affirm}[\text{save money}]]$.
i.e., Don't you save money?—Expected affirmative answer: Yes, I do.

Schematically:

- a) [positively rated/expected core proposition].
- b) $[\neg[\text{expectational core } p]] = [\text{unexpected, counterexpectational } p]$.
- c) $[Q[\neg[\text{expectational core } p]]] = [Q \text{ questioning } [\text{counterexpectational } p]]$
invites the Asking > Calling-into-Question Implicature and Interrogative Negation Reversal.

By contrast, high interrogative negation (in ONPQs) scoping over a negatively rated core proposition yields a negative answer bias question.

(18) ONPQ: Negative core proposition (counterexpectational, anti-Common Ground) >> negative answer bias (dubitative question):

- a) Take a negatively rated core proposition,
e.g. negative $p = \textit{hurt oneself}$.
- b) The negation of a negatively rated core proposition is desirable/expectational,
e.g. $[\neg[\text{negative } p = \textit{hurt oneself}]] = \text{expectational}$,
- c) and interrogative scope over a desirable/expectational proposition adds the notion of confirmative expectancy to the Interrogative Operator Q , which then asks for the confirmation of $[\neg[p]]$,
e.g. $[Q[\neg[\text{negative } p]]] = [Q[\textit{not hurt oneself}]] = [Q \text{ confirming } [\textit{not hurt oneself}]]$.
i.e., *You don't hurt yourself, do you?*
—Expected negative answer, confirming $p = \textit{not hurt oneself}$: *No, I don't.*

Schematically:

- a) [negatively rated/counterexpectational core proposition].
- b) $[\neg[\text{counterexpectational core } p]] = [\text{expected, expectational } p]$.
- c) $[Q[\neg[\text{counterexpectational core } p]]] = [Q \text{ confirming } [\text{expected, expectational } p]]$
invites the Asking-for-Confirmation Implicature, asking for confirmation of the incredulity of $[\neg[\text{counterexpectational } p]]$.

Furthermore negative answer bias questions such as the preceding tend to be conceived of as non-negated dubitative questions by the following mechanism.

Asking and hoping for something negative not to be true may easily be paraphrased as fearfully asking about the possibility of something negative being true, thereby backgrounding and eliminating the negation, cf.

(19) Equivalence of negated and non-negated dubitative questions:

I'm not bothering you, am I?
 = *Am I possibly bothering you?*

In the long run, the negation of such questions may be backgrounded, and the negation may eventually turn into a negative answer bias question particle in the sense of English *really?* or German *denn wirklich?* or Latin *num?* encoding no longer a negation, but the speaker's disbelief or doubt. This development explains the apparent mismatch between the formal presence of a negation and the overtly nonnegating function of question particles like Lithuanian *nejaũ(gi)* and Russian *neuželi*, both of which are outer negated polar questions with fronted negation in origin, but are perceived synchronically as non-negated incredulity questions [Q 'really' [p]]; see below, §§ 3.6–7.

The operation of these two mechanisms, as laid out above in (17) and (18), may be documented across several ancient and modern languages, including Latin, Ancient Greek, Tocharian B, Lithuanian, Russian, and Turkish.

3.3 *Latin Polar Interrogative =ne with Positive and Negative Core Propositions under Question*

In Latin, outer negated polar questions marked with destressed⁸ and clitic *=ne* convey an affirmative answer bias when scoping over a positively rated core proposition.

8 The grammaticalization of high negations under interrogative scope into interrogative particles is frequently accompanied by their destressing, cf. Greek οὐχούνη [§ 2.5.1.2 above], Tocharian B *mapi* [§ 2.5.3.2 above]. Other parallels include Old High German *na* in *ni ... na* (Lühr 1997:332). In the same vein, destressing of illocutional interrogative negations can be observed for English *-n't* and German *nicht*; cf. on the latter Meibauer 1990:445.

(20) a. ONPQ: Positive core proposition >> affirmative answer bias.

E.g. positive p = *be possible; it is possible.*

Potī=n *ut ...?*

possible:NOM.N=Q/*NEG COMP ...?

'Isn't it possible that ...?' (Pl. *Bacch.* 751 +)⁹

E.g. positive p = *have olives; listen.*

voltis=ne *olivas?*

want:PRS.2PL=Q/*NEG olive:ACC.PL

'Don't you want some olives?' (Pl. *Curc.* 90)

audī=n *tu, Persa?*

listen:PRS.2SG=Q/*NEG you:NOM Persian:VOC

'Don't you listen, Persian?' (Pl. *Pers.* 676)

But when scoping over a negatively rated core proposition, a negative answer bias question results.

(20) b. ONPQ: Negative core *proposition* >> negative answer bias.

Negative p = *be stricken by error.*

Est=ne quisquam tam inflammatus errore ...?

is=Q/*NEG anybody:NOM thus inflamed:NOM error:ABL ...

'Wouldn't anyone be thus stricken by error ...?' (Cic. *Ac.* 2,116, cf. Kühner and Stegmann 1976:505–508)

Negative p = *be like this, this being true.*

Ita=ne vero?

'Thus it is not [the case] verily, is it?'

'That's not true, say?' / 'Das ist doch wohl nicht war?' (Cic. *Att.* 14,10,1)

The pragmatic peculiarities of Latin =*ne*, which in Old Latin may yield affirmative bias questions with positive core propositions, but negative bias questions with negative core propositions, supports the negation-based etymology of Latin =*ne*. The same linguistic behavior is found with negation-based question markers in other Indo-European languages.

9 This example is syntactically archaic, preserving a negated nominal clause with zero copula; see Hofmann 1924:76.

3.4 *Ancient Greek ἀρά οὐ/μή with Positive and Negative Core Propositions under Question*

There are languages that have begun to formally differentiate high-negation polar questions involving positively rated core propositions from those involving negatively rated core propositions. Ancient Greek is such a language, which uses different negations for each of the two question types. Affirmative-bias high-negation polar questions with a positively rated core proposition are marked with AGk. ἀρά οὐ ...?, cf.

(21) a. ONPQ: Positive core proposition >> affirmative answer bias.

Positive p = *be necessary*.

ἀρά γε οὐ χρή ...;

Q PTCL NEG is_necessary:PRS

'Wouldn't it be necessary ...?' (X. *Mem.* 1,5,4)

However, negative-bias high-negation polar questions with a negatively rated proposition are marked with AGk. ἀρά μή ...? The function of AGk. ἀρά μή is apotropaic/prohibitive, cf.

(21) b. ONPQ: Negative core proposition >> negative answer bias

ἀρά μή διαβάλλεσθαι δόξεις ὑπ' ἐμοῦ;

Q NEG be.slandered:INF think:FUT.2SG by I:GEN

'You don't really think to be slandered by me, do you?' (X. *Mem.* 2,6,34)

3.5 *West Tocharian Interrogative mapi with Positive and Negative Core Propositions under Question*

West Tocharian employs a particle *mapi*, composed of the distressed negation *mā* and a particle *pi*, to mark outer negated polar questions. These surface as affirmative answer bias questions when *mapi* scopes over a positively rated core proposition, cf.

(22) a. ONPQ: Positive core proposition >> affirmative answer bias.

Positive p = *be a refuge/protection*.

mapi kca sū cāmpān=m(e) laklene waste?

NEG somehow he:NOM can:PRS.3SG=us distress:LOC refuge:NOM

'Can't he [= the Buddha] somehow be a refuge in our distress?'

= 'Yes, of course he can.' (B77.1; Peyrot 2013:364)

But when scoping over a negatively rated core proposition, a question results that is biased towards a negative answer, cf.

- (22) b. ONPQ: Negative core proposition >> negative answer bias.

Negative p = *have debt*.

mapi ketra ca peri nestä

NEG anybody:GEN anything:OBL owing:NOM be:PRS.2SG

totka tsamo wat?

small:OBL large:OBL or

‘You don’t have any debt to anybody else, either little or much, do you?’

(THT1111b2f.; Tamai 2014:377)

This account of the Tocharian B *mapi*-questions solves the puzzle formulated by Peyrot (2013:363): “A difficult matter with *mapi* is that it mostly seems to be positive (...) but sometimes also negative (...) it remains enigmatic why the value of the question seems to be labile, i.e. why it would be not marked for being positive or negative.” Adams (2015:50f.) too observes the seeming indeterminacy of *mapi* questions as affirmative or non-affirmative questions without being able to offer an explanation for the phenomenon.

3.6 Modern Lithuanian Interrogative *nejaūgi* with Negative Core Proposition under Question

Modern Lithuanian uses the negation-based interrogative particle *nejaūgi* as an “interrogative and dubitative particle” (Ambrasas et al. 1997:400) to encode questions that convey the speaker’s disbelief in the negatively rated core proposition under question and that are biased towards a negative answer, cf. e.g.

- (23) *Nejaūgi tū skir-s-ie-s su manim?*

Not.already.in.fact:Q you divorce-FUT-2SG-RFL with I:INS.SG

‘You will not really divorce me, will you?’

‘Will you really divorce me?’ (= ‘I can’t believe it’)

—Expected answer: ‘No, I won’t.’

Formally, Lith. *nejaūgi* is made up of the raised negation *ne* and two particles *jaū* ‘already’ and *gi* ‘really, however’. Functionally, however, although *nejaūgi* contains the negation, it is usually considered and translated as a non-negative interrogative particle, cf. the *DLKŽ*, which describes the function of *nejaū(gi)* as *klausiant ar reikšiant abejojimą, nusteбimą* ‘asking or expressing doubt, surprise’, and accordingly Ambrasas et al. (1997:400): “The interrogative

particles *nègi/nejaũ/nejaũgi* ‘really(?)’ ... strongly imply the speaker’s surprise, disbelief, doubt.” The mismatch between the presence of a negation and the non-negative meaning dissolves under the interpretation of the question with *nejaũ(gi)* as an outer negated, negative-answer bias question:

- (24) *You will not divorce me (, will you)?*
It is hopefully not the case that you will divorce me, is it?
Du wirst dich doch nicht (schon) von mir scheiden lassen (, oder)?

Under this interpretation, the negation is an external negation and the speaker asks for a confirmation of the negatively rated, undesired core proposition not to come true. The question thus falls into the above category of ONPQs that generate negative answer bias under a negatively rated core proposition. The literal and original meaning of *nejaũ(gi)* as a negative-dubitative interrogative particle ‘not really?’ was rightly recognized by Hermann (1926:298).¹⁰

- (25) ONPQ: Negative core proposition >> negative answer bias.

Negative p = *disturb*.
nejaũ(gi) àš trukdaũ?
 *‘I hope/fear: I’m not disturbing you, am I?’
 = ‘Do I really disturb you?’ (Križinauskas 2000:374)

Lithuanian additionally shares with Ancient Greek and Vedic the further conversion of the outer negation question particle into an affirmative modal particle, and finally into a causal conjunction like Tocharian B *mapi*. The interrogative use in bias questions is continued in (Modern) Lithuanian *nejaũgi*. From the source of the latter descends OLith. *niaũ* as a causal-affirmative conjunction. ALEW (2, 691, s.v. *né, nè*) lists three attestations of *niaũ* under the heading of the negation *né, nè*, classifying it as a particle and glossing its meaning as ‘vielleicht’. However, the meaning of *niaũ* is not ‘vielleicht’ but the opposite, causal-affirmative ‘certainly, surely’, cf. e.g.

- (26) *Geriaus čia eykime, niau tayfwe*
 better here go:PRS.IMPV.1PL NEG.ALREADY/AFFIRM freedom
rafime.
 find:PRS.1PL
 ‘Let’s better go here, (for) certainly we will thus find freedom.’ (SLG1 61,6)

10 “*nejaugi* hat die Bedeutung eines fragenden *doch nicht?, wirklich?* erlangt.”

A functionally parallel development is found in the transition of Lithuanian *nêsti?* 'isn't it?' to *nês* 'for, because'.

3.7 Russian Interrogative neuželi with Negative Core Proposition under Question

The semantic pragmatic development assumed for Lith. *nejaũ(gi)* is shared and thus supported by its exact etymological match, Russian *neuželi*. Like Lith. *nejaũ(gi)*, Russ. *neuželi* functions as a sentence-initial question particle, expressing the speaker's doubt about, distrust in or astonishment at a negatively rated core proposition under interrogative scope.¹¹ Russian *neuželi* questions license a translation either as an outer negated negation question or as a fearful non-negated confirmation question with negative confirmation bias towards the undesirable core proposition, triggering the mechanism ONPQ: Negative core proposition >> negative answer bias, as per (18) above.

- (27) a. ONPQ: Negative core proposition >> negative answer bias.

Negative p = *come too late*.

neuželi *ja opozdal?*

(*not.already=)really:Q I be.late:PRT.1SG.M

‘It is hopefully not the case that I’ve come too late?’

'I haven't come too late, have I?'

Accordingly, the *neuzeli* question may be rephrased as an overtly non-negated question with Russian *razve* 'really', *vozmožno* 'perhaps' or in translation with English *really* or French *vraiment, par hasard*, cf.

- (27) b. *razve ja opozdal?*
 really I be.late:PRT.1SG.M?
Vozmožno li ja opozdal?
 possible Q I be.late:PRT.1SG.M?
 'Have I really come too late?'

11 See Pul'kina & Sachava-Nekrasova 1980:449; for an overview of the lexicographical treatment of *neuželi*, cf. Baranov 1986:122. *Neuželi* marks the core proposition as a presumption which is called into question; see Baranov 1986:123 f.

3.8 *Turkish Interrogative mi with Positive and Negative Core Proposition under Question*

The interaction of negation-based polar question markers with the expectancy or counterexpectancy of the core proposition under question is also found in non-Indo-European languages. An example is Turkish, for which an etymological relationship of the negation *me* and the polar question marker *mi* has been claimed, see Heine and Kuteva in section 1 above. Following the model of the Indo-European languages surveyed above, Turkish *mi*, when scoping over a positively rated core proposition, makes an affirmative bias question.

- (28) a. ONPQ: Positive core proposition >> affirmative answer bias.

Positive p = *go to the movies*.

Sinemaya gidecek miy-di-niz?

cinema:DAT go:FUT.PTCP Q-PST-2PL

'Didn't you want to go to the movies?' (Wendt 1972:303)

But when scoping over a negatively rated core proposition, a negative bias question results.

- (28) b. ONPQ: Negative core proposition >> negative answer bias.

Negative p = *drink this water* (with derogatory *this*).

Bu su içilir mi?

this water drinkable Q

'Can you (really) drink this water?'

'This water can't be drunk, can it?' (Wendt 1972:303)

4 Interrogative Negation >> Negated Conjunction >> Disjunctive Particle

In addition to the syntactic-pragmatic mechanisms laid out in Sections 2 and 3 (outer negation conversion by Asking > Calling-into-Question Implicature into an affirmative answer bias particle [§ 3.2] (17); outer negation conversion by Asking-for-Confirmation Implicature into a negative answer bias particle and incredulity question particle, (18)), there is another mechanism which turns outer interrogative negations into disjunctive particles meaning 'or' and into complementizers of disjunctive questions 'whether ... or ...'. As a result of this negation > conjunction shift, disjunctive conjunctions and the complementiz-

ers of disjunctive questions may be homophonous with the negation (as in Old French *ne* ‘or’) or contain the negation combined with other particles (as in Hitt. *naššu* ‘or’), as was already observed and documented by Morpurgo Davies (1975).¹² Morpurgo Davies recognized a semantic shift from “if not” or “it is not”/“and not” to the disjunctive operator “or” (167) and concluded that “[i]ntuitively it is possible to see—and Turkish and Arabic show the development in progress—how “if not” can yield “or”. Should we then argue that the other cases too may be explained in these terms?”

There is in fact more evidence to bolster a two-stage development leading from interrogative negation to a negative conditional and eventually to a disjunctive conjunction, formally $[Q[-[p]]] \gg \text{negative conditional} \gg \text{disjunctive conjunction}$. Crucially, negation-based disjunctive conjunctions tend to show negation-initial placement. Under the presumed shift from “if not” to “or”, this makes sense inasmuch as negation-initial clauses are a source of outer negated polar questions, which may develop into negative conditionals by the Topic-Conditional Shift.

- (29) a. Topic-Conditional Shift: *Conditionals are topics*, see Haiman 1978, and cf. Auer 2005:31f. and Hackstein 2013: negated polar topic questions with fronted propositional negation under neutral interrogative scope provide a frequent source of negated conditionals. Older Indo-European languages may use the fronted interrogative negation as a negative conditional, cf. e.g. Old Latin *nī* ‘if not’.
- (29) b. Attenuation of negation: negative conditional negations meaning ‘if not’ take on the non-negated meaning ‘or’ through the logical equivalence of $\{x, \text{if not } y\} = \{x \text{ or } y\}$.

H.-Luw. *nipa* ‘or’ (Morpurgo Davies 1975:160, 165, Hawkins and Morpurgo Davies 2010, Morpurgo Davies 2011:209–212), e.g. in *waš ni REX-tiš nipa=wa=š (FEMINA)haššušaraš* ‘Whether (s)he is a king, or (s)he is a queen’ (KULULU 5, 4 §7ab; Hawkins and Morpurgo Davies 2010:116).

Hitt. *naššu* ‘or’ < PIE **no=sue*, literally ‘not thus’ (Morpurgo Davies 1975:160, Kloekhorst 2008:596f.), may represent an etymological-functional match of Latin *nisi* ‘not thus’ > ‘if not’. The syntactic and func-

¹² Cf. also Mauri 2008:43f., with no mention of Morpurgo Davies.

tional development begins with a negative conditional conjunction (negation plus particles), which in turn provides the source of a disjunctive conjunction 'or'.

Old French *ne* 'or' (Moignet 1973:332 f.), e.g. in

De coi avez ire ne duel?

'Whence do you have anger or distress?' (Erec 2513).

Italian *sennò* 'if not' > 'or' (Mauri 2008:44).

Modern Dutch *dit, zo niet dat* 'this, if not that' > 'this or that' is a further parallel (Kloekhorst 2008:597).

Outside Indo-European, cf. also Modern Colloquial Arabic *walla, wəlla* < Classical Arabic *wa'illā* (**wa 'in lā* 'and if not'); Turkish *yoksa*, originally from negative conditional *'if not' (*yok* 'it/there isn't' + conditional -*sa* 'if'); and Tamil *allatu* 'or', lit. 'it is not' (Morpurgo Davies 1975:165).

Furthermore, negative conditional markers provide the source for the complementizers of disjunctive interrogative complementizers. In these constructions as well, the negations are prone to be attenuated. On a purely logical level, the semantic-syntactic frame of the kind 'alternative question with negated alternatives', i.e., {whether not *x* or not *y*}, is denotationally equivalent to a non-negated alternative question {whether *x* or *y*}, cf. e.g.

- (30) *I am wondering whether I shouldn't go or whether I shouldn't stay.*
 = *I am wondering whether I should go or whether I should stay.*

The logical equivalence in (30) is no different from the denotational equivalence of a negated polar question (NPQ) with a complementary affirmative polar question (APQ), cf. e.g. Buring & Gunlogson 2000:1.

- (31) NPQ: *Haven't I addressed this matter lately?*
 = APQ: *Have I addressed this matter lately?*

NPQ: *Je me demande si Jean n'est pas malade.*

= APQ: *Je me demande si Jean est malade.* (Meibauer 1990:446)

The equivalence of a question containing two negated alternatives with its non-negated version, which holds on a purely formal logical level, explains instances of alternative-question constructions which state alternative questions in the negative, but treat these as non-negated alternative questions whose translation equivalents in other languages do in fact appear as non-negated. The underlying mechanism is the logical equivalence of negation under question with hypothetical negation ('if not'), which then by logical implication comprises the complementary possibilities of negated or non-negated proposition (Affirmative-Negative Equivalence under Disjunction). This equivalence is responsible for the bleaching of the negation.

(32) a. Russian, colloquial

ne to A ne to B?

'Shall one (do/prefer) A or B?', 'Either A or B?'

ne to idti, ne to net?

NEG that/then go:INF NEG that/then NEG

'Shall one go or not?' (Daum & Schenk 1984:399)

ne to idti, ne to ostavat'sja?

NEG that/then go:INF NEG that/then stay:INF

'Shall one go or stay?'

(32) b. Old French

qui qu= alast ne anz ne hors

who COMP= go:IMPF.SBJV.3SG NEG inside NEG outside

'whoever would go, whether inside or outside' (Erec 5167)

(32) c. Latin

utrum? taceam=ne

utrum? taceam=ne

which.alternative? be.quiet:PRS.SBJV.1SG=Q/*NEG

an praedicem?

**at=ne praedicem?*

**BUT=NEG speak.up:PRS.SBJV.1SG*

(*'Which one? Should I not be quiet or should I not speak up?')

= 'Shall I be quiet or shall I speak up?' (Ter. Eun. 721)¹³

13 Lat. interrogative =ne < PIE negation *ne (see above § 3.3); Lat. an < *at=ne. For attestations of the *utrum* = ... *ne* ... an ... construction, see Kühner and Stegmann 1914:526.

(32) d. East Tocharian

āmāsañ trāñkiñc:

‘The ministers say:

mā te nātāk cam brā[mañ] epe mā te was
 NEG Q lord:NOM this:OBL Brahmin:OBL or NEG Q we:OBL
entsaträ was nu tamne-wkämnyo nātkis
 keep:PRS.3SG we:NOM however thus-kind:INS lord:GEN
yäsluntaśśäl mā cämplye nasamäs
 enemy:COM NEG able:NOM.PL be:PRS.1PL

Whether the lord keeps this Brahmin or whether he keeps us, yet
 with such an enemy of the lord we (are) not able (to cooperate (?))’
 (A342b2–4, tr. CEToM; cf. Hackstein 2013:113)

5 *And Whatnot: The Litotes Effect*

Another syntactic-pragmatic context that invites the neutralization of high negation is provided by interrogative-exclamatives. According to an inherited Indo-European construction, exclamatives may appear in the guise of both root clauses and subordinate clauses, the latter often either as indirect interrogatives or as relative clauses. German examples are

(33) a. Direct Negated Exclamative Interrogative:

Was gibt es hier nicht alles?!
 what:ACC give:PRS.3SG it here NEG all:ACC
 ‘What if anything would not be here?’

(33) b. Indirect negated exclamative interrogative:

Was es hier nicht alles gibt?!
 what:ACC it here NEG all:ACC give:PRS.3SG
 ‘[Awesome,] what a wealth of nice things there are (around) here!’
 (Engel 2009:132)

Once again, the attentuation of the negation is indicated by the observation that negated interrogative-exclamatives are frequently interchangeable with their non-negated versions.

(33) c. Indirect non-negated exclamative interrogative:

Was es hier doch alles gibt?!
 what:ACC it here PTCL all:ACC give:PRS.3SG
 '[Amazing,] all the things that there are (around) here!'

In the same vein, translation equivalents of negated German exclamative-interrogatives appear as non-negated questions in English, Russian, French and Latin.

(34) a. Negated exclamative interrogative:

Was du nicht sagst?! [German]
 what:ACC you:NOM NEG say:PRS.2SG

(34) b. Non-negated translation equivalents:

What do you know?! [English]
čto ty govoriš'?! [Russian]
 what:ACC you:NOM.SG say:PRS.2SG
Que tu dis?! [French]
 what you:NOM.SG say:PRS.2SG
Negant - 'Quid ais?' inquam. [Latin]
 deny:PRS.3PL - what say:PRS.2SG say:PRS.1SG
 'They say 'No.'—'What do you say?', I say.' (Cic. Att. 2,8,1)

What is the mechanism behind the elidability of the negation in the above examples? We have seen above that elidable negations are frequently termed "expletive negations" (cf. e.g., Portner and Zanuttini 2000:193 with n. 1)—a rather fuzzy term, since "expletive negation" denotes any "merely filling" negation that is devoid of its negating function and hence elidable ("leere oder expletive Negation"; Gallmann apud Eisenberg et al. 2009:915). Less imprecise is Meibauer's "non-propositional negation" (1990:444). Whereas propositional *nicht* negates the propositional content of a sentence, so-called non-propositional *nicht* apparently does not. Rather, it produces a 'modal' assertive effect, e.g.

(35) *Was weiß er nicht alles?* [admiring or ironic assertion by means of a question]
 'What if anything could there be that he would not know?'

But so far this does not go beyond the descriptive level. What is the mechanism behind the non-propositionality of the negation? According to Meibauer (1990), non-propositional *nicht* descends from propositional *nicht* by a pragmatic mechanism. Meibauer (1990:458) proposes to start from a true Information Question, cf. e.g. (36a), in which *nicht* appears as an inner propositional negation and permits the rephrasing as (36b).

- (36) a. *Was weiß er nicht alles?*
 (36) b. *Was gäbe es, was er nicht wüsste?*

This is where pragmatics comes into play. Normally, a negative sentence will be avoided if a positive one can be used in its place (Leech 1983:101). If a negative sentence is used, there must be an extra reason for it (per the Gricean Maxim of Quantity, see n. 7 above), which invites the following inference: by asking about the possibility of the negated proposition (*him not knowing everything*) being true, the speaker wishes to express that he rates the negated proposition as undesirable and therefore unexpected. I argue that Meibauer is right in invoking a pragmatic mechanism, but that the mechanism behind the attenuation and elidability of negations in interrogative-exclamatives is the generalization of an effect that may be termed the Litotes Effect and emerges according to the following three-step mechanism. The input is a polar question or content question with a propositional inner negation under interrogative scope, either in the guise of a matrix interrogative clause like (37a):

- (37) a. Negated exclamative interrogative

Was habe ich nicht alles für dich getan?! [German]

or as a synonymous indirect interrogative clause like (37b):

- (37) b. Indirect interrogative with elided matrix clause

[*Ich frage*] *Was ich nicht alles für dich getan habe!*
 [*Unglaublich*] *Was ich nicht alles für dich getan habe!*
 [*Nichts gibt es*] *Was ich nicht alles für dich getan habe!*

First, the interrogative *was?* 'what?' acquires the sense of a negative assertion 'what (if anything at all)' by the Asking > Questioning Implicature (Interrogative Negation Reversal). Hence

TABLE 3 *Litotes Effect and negation attenuation*

<i>Was nicht alles?</i>	Processes
a) <i>Was (nicht (alles))?</i> → <i>Nichts (was nicht (alles))</i>	Asking > Calling-into-Question Implicature assigns negating function to the content interrogative
b) <i>Nichts (was nicht (alles))</i> → <i>alles</i>	Double negation triggers Litotes Effect
c) = <i>alles</i>	Shift of emphasis causes backgrounding of negative, and foregrounding of implied complementary affirmative

(38) a. *What have I not done for you?*

acquires the meaning

(38) b. *What (if anything at all) is there ...?*
= *There is nothing/I doubt there is anything—that I have not done for you.*

Second, upon its acquisition of negative polarity, the interrogative *what if anything at all* in turn negates the internal negation, creating the Litotes Effect, i.e. the emphasis of a positive assertion by means of a double negation.

(38) c. *What (if anything at all) would there be that I have not done for you?*

The Litotes Effect makes use of the affirmation-by-negation paradox: it is by means of the negated statement that one can achieve a stronger affirmation than by a non-negated affirmative statement; cf. already Ducrot (1984:216), who rightly diagnosed a “dissymétrie entre énoncés affirmatifs et négatifs ... l’affirmation est présente dans la négation d’une façon plus fondamentale que ne l’est la négation dans l’affirmation.” Crucially, the same asymmetry holds for questions: a negated question encodes more affirmative power than a non-negated question.

Finally, the backgrounding of the negative and the foregrounding of the implied complementary affirmative cause the German negation *nicht* in *Was nicht alles?!* ‘What not?’ to lose its semantic compositionality. As a result, the entire phrase ceases to be perceived as a negative phrase.

The development of German *Was nicht alles?* is paralleled by that of English *and whatnot*, which may be paraphrased as the non-negated *and everything*.

6 Conclusions

- a. Fronted high negations under interrogative scope may undergo conversion into affirmative answer bias particles when the interrogative operator is affected by the Asking > Calling-into-Question Implicature, which calls the negation of an expectational, positively rated core proposition Interrogative into question, thereby causing Negation Reversal and an affirmative bias towards the core proposition (§ 3.2), cf. Ancient Greek οὐ (§ 2.5.1), ἄρ' οὐ (§ 3.4), Vedic *nahí* (§ 2.5.2), West Tocharian *mā* (§ 2.5.3), *mapi* (§ 3.5).
- b. Alternatively, fronted high negations under interrogative scope may undergo conversion into interrogative particles that convey negative answer bias and mark dubitative questions, when the interrogative operator is affected by the Asking-for-Confirmation Implicature, and cause a confirmation bias towards the negation of a counterexpectational negatively rated core proposition (§ 3.2). This mechanism causes high interrogative negations to develop into markers of dubitative and incredulity questions, cf. Ancient Greek ἄρα μή (§ 3.4), Lithuanian *nejaūgi* (§ 3.6), Russian *neuželi* (§ 3.7). The choice between affirmative or dubitative bias question is thus partly driven by the expectancy rate of the core proposition.
- c. Furthermore, negations under interrogative scope may develop into negative conditional conjunctions and further into disjunctive particles meaning 'or' and complementizers of disjunctive questions ('whether ... or ...') (§ 4). The underlying mechanism is the logical equivalence of negation under question with a hypothetical negation ('if not'), which comprises the complementary possibilities of negated or non-negated proposition (Affirmative-Negative Equivalence under Disjunction).
- d. Finally, in interrogative-exclamatives, inner negations may be converted into non-negated assertive particles by the Litotes Effect (§ 5). The effect is triggered by rhetorical content question markers, which under the Asking > Calling-into-Question Implicature convey the opposite polarity of the content interrogative, e.g. rhetorical *What?* is interpreted as *What, if anything?*, which then means and asserts *Nothing*. Rhetorical content questions involving polarity reversal may set off a Litotes Effect when scoping over a negation, whereby the reverse-polarity rhetorical interrogative cancels the negation under its scope, e.g. rhetorical *What not?* >> *What, if anything, not?* >> *Nothing that (is) not = Everything*.

TABLE 4 Conversion of negation and synchronic gradience

	A) interrogative negation	B) interrogative particle	C) affirmative particle, conjunction
Latin	<i>*ne?</i>	affirmative = <i>ne?</i> dubitative = <i>ne?</i> neutral = <i>ne?</i>	
Greek	οὐκ οὐν?	affirmative οὐκ οὐν? dubitative οὐκ οὐν?	affirmative, conclusive οὐκ οὐν
Vedic	<i>ná=nu?</i>	affirmative <i>ná=nu?</i>	affirmative <i>ná=nu</i>
West Tocharian	<i>má +pi</i>	affirmative <i>mapí?</i> , dubitative <i>mapí?</i>	causal-explicative <i>mapí</i> , <i>mäpí</i>
Lithuanian	<i>nejaũ(gi)?</i>	dubitative <i>niaũ(gi)?</i>	causal-explicative <i>niaũ</i>
OHG	<i>ne, ni?</i>	affirmative = <i>na?</i>	

All of these mechanisms may be operative at all times and in all languages and often share formal traits such as the destressing of the negation under B and C in the following table (Latin =*ne* [§ 3.3], Ancient Greek οὐκ οὐν [§ 2.5.1.2], West Tocharian *mapí* [§ 2.5.3.2.]). In addition, they represent historical processes which may at the same time be synchronically projected in the guise of gradience and layering, i.e. the synchronic cooccurrence of the developmental stages A through C.

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