Two Types of Polar Question in Nłeʔkepmxcín*

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Abstract: Nłeʔkepmxcín (Northern Interior Salish) has two ways to form polar questions: a matrix predicate *keʔ* plus a nominalized subordinate clause, or a second-position clitic *n̓*. I show that the two strategies have different pragmatic properties. *keʔ* is used for neutral questions: typical *keʔ*-contexts are when the speaker is (or wishes to appear) completely unsure about the answer. *n̓* is used when the speaker is not able to commit to a particular proposition *p*, but expects that the addressee will do so. Typical *n̓*-contexts are when the speaker has evidence that the addressee believes *p*. Nłeʔkepmxcín sheds light on several theoretical debates about polar questions. It provides evidence that (i) both bipolar and monopolar questions exist; (ii) inquisitive and assertive declarative questions are not a unified phenomenon; (iii) there is no universal default mapping between declarative/interrogative syntax and assertion/questioning speech acts; (iv) alternative questions are not necessarily formed from monopolar bases.

Keywords: Nłeʔkepmxcín, Salish, polar questions, semantics, pragmatics, bias, fieldwork

1 Introduction

1.1 Research question

In Nłeʔkepmxcín (a.k.a. Thompson River Salish; ISO 639-3: thp), polar questions can be formed in two ways. The first involves an intransitive predicate, cited by Thompson and Thompson (1992; henceforth T&T 1992) as *keʔ(-è)*.[1] I will cite this element as *keʔ* for convenience, although it does often show up, especially in the Coldwater dialect, as *keʔe*. *keʔ* takes as complement a nominalized subordinate clause introduced by the 'unrealized' determiner/complementizer *k*. Examples are given in (1) and (2).[2]

* I am very grateful to Nłeʔkepmxcín consultants Bev Phillips, kʷəɬtèzetkʷuʔ (Bernice Garcia), and cŭʔsinek (Marty Aspinall). *kʷukʷsteyp!* Bernice wishes it to be acknowledged that she is a Kamloops Indian Residential School speaker, who is re-learning her language. She introduces herself thus: *ʔes ʔúməcms kʷəɬtèzetkʷuʔ təw ɬe c̓əɬétkʷu wéʔe ncitxʷ. ƛ̓uʔ wéʔec ʔex netíyxs scweʷẃxmx, ƛ̓uʔ tékm xéʔe ne nłeʔkepmx e tmixʷs*. 'My traditional name is kʷəɬtèzetkʷuʔ, my home is in Coldwater of 'Nicola' of Nlaka'pamux lands.'

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[1] T&T (1992:166) call *keʔ* an interrogative indefinite, and state that it means 'which, whichever, whatever' as well as 'is it (that) …?'. T&T do not give examples of *keʔ* in its use as a wh-word, and I have not yet been able to elicit it in its 'which' meaning. Here I focus exclusively on its use in polar questions.

[2] In data taken from prior literature, glosses have sometimes been added or adjusted. Glosses not found in the Leipzig Glossing Rules are: ADD: additive; AUG: augmentative; AUT: autonomous; CHAR: characteristic

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(1) **kéʔe** k=eʔ=s=x^{w}uy̓ nés?
Q D/C=2SG.POSS=NMLZ=PROSP go
'Will you go?' (T&T 1992:166)

(2) **keʔ** k=s=wik-t-Ø-x^{w} u cíʔ e helew̓?
Q D/C=NMLZ=see-TR-3OBJ-2SG.ERG to there DET eagle
'Do you see the eagle over there?' (Koch 2008:285)

The second strategy involves a second-position enclitic *n̓*, as illustrated in (3) and (4). A two-sentence string containing an example of each strategy is shown in (5).

(3) q^{w}nóx̣^{w}=k^{w}=**n̓**?
sick=2SG.SBJ=**Q**
'Are you ill?' (T&T 1992:24)

(4) c̓e=**n̓** xéʔe k=eʔ-n-tíy-tn?
CLEFT=**Q** DEM DET=2SG.POSS-NMLZ-tea-INS
'Is that your teapot?'x (T&T 1992:163)

(5) **kéʔ** k=s=y̓é=s ƛ̓uʔ ɬ=eʔ-sqáqx̣a ɬ=Hermann?
Q D/C=NMLZ=good=3POSS EXCL DET=2SG.POSS-dog DET=Hermann
Tem=**n̓** k=s-piʔ-íp=s?
lack=**Q** D/C=NMLZ=lose-OOC=3POSS
'Is your dog Hermann still ok? He didn't get lost?' (Koch 2008:272)

The semantic and pragmatic differences between these two strategies for forming positive polar questions have not previously been investigated.

The primary goals of this paper are to establish the discourse conditions on each type of polar question, and to provide an analysis that derives the facts. Once that is done, we will also be able to shed light on some current debates about the semantic and pragmatic analysis of polar questions.

In the rest of the introduction, I provide language background, theoretical background, and information about methodology. In Section 2 I provide basic syntactic information about polar questions in Nłeʔkepmxcín. Section 3 lays out my hypothesis and its predictions. I propose that *keʔ*-questions present a set of two alternative answers to the addressee (in other words, they are 'bipolar'), while *n̓*-questions present only one proposition to the addressee (they are 'monopolar'). This proposal predicts that in fully neutral discourse contexts, *keʔ* is the preferred option. For *n̓*-questions, I adopt Rudin's (2018, 2022) analysis of English declarative questions. This analysis predicts that *n̓*-questions are the preferred option whenever the speaker is not able to commit to the presented proposition *p*, but has reason to believe that the addressee is able to commit to *p*.

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reduplication; CMPL: completed; COUNTER: counter to expectation; CTR: control; EMPH: emphatic; EXCL: exclusive; FMV: formative; IMM: immediate; INC: inchoative; IND: indirective applicative; INH: inherent; LC: limited control; OOC: out of control; RPRT: reportative; TAG: tag question particle.

There is no consistent system for marking stress in Nłeʔkepmxcín. In data I have collected, I have chosen to mark stress only on words with more than one syllable (where 'words' is construed to also include any clitics that might have attached to a root). Material that is grammatically there but not pronounced is enclosed in square brackets.

Section 4 is the main data section; it presents evidence that the predictions of the hypothesis are confirmed. In Section 5, I present my analysis in more detail and discuss how the Nłeʔkepmxcín data relate to several theoretical debates. One debated issue is whether polar questions are all bipolar, all monopolar, or can be both; I argue that polar questions can be either bipolar or monopolar, and that Nłeʔkepmxcín morphosyntactically encodes the difference. A second issue is whether inquisitive and assertive declarative questions are different phenomena or can be unified. I argue that inquisitive and assertive declarative questions are not the same thing, and only the former are marked with *n̓* in Nłeʔkepmxcín. Thirdly, I argue that Nłeʔkepmxcín speaks against the prevailing view that there is a default mapping between declarative syntax and assertion, on the one hand, and between interrogative syntax and questioning, on the other. This belief has led to proposals that declarative questions are non-default and as such are subject to additional pragmatic constraints. In Nłeʔkepmxcín, there is no evidence that either form of polar question is more closely related to an interrogative syntax. Finally, in Nłeʔkepmxcín 'or not' questions can only be formed from bipolar bases, contrary to what has been argued for English by Biezma and Rawlins (2012) and Krifka (2021a,b).

1.2 Language background

Nłeʔkepmxcín is a Northern Interior Salish language, spoken along the Fraser Canyon and the Nicola and Thompson Rivers in British Columbia, Canada. The language comprises several dialects; the Spuzzum and Lytton dialects are the most well-documented, with the Nicola Valley dialect less well-studied. According to Gessner et al. (2022), the language had approximately 105 fluent speakers in 2022.

For this research I worked with two speakers of Nłeʔkepmxcín: Bev Phillips, who is from Lytton, and kʷəɬtèzetkʷuʔ (Bernice Garcia), who is from Coldwater and speaks the Nicola Valley dialect. As the two consultants speak different dialects, I will sometimes give two versions of the same sentence so that both variants are represented. Unless otherwise noted, the two speakers' judgments agree on all the core generalizations presented here.

Data are presented in a North American Phonetic Alphabet orthography, used in Thompson and Thompson's 1992 grammar and 1996 dictionary, and in Jimmie (1994). This is one of the orthographies used by community members,[3] but there are other writing systems in use as well.

1.3 Theoretical background

A classical analysis of polar questions says that they denote the set of their possible answers. Thus, for Hamblin (1973), the question *Is it raining?* denotes the set of propositions {it is raining, it is not raining}. This idea immediately raises puzzles, however, since in many languages there are multiple different ways of constructing a polar question. Some examples from English are given in (6).[4]

(6) a. Is it raining? — positive Q
b. Is**n't** it raining? — high negative Q
c. Is it **not** raining? — low negative Q
d. **It's** raining? — declarative Q

[3] See https://www.firstvoices.com/explore/FV/sections/Data/.

[4] Rising declaratives and verum questions may also contain (high or low) negation, further adding to the range of possibilities.

e. **IS** it raining? verum Q
f. It's raining, **isn't it**? reverse-polarity tag
g. It's raining, **is it**? same-polarity tag

The questions in (6)a–g) are all in some sense designed to find out whether it is raining, and all can receive similar answers, such as *Yes, it's raining* or *No, it's not raining*. Under a classical analysis, therefore, they all have the same semantics: {it is raining, it is not raining}. The puzzle is that the questions in (6)a–g) each convey slightly different pragmatic meanings, and are felicitous in a different subset of discourse contexts.

A couple of examples of different contexts for polar questions are given in (7) and (8). In (7), the speaker had no prior epistemic bias (i.e., no prior beliefs) about the truth of the prejacent proposition, but is faced at the utterance time with positive evidence for it. The only appropriate forms of the polar question are a positive question (7), a declarative question (7), or a same-polarity tag (7). (The symbol # indicates unacceptability in the context.)

(7) *Context: A is in a windowless room, with no idea what the weather is like outside. B enters the room wearing a dripping wet raincoat. A asks:*

a. Is it raining?
b. #Is**n't** it raining?
c. #Is it **not** raining?
d. It'**s** raining?
e. #**IS** it raining?
f. #It's raining, **isn't it**?[5]
g. It's raining, **is it**? (adapted from Gunlogson 2008)

In contrast, in (8), the speaker had a prior epistemic bias towards the positive answer (that there is a Chinese restaurant nearby), and receives no further evidence at the utterance time. The most felicitous ways to ask the question are with high negation (8), or a reverse-polarity tag (8). The plain positive question (8) is possible, but not preferred.

(8) *Context: A thinks there is a Chinese restaurant nearby. B says, "You wanna go get something to eat?" and A replies:*

a. ? Is there a Chinese restaurant around here?
b. Is**n't** there a Chinese restaurant around here?
c. #Is there **not** a Chinese restaurant around here?
d. #There**'s** a Chinese restaurant around here?
e. #**IS** there a Chinese restaurant around here?
f. There's a Chinese restaurant around here, **isn't there**?
g. #There's a Chinese restaurant around here, **is there**? (adapted from Ladd 1981)

In this paper my main focus is positive polar questions, although for completeness I will give some negative question data in Section 6.

Even sticking to positive questions and excluding verum questions and tag questions, there are interesting analytical issues. Compare the situation in (7) (where the speaker had a neutral prior

[5] The intended intonation of (7f) is with a final rise. There is another construction again, with falling intonation on the tag, which is acceptable in this context.

epistemic stance, but receives positive contextual evidence that it is raining) with that in (9), which has neutral epistemic bias and also neutral (i.e., no) contextual evidence.[6] In (9), the declarative question is no longer appropriate and the only real option is a plain positive question.

(9) *Context: Mary calls her friend Bob who lives far away. After saying "hi", she asks, "What's the weather like over there? …":*

a. Is it raining?
b. #Is**n't** it raining?
c. #Is it **not** raining?
d. #It'**s** raining?
e. #**IS** it raining?
f. #It's raining, **isn't it**?
g. #It's raining, **is it**? (adapted from Büring & Gunlogson 2000)

The puzzles raised by data such as in (7) to (9) have led to much debate; examples of relevant works include Bolinger (1978), Ladd (1981), Han (1998, 1999), Beun (2000), Büring and Gunlogson (2000), Hsieh (2001), Huddleston and Pullum (2002), Gunlogson (2003, 2008), van Rooy and Šafářová (2003), Romero and Han (2004), Šafářová (2005), Beyssade and Marandin (2006), Romero (2006, 2020), Asher and Reese (2007), Reese (2007), Poschmann (2008), Aihara (2009), Reese and Asher (2010), Roelofsen and van Gool (2010), AnderBois (2011, 2019), Biezma and Rawlins (2012), Roelofsen et al. (2012), Repp (2013), Sudo (2013), Yuan and Hara (2013), Trinh (2014), Ito (2015), Krifka (2015, 2017, 2021a, 2021b), Malamud and Stephenson (2015), Roelofsen and Farkas (2015), Domaneschi et al. (2017), Farkas and Roelofsen (2017), Gärtner and Gyuris (2017), Gyuris (2017), Westera (2017), Xu (2017, 2018), Jeong (2018), Rudin (2018, 2022), Frana and Rawlins (2019), Bhatt and Dayal (2020), Silk (2020), Ciardelli (2021), Giannakidou and Mari (2021), Goodhue (2018, 2019, 2021, 2022), Liu et al. (2021), Woods and Roeper (2021), Bill and Koev (2022), Larrivée and Mari (2022), among others.

One point of debate concerns whether or not polar questions always denote their two possible answers (as they do in the classical Hamblin approach where they denote the set $\{p, \neg p\}$, or in Inquisitive Semantics, where polar questions denote bipolar sets of information states). In a series of recent papers, Krifka (2015, 2017, 2021a,b) has defended the idea that at least some polar questions are monopolar, in that they present only one proposition to the addressee, requesting the addressee to confirm that proposition. Other authors have even proposed that *all* polar questions are monopolar; see for example Gunlogson (2003:37), Roberts (2012:10), and Biezma and Rawlins (2012). Biezma and Rawlins write that "there is no alternative-introducing item in polar questions" (2012:395), and that all polar questions "denote just a single Hamblin alternative" (2012:366). In Biezma and Rawlins' analysis, the question operator in a polar question simply adds a presupposition that the proposition in the singleton set is one of the salient alternatives in the context.

We thus see that there are (at least) three possible positions with respect to the semantic denotation of polar questions: (i) they are all bipolar (as in Ciardelli 2021, among others);[7] (ii) they

[6] Büring and Gunlogson (2000:7) define 'contextual evidence' as 'Evidence that has just become available to the participants in the current discourse situation.'

[7] Within Inquisitive Semantics, the concept of 'highlighting' is used to reflect the fact that one of the alternative propositions can be more prominent in a polar question; see for example Roelofsen and van Gool (2009), Farkas and Roelofsen (2017), among others.

are all monopolar (Biezma & Rawlins 2012, among others); or (iii) they can be either bipolar or monopolar (Krifka 2015, 2017, among others). In this paper I will argue for the third option, based on evidence from Nłeʔkepmxcín.

Beyond the question of bipolarity vs. monopolarity, there are details to be settled about the precise pragmatic effect of monopolar questions; see for example discussion of English declarative questions in Gunlogson (2003, 2008), Malamud and Stephenson (2015), Jeong (2018), Rudin (2018, 2022), Goodhue (2021), among others. I will return to these matters in Section 5.

1.4 Methodology

The data presented here result from the author's fieldwork with two speakers: Bev Phillips, from l̓əq̓əmcín (Lytton; Lytton dialect), and kʷəɬtèzetkʷuʔ (Bernice Garcia), from c̓əɬétkʷu (Coldwater; Nicola Valley dialect).

The two main data collection methodologies used were translation tasks and acceptability judgment tasks (Matthewson 2004, among others). Translation tasks involve a consultant being asked to produce a Nłeʔkepmxcín utterance after hearing and/or seeing a specific discourse context paired with an English utterance. The discourse contexts are presented either verbally, or via connected strings of pictures, also known as storyboards (Burton & Matthewson 2015). An example of a storyboard-based translation task is given in Figure 1. The consultant views the pictures (while the researcher reads any text in the pictures), and then produces a translation of the final utterance.

Figure 1: Storyboard for neutral epistemic bias, positive contextual evidence

This is a slightly different way of working with storyboards than was originally proposed by Burton and Matthewson (2015), whose method involves the consultant telling the whole story in their own words, with typically no written text in the pictures. Common to both methods is the fact that the storyboards are designed to elicit specific linguistic phenomena and to test specific linguistic hypotheses; they thus differ from all-purpose narrative-eliciting techniques such as the Pear Stories (Chafe 1980) or Frog Stories (Berman & Slobin 1994).

Acceptability judgment tasks involve the consultant evaluating a Nłeʔkepmxcín utterance in a specific discourse context, which is again presented either verbally or with the help of pictures. Consultants were not given a strict response scale, but simply responded about whether the sentence sounded acceptable in the context. See Matthewson (2004), the papers in Bochnak and Matthewson (2015), and Tonhauser and Matthewson (2016), among others, for further details of these methodologies.

It is important to note that the distinction I will be discussing — between two different ways of expressing a polar question in Nłeʔkepmxcín — is both subtle and extremely discourse-dependent. We can see this in English too, where there is only a slight difference between *Is it raining?* and *It's raining?*, in a context where one's addressee has just walked in wearing wet raingear. And even in a context which strongly favours a negative question such as (8) above, the positive question may be accepted by some speakers.

For languages with large numbers of speakers, these issues can be somewhat alleviated by conducting experiments with large numbers of participants. This method allows researchers to establish overall preferences between different question forms; see for example Roelofsen et al. (2012), Domaneschi et al. (2017) for English, or Liu et al. (2021) for German. In the current context, a large-scale experimental methodology is not possible. Instead, I will present information about which forms were *volunteered* by consultants, as opposed to merely accepted. This will stand as a proxy for which form they prefer. I will also report on negative judgments where these arose, and I will give consultants' comments wherever they are relevant to elucidating the meaning of the questions or the contexts they are felicitous in.

2 Basic structure of Nłeʔkepmxcín polar questions

As mentioned in Section 1.1, matrix polar questions in Nłeʔkepmxcín may involve either the *keʔ* strategy or the *n̓* strategy. *keʔ* is an intransitive predicate that takes a subordinate nominalized clause (see (1) and (2)) while *n̓* is a second-position clitic (see (3) and (4)). T&T gloss *keʔ* as 'is.it.that', while Koch (2008) glosses it as 'is.it.case'. I will gloss both *keʔ* and *n̓* as 'Q'.

The enclitic *n̓* and the predicate *keʔ* can co-occur, although this is not often volunteered. Their co-occurrence is illustrated in (10) and (11).[8]

(10) *keʔ n̓ ks ʕʷəsʕʷə́sts?*
keʔ=n̓ k=s=ʕʷəs~ʕʷə́s-t=s
Q=Q D/C=NMLZ=AUG~sunshine-IMM=3POSS
'It is sunny?' (BP; volunteered without *n̓;* accepted with it)

[8] In all data I have elicited, I provide a four-line presentation, where the first line does not include morpheme breaks.

(11) *keʔ n̓ ks xʷtəpstéxʷ ʔe school?*
keʔ=n̓ k=s=xʷtəp-s-t-éxʷ ʔe=school
Q=Q D/C=NMLZ=finish-CAUS-TR-2SG.ERG DET=school
'Have you finished school?' (BP; volunteered)

One of my consultants disprefers the *keʔ n̓* combination, although she has on occasion accepted it. When asked to judge (12), on one occasion this consultant frowned slightly and said "Yeah, that's one way", and on another occasion said "Yeah, I'd understand you", but indicated that she would not normally say it like that. It is possible that I have simply not yet established the appropriate discourse contexts for the *keʔ n̓* combination, so future research is required here.

(12) ? *keʔ n̓ ks tekłs?*
? **keʔ=n̓** k=s=tekł=s
Q=Q D/C=NMLZ=rain=3POSS
'Is it raining?' (KBG)

I will not be analyzing embedded questions in this paper, but for completeness I briefly show how they are formed. According to Kroeber (1997), embedded questions are introduced by the 'hypothetical' complementizer *ʔe* and contain subjunctive marking, as in (13). For my consultants also, subjunctive marking is obligatory in an embedded question, and the *ʔe* complementizer is usually present. It may be dropped, but I assume this is phonological elision, since the subjunctive marking is licensed by the presence of this complementizer. Examples are given in (14) and (15).

(13) sew-e-cm-s [**ʔe**=xʷuy̓=**wn** nes].
ask-TR-1SG.OBJ-3ERG [**COMP**=PROSP=**1SG.SBJV** go]
'He asked me if I was going to go.' (Kroeber 1997:383)

(14) *Context: The phone rings and I have a quick conversation with the person. It was my friend Mary who is coming to visit from a neighbouring town. You ask me, "What did Mary want?" and I say:*

ʔex séwecms ʔe tékł us nʔéye.
ʔex sέw-e-cm-s [**ʔe**=tékł=**us** nʔéye]
IPFV ask-TR-1SG.OBJ-3ERG [**COMP**=rain=**3SBJV** DEM]
'She asked me whether it was raining here.' (BP; volunteered)

(15) *Context: You are supposed to work with Aaditya and he doesn't show up. So you text me and ask if he is coming. I don't know whether he's coming, but I'm sure that Samir knows. I reply:*

x̣əkstés ɬ Samir (ʔe) xʷúy̓ us móqʷix.
x̣ək-s-t-és ɬ=Samir [**(ʔe**=)xʷúy̓=**us** móqʷ-ix]
know-CAUS-TR-3ERG DET=Samir [(**COMP**=)PROSP=**3SBJV** gather-AUT]
'Samir knows if he's coming.' (BP; volunteered)

In addition to the hypothetical *ʔe* complementizer plus subjunctive, it is possible to have the question predicate *keʔ* in an embedded question, as shown in (16) and (17) (one from each speaker). This is occasionally volunteered, and usually accepted when offered.

(16) *Context: As in (14).*

ʔex sewłn ʔe kéʔ us ks tekłs nʔéye.
ʔex sewłn [ʔe=**kéʔ**=us k=s=tekł=s nʔéye]
IPFV ask [COMP=**Q**=3SBJV D/C=NMLZ=rain=3POSS DEM]
'She asked if it is raining here.' (BP; volunteered)

(17) *Context: As in (15).*

x̣əkstés ɬ Samir ʔe kéʔ us ks xʷuy̓s móq̓ʷix.
x̣ək-s-t-és ɬ=Samir [ʔe=**kéʔ**=us k=s=xʷuy̓=s móq̓ʷ-ix]
know-CAUS-TR-3ERG DET=Samir [COMP=**Q**=3SBJV D/C=NMLZ=PROSP=3POSS gather-AUT]
'Samir knows if he's coming.' (BP; volunteered after prompting to use *keʔ*)

The enclitic *n̓* is only marginally possible inside an embedded question. It has not been volunteered in data so far collected. When I offer *n̓* inside an embedded question to the consultants, it is sometimes accepted, sometimes judged as marginal, and sometimes outright rejected. In (18) we see a range of reactions to the presence of *n̓*, and in (19) we see that *n̓* was accepted under a positive matrix predicate but rejected under a negative one. Whether this is significant or a coincidence must be the subject of future research.

(18) *Context: As in (14).*

a. *ʔex séwecms ʔe tékł us n̓ nʔéye.*
ʔex sέw-e-cm-s [ʔe=tékł=us=**n̓** nʔéye]
IPFV ask-TR-1SG.OBJ-3ERG [COMP=rain=3SBJV=**Q** DEM]
'She asked me if it is raining.' (KBG)

b. ? *sewłn ɬ Mary ʔe tékł us n̓.*
? sewłn ɬ=Mary [ʔe=tékł=us=**n̓**]
ask DET=Mary [COMP=rain=3SBJV=**Q**]
'Mary asked if it is raining.' (BP)

Consultant's comment: "It sounds correct … I don't know, not sure. I think it's correct."

c. ? *ʔex sewłn ɬ Mary ʔe tékł us n̓.*
? ʔex sewłn ɬ=Mary [ʔe=tékł=us=**n̓**]
IPFV ask DET=Mary [COMP=rain=3SBJV=**Q**]
'Mary asked if it is raining.' (BP)

Consultant's comment: "I think it's ok. I don't know though. It's another way to say it."

(19) *Context: as in (15).*

a. *x̣əkstés ɬ Samir ʔe xʷúy̓ us n̓ moq̓ʷix.*
x̣ək-s-t-és ɬ=Samir [ʔe=xʷúy̓=us=**n̓** móq̓ʷ-ix]
know-CAUS-TR-3ERG DET=Samir [COMP=PROSP=3SBJV=**Q** gather-AUT]
'Samir knows if he's coming.' (BP; volunteered when prompted to use *n̓*)

b. *#tetéʔ ks x̣əksténe ʔe xʷúy̓ us n̓ móq̓ʷix.*
teténʔ k=s=x̣ək-s-t-éne [ʔe=xʷúy̓=us=**n̓**
NEG D/C=NMLZ=know-CAUS-TR-1SG.ERG [COMP=NMLZ=PROSP=3SBJV=**Q**
móq̓ʷ-ix]
gather-AUT]
'I don't know if he's coming.' (BP)

The final option I have observed for embedded polar questions is to use the negative marker *teʔe* (along with *ʔe* and subjunctive). This was volunteered once but also requires further investigation.

(20) *Context: As in (14).*

ʔex sewłn ʔe téʔe us ks tekłc nʔéye.
ʔex sewłn [ʔe=**téʔe**=us k=s=tekł=c nʔéye]
IPFV ask [COMP=**NEG**=3SBJV D/C=NMLZ=rain=3POSS DEIC]
'She asked if it is raining here.' (Literally: 'She asked if it isn't raining here.')
(BP; volunteered)

3 Hypothesis and predictions

The hypothesis I will be testing is given in (21).

(21) *keʔ* creates a bipolar question, and *n̓* creates a monopolar question.

For bipolar questions, I assume a classical analysis whereby they denote the two-member alternative set {*p*, ¬*p*}. *keʔ* questions offer both *p* and its negation as possible next commitments of the addressee, and are therefore predicted to be unbiased. In fully neutral discourse contexts, *keʔ* should be the preferred strategy.

Monopolar questions present only a single proposition *p* to the addressee. In terms of their pragmatic effects, I adopt Rudin's (2018, 2022) analysis of English declarative questions. We will see below that the Nłeʔkepmxcín data fit very well with Rudin's analysis. The basic idea is that the speaker of an *n̓*-question refrains from committing to the prejacent proposition *p*, but also offers only *p* (and not its negation) as a future addition to the Common Ground. Pragmatic competition with other possible ways to present *p* (either through an assertion, or through a bipolar question) derives the effect that the speaker of an *n̓*-question has an expectation that the addressee believes *p* to be true. Section 5 below gives more details.

This approach to *n̓*-questions predicts that they will be the preferred option whenever the speaker is not in a position to commit to *p*, but believes that the addressee will commit to *p*. This includes almost all cases in which English declarative questions are possible, including 'incredulity' cases where the speaker does not believe *p* to be true. However, it crucially excludes so-called 'assertive declarative questions', where the speaker is in a position to commit to *p*, but is merely unsure of the appropriateness of the discourse move.

4 Data

In this section I first report on the results for questions in fully neutral discourse contexts, and then for contexts that fit the predicted pragmatic profile for monopolar questions. Recall that we cannot

expect the results to be a fully clear-cut matter of 100% acceptance of one form and rejection of the other. I will give information about which forms are volunteered by consultants, which are rejected, and which are only accepted when prompted.

4.1 Fully neutral discourse contexts

In fully neutral discourse contexts, the most commonly volunteered polar questions contain *keʔ.* Example (22) is a case where *keʔ* is initially volunteered, but *n̓* is produced upon request.

(22) *Context: One evening, Mary decides to call her friend Bob who lives far away. Immediately after they greet each other, Mary says, "What's the weather like over there? …":*

a. *keʔ ks ʕʷəsʕʷə́st?*
keʔ k=s=ʕʷəs~ʕʷə́s-t
Q D/C=NMLZ=AUG~sunshine-IMM
'Is it sunny?' (BP; volunteered)

b. *ʕʷəsʕʷə́st n̓?*
ʕʷəs~ʕʷə́s-t=**n̓**
AUG~sunshine-IMM=**Q**
'Is it sunny?' (BP; volunteered after prompting to use *n̓*)

In (23), the consultant volunteers *keʔ* in (23a), and when asked about the version with *n̓* in (23b), corrects it to (23c) which contains an evidential. In (23c), I assume that the evidential *nukʷ* conveys that the speaker has some reason to assume, or evidence to suggest, that it's going to be nice weather, and is seeking confirmation from the addressee. (For discussion of *nukʷ,* see Littell & Mackie 2011, 2014; Smith 2022; and Hannon & Smith 2023.)

(23) *Context: Rose is at work. Her colleague Bob walks in and they greet each other. Rose immediately says:*

a. *kéʔe xʷuy̓ ks nq̓ʷəyénks ʔe spiʔx̣áwt us?*
kéʔe xʷuy̓ k=s=n-q̓ʷəy-énk=s ʔe=spiʔx̣áwt=us
Q PROSP D/C=NMLZ=LOC-cook-belly=3POSS COMP=day.removed=3SBJV
'Is it going to be nice weather / sunny tomorrow?' (KBG; volunteered)

b. *#xʷuy̓ n̓ nq̓ʷəyénk ʔe spiʔx̣áwt us?*
# xʷuy̓=**n̓** n-q̓ʷəy-énk ʔe=spiʔx̣áwt=us
PROSP=**Q** LOC-cook-belly COMP=day.removed=3SBJV
'Is it going to be nice weather / sunny tomorrow?' (KBG)

Consultant's comment on (23b): "Well it hasn't happened yet. You have to add in something."

c. *xʷúy̓ nukʷ n̓ nq̓ʷəyénk ʔe spiʔxáwt us?*
xʷúy̓=**nukʷ=n̓** n-q̓ʷəy-énk ʔe=spiʔxáwt=us
PROSP=**EVID=Q** LOC-cook-belly COMP=day.removed=3SBJV
'Is it going to be nice weather / sunny tomorrow?' (KBG; volunteered)

Consultant's comment on (23c): "So you're kinda predicting."

A good example of a fully neutral context is exam or test questions; the test-giver takes care not to presuppose or suggest anything about the possible answer (see AnderBois 2019). As shown in (24) and (25), test questions prefer the *keʔ* strategy in Nɬeʔkepmxcín.

(24) *Context: Question on a test in school.*

kéʔe ks kʼíʔkʼeʔts ɬ ƛʼəqʼəmcín təw ɬə cʼəɬétkʷuʔ?
kéʔe k=s=kʼíʔkʼeʔt=s ɬ=ƛʼəqʼəmcín təw=ɬə=cʼəɬ-étkʷu
Q D/C=NMLZ=close=3POSS DET=Lytton PREP=DET=cold-water
'Is Lytton close to Coldwater?' (KBG; volunteered)

(25) *Context: Question on a test in school.*

a. *keʔ kex sʔúpis ʔe spéʔec ʔe stakʷólsʼ?*
keʔ k=ex s=ʔúpi-s ʔe=spéʔec ʔe=stakʷólsʼ
Q D/C=IPFV NMLZ=eat+TR-3ERG DET=bear DET=potato
'Do bears eat potatoes?' (BP; volunteered)

b. *ʔex nʼ ʔúpis ʔe spéʔec ʔe stakʷólsʼ?*
ʔex=**nʼ** ʔúpi-s ʔe=spéʔec ʔe=stakʷólsʼ
IPFV=**Q** eat+TR-3ERG DET=bear DET=potato
'Do bears eat potatoes?' (BP; volunteered after prompting to use *nʼ*)

Another set of fully neutral questions is in the statement of debate topics (see AnderBois 2019, and Gunlogson 2008 on 'speculative questions'). The *keʔ* strategy is routinely offered for debate topics, as the hypothesis predicts; examples are given in (26).

(26) *Context: A teacher is setting her students some debate topics.*

a. *keʔ ks yʼes ʔe wʔéxuxʷ weɬ pankúpa?*
keʔ k=s=yʼe=s ʔe=wʔéx=əxʷ we=ɬ=pankúpa
Q D/C=NMLZ=good=3POSS COMP=live=2SG.SBJV PREP=DET=Vancouver
'Is Vancouver a good place to live?' (KBG; volunteered)

b. *keʔ ks yʼes tək swʔex ʔe Vancouver?*
keʔ k=s=yʼe=s tə=k=s=wʔex ʔe=Vancouver
Q D/C=NMLZ=good=3POSS OBL=D/C=NMLZ=live DET=Vancouver
'Is it good to live in Vancouver? (BP; volunteered)

c. *kéʔe xʷuyʼ scwuwms ʔe scméʼiʔt?*
kéʔe xʷuyʼ s=cwuw-m=s ʔe=scméʼiʔt[9]
Q PROSP NMLZ=work-CTR.MID=3POSS DET=children
'Should children work?' (Literally: 'Will children work?') (KBG; volunteered)

[9] It is interesting to note that the prospective auxiliary *xʷuyʼ* is not attracting the clausal nominalizer and the possessive subject clitic in (26). Henry Davis (p.c.) speculates that it is being re-analyzed as a prefix. Similarly in (26), the imperfective auxiliary is not hosting the nominalizing and possessive clitics. Further investigation is required.

d. *keʔ kes wmexs təwe sptéks ʔe zuqʷʔ*
keʔ k=e s=wmex=s təw=e=s=pték=s ʔe=zuqʷ
Q D/C=IPFV NMLZ=live=3POSS PREP=D/C=NMLZ=pass=3POSS D/C=die
'Is there life after death?' (BP; volunteered)

Consultant's comment on (26d): "Sounds like I'm really getting philosophical or something. I think you can. Sort of like you're asking somebody smarter than you."

Although *keʔ* versions are volunteered, *n̓* versions are also accepted in debate contexts, as shown in (27).

(27) *Context: As in (26).*

a. *y̓e n̓ tək swʔéx ne Vancouver?*
y̓e=**n̓** tə=k=s=wʔéx ne=Vancouver
good=**Q** OBL=DET=NMLZ=live PREP=Vancouver
'Is it good to live in Vancouver?' (BP; volunteered when prompted to use *n̓*)

b. *ʔe swmex n̓ təwe ptéks ʔe súqʷʔ*
ʔe s-wmex=**n̓** təw=e=pték=s ʔe=súqʷ
INT NMLZ-live=**Q** PREP=D/C=pass=3POSS D/C=die
'Is there life after death?'
(BP; volunteered without context; accepted in debate context)

Another fully neutral case is during a job interview; the questioner does not normally want to indicate any bias towards a particular answer, at least not when the prejacent is a proposition that would negatively impact the interviewee's ability to do the job. As shown in (28), *keʔ* is the default strategy in this type of context, and as shown in (28), using *n̓* can introduce unwanted bias.

(28) *Context: Someone is being interviewed for a job working at an animal shelter. The job involves keeping the animals' cages clean and taking the dogs for walks.*

a. *keʔ keʔ sy̓e ne c̓éx̣əm?*
keʔ k=eʔ=s=y̓e ne=c̓éx̣-əm
Q D/C=2SG.POSS=NMLZ=good PREP=clean-CTR.MID
'Are you good at cleaning?' (BP; volunteered first)

b. *y̓e kʷ n̓ ne c̓áx̣əm?*
y̓e=kʷ=**n̓** ne=c̓áx̣-əm
good=2SG.SBJ=**Q** PREP=clean-CTR.MID
'Are you good at cleaning?' (BP; volunteered second)

c. *keʔ ks zuʔíxəmnəxʷ keʔ szuzúwt ʔe ʔéxəxʷ cwuwm?*
keʔ k=s=zuʔíx-əmn[-t]=əxʷ keʔ=s=zu~zúw-t
Q D/C=NMLZ=used.to-RLT[-TR]=2SG.ERG 2SG.POSS=NMLZ=AUG~slow-IMM
ʔe=ʔéx=əxʷ cwuw-m
D/C=IPFV=2SG.SBJV work-CTR.MID
'Are you used to being late when you work?' (BP; volunteered)

Consultant's comment on (28c): "That's a good interview one."

d. *naʕʔíp kʷ n̓ zuzúwt ʔe ʔéxəxʷ cwuwm?*
naʕʔíp=kʷ=**n̓** zu~zúw-t ʔe=ʔéx=əxʷ cwuw-m
always=2SG.SBJ=**Q** AUG~slow-IMM D/C=IPFV=2SG.SBJV work-CTR.MID
'Are you always late when you go to work?' (BP; volunteered; volunteered translation)

Consultant's comment on (28d): "This could get insulting."

e. *keʔ ks naʕʔíps keʔ szuzúwt ʔe ʔéxəxʷ cwuwm?*
keʔ k=s=naʕʔíp=s k=eʔ=s=zu~zúw-t
Q D/C=NMLZ=already=3POSS D/C=2SG.POSS=NMLZ=AUG~slow-IMM
ʔe=ʔéx=əxʷ cwuw-m
D/C=IPFV=2SG.SBJV work-CTR.MID
'Are you always late when you go to work?'
(BP; semi-volunteered; correcting details of offered sentence)

Researcher, about (28e): "Is that insulting?"
Consultant: "No, it's just saying 'Are you?'. Not the way you said it, no."

The data in this section have shown that there is a strong tendency for the *keʔ* strategy to be preferred when the context is fully neutral (i.e., with no prior epistemic bias on the part of the speaker, and no reason to take for granted that the addressee believes the prejacent to be true). Questions formed with *n̓* are often also accepted in these neutral contexts, but sometimes we see evidence that the context is subtly changed by doing so.

In the next section we turn to the first set of non-neutral contexts, and we will see an opposite data pattern. In fact, the tendency will be even stronger here, with *keʔ*-questions often being outright rejected.

4.2 Neutral epistemic bias, contextual evidence that the addressee believes *p*

In this section we look at cases where the speaker has no prior epistemic bias, but is faced with evidence in the utterance situation that the addressee believes the prejacent proposition. In these contexts, the speaker is expecting the addressee to confirm the prejacent. These are some of the prime cases where in English declarative questions are acceptable (see e.g., Gunlogson 2003, 2008 and much subsequent research).

In these contexts, in Nłeʔkepmxcín, speakers standardly volunteer and prefer the enclitic *n̓*, as shown for example in (29). The consultant's comment about (29) suggests that the *keʔ* strategy leaves it too open as a live possibility that it is not raining.

(29) *Context (adapted from Gunlogson 2008): Rose is working in an office that has no windows. She is thinking to herself, "I wonder what the weather is like outside?" Just at that moment, Bob enters the office wearing raingear and carrying an umbrella. Rose says:*

a. *ʔex n̓ tékɬ?*
ʔex=**n̓** tékɬ
IPFV=**Q** rain
'Is it raining?' (BP; volunteered)

b. *#keʔ ks tekɬs?*
keʔ k=s=tekɬ=s
Q D/C=NMLZ=rain=3POSS
'Is it raining?' (BP)

Consultant's comment about (29b): "I don't know if she would say *keʔ ks tekɬs,* unless there's a way he got wet otherwise (laughs)."

Example (30) is a similar case. The consultant again offers *n̓,* and when asked about the *keʔ* version, changes the context to one that crucially lacks the positive contextual evidence.

(30) *Context (adapted from Gunlogson 2008): Bob is going for a walk and runs into Mary, a friend of his who he hasn't seen for a while. He notices that her hair is shorter than usual and he says:*

a. *ʔesłóq̓ʷqn kʷ n̓?*
ʔes-łóq̓ʷ-qn=kʷ=**n̓**
STAT-strip-head=2SG.SBJ=**Q**
'You had a haircut?' (BP; volunteered)

b. *#keʔ keʔ sesłóq̓ʷqn?*
#**keʔ** k=eʔ s=es-łóq̓ʷ-qn
Q D/C=2SG.POSS NMLZ=STAT-strip-head
'Did you have a haircut?'
(BP; volunteered when asked to use *keʔ*, but context changed)

Consultant's comment on (30b): "Maybe, yes. Maybe they're talking on the phone."

Another context in which there is contextual evidence that the addressee believes the prejacent is given in (31). Both consultants volunteered *n̓,* as seen in (31a) and (31b). When one consultant was asked to create a *keʔ* version, she gave (31c), but judged it as worse than the *n̓* version in (31a).

(31) *Context: Your friend applied for a job, but you have no idea whether she was successful or not. You show up at her place and she is celebrating. You say:*

a. *kʷənwén̓ xʷ n̓ ɬ scuw?*
kʷə[n]-nwén̓[-t]=xʷ=**n̓** ɬ=s-cuw
grasp-LC[-TR]=2SG.ERG=**Q** DET=NMLZ-work
'You got the job?' (BP; volunteered)

b. *kʷenwéɬn̓ kʷ n̓ ɬe scúw?*
kʷe[n]-nwéɬn̓[-t]=kʷ=**n̓** ɬe=s-cúw
grasp-LC.MID[-TR]=2SG.SBJ=**Q** DET=NMLZ-work
'You got the job?' (KBG; volunteered)

c. *keʔ ks kʷenwén̓ xʷ ɬ scuw?*
keʔ k=s=kʷe[n]-nwén̓[-t]=xʷ ɬ=s-cuw
Q D/C=NMLZ=grasp-LC[-TR]=2SG.ERG D/C=NMLZ-work
'Did you get the job?'
(BP; volunteered when asked to use *keʔ*; volunteered translation)

Consultant's comment, when asked which would be better in this context between (31a) and (31c): "I would use *kʷenwenx̓ʷ* ***n̓*** *łscuw*. But they're both totally correct. I would use *kʷenwenx̓ʷ* ***n̓***."

Further evidence is given in (32) to (34). In all these contexts involving contextual evidence that the addressed believes the prejacent proposition *p*, consultants volunteered questions with *n̓*.

(32) *Context: Rose left her lunch in the lounge at work and then had to answer an urgent phone call in her office. She comes back, excited to eat, and finds that the food is gone. The only other person in the lounge is Nadia. Rose says to Nadia:*

a. *ʔúpixcem xʷ n̓ ɬ n słaʔx̣áns?*
ʔúpi-x[-t]-cem=xʷ=**n̓** ɬ=n-s-łaʔx̣-áns
eat-IND[-TR]-1SG.OBJ=2SG.ERG=**Q** DET=1SG.POSS-NMLZ-eat-tooth
'Did you eat my food?' (KBG; volunteered)

b. *ʔúpixcem xʷ n̓ te n słaʔx̣áns?*
ʔúpi-x[-t]-cem=xʷ=**n̓** te=n-s-łaʔx̣-áns
eat-IND[-TR]-1SG.OBJ=2SG.ERG=**Q** OBL=1SG.POSS-NMLZ-eat-tooth
'Did you eat my food?' (BP; volunteered)

(33) *Context: Your beloved pet canary was sick and had to have an operation. You are waiting while the operation takes place and then the vet comes out looking sad and guilty. You say:*

a. *zuqʷ n̓?*
zuqʷ=**n̓**
die=**Q**
'It's dead?' (BP; volunteered first)

b. *keʔ ks zuqʷs?*
keʔ k=s=zuqʷ=s
Q DET=NMLZ=die=3POSS
'Is it dead?' (BP; volunteered second; KBG accepted)

Consultant's comment about (33a) vs. (33b): "I would probably use that first one."

c. *zuqʷ n̓ ƛ̓əm̓?*
zuqʷ=**n̓** ƛ̓əm̓
die=**Q** CMPL
'It's dead?' (KBG; volunteered)

In (34), the consultant's comments clearly indicate the more neutral status of the *keʔ* strategy. Her comments about (34) indicate that *keʔ* requires a different context from the one given.[10]

[10] The two sentences in (34) are not quite a minimal pair because the *n̓* version in (34a) also contains the tag-marker *nəst;* follow-up elicitation is required.

(34) *Context: A friend comes over to visit and it's about 2pm. If she was hungry, you would feed her, but you assume she's already eaten. You just want to check.*

a. *nweṅ kʷ ṅ ƛ̓əṁ ɬaʔx̣áns, nəst?*
n-weṅ=kʷ=**ṅ** ƛ̓əṁ[11] ɬaʔx̣-áns, nəst
LOC-already=2SG.SBJ=**Q** CMPL eat-tooth TAG
'You ate already, right?' (BP; volunteered)

b. *#keʔ ks nweṅ keʔ słaʔx̣áns?*
keʔ k=s=n-weṅ keʔ=s=ɬaʔx̣-áns
Q D/C=NMLZ=LOC-already 2SG.POSS=NMLZ=eat-tooth
'Did you eat already?' (BP)

Consultant's comment on (34b): "Yes. But that's really asking a question. It's not the same as the other one [(34a)]. You really just have no clue."

4.3 Other contexts where the speaker expects the addressee to confirm *p*

So far, we have seen that in fully neutral contexts, *keʔ* is preferred, and in contexts with contextual evidence that the addressee believes the prejacent, *ṅ* is preferred. Now I will show that *ṅ* is the preferred choice not only when there is such positive evidence in the discourse context, but more broadly whenever the speaker expects the addressee to confirm the prejacent.

4.3.1 Greetings

The semantic contrast between the *ṅ* strategy and the *keʔ* strategy is clearly revealed when we consider a common greeting in the language, which involves asking whether the addressee is doing well. The greeting is standardly formed with *ṅ,* as shown in (35). When asked how it would sound to use *keʔ* in a greeting context, both consultants gave comments indicating that with *keʔ,* the greeting is transformed instead into a real question, where the negative answer is an open possibility.

(35) *Context: A greeting.*

a. *ẏe kʷ ṅ, Lisa?*
ẏe=kʷ=**ṅ,** Lisa
good=2SG.SBJ=**Q** Lisa
'How are you Lisa?' (BP; volunteered)

b. *#keʔ keʔ sẏé?*
#**keʔ** k=eʔ=s=ẏé[12]
Q D/C=2SG.POSS=NMLZ=good
'Are you good?' (KBG; BP)

[11] T&T:139 gloss *ƛ̓əṁ* as 'COMPLETED, already accomplished or established; perfective'. In my preliminary explorations of this morpheme, it seems to contain evidential semantics, at least in the Lytton dialect.
[12] Example (35) was technically volunteered, but only as a corrected form from one that I gave the consultant,

BP's comment on (35b): "No I wouldn't [use it]. But I would use it if I was fishing for information. … There's a place for all of them but … If a person is not well, then somebody might say that, *keʔ keʔ sy̓e* … Maybe you saw something or something happened and you wanna know how they are but you don't wanna assume, *keʔ keʔ sy̓e.*"

KBG's comment on (35b): "For me, you're asking a direct question. And maybe you know an incident that happened."

In a greeting context, it is perhaps not really the case that the speaker has reason to believe the addressee *is* doing well, but nevertheless, the monopolar analysis captures an important feature of these contexts. The speaker of a greeting intends to offer only one possible proposition for entry into the Common Ground. The possibility of a negative answer is not usually considered.

4.3.2 Incredulity questions

Another set of cases where the speaker expects the addressee to confirm *p,* even though there is no contextual evidence for *p* being true, are incredulity questions. Here, the addressee has often just asserted the prejacent, but the speaker is skeptical. In English, these contexts allow declarative questions; see Farkas and Roelofsen (2017), Rudin (2018), among others, for discussion.

In Nłeʔkepmxcín, speakers volunteer *n̓* in these contexts, and the *keʔ* versions are less acceptable.

(36) *Context (from Rudin 2018:39/2022:348; based on Farkas & Roelofson 2017:276): A mother asks her child to set the table, and he does a really bad job before announcing himself to be done. The mother says to the child:*

a. *ʔescqáyqʷ n̓ xʔe tək tápəl?*
ʔes-cq-áyqʷ=**n̓** xʔe tə=k=tápəl
STAT-set-tree=**Q** DEIC OBL=DET=table
'This table is set?' (BP; volunteered)

b. *keʔ kes ʔescqáyqʷ xʔe tək tápəl?*
keʔ k=e=s=ʔes-cq-áyqʷ xʔe tə=k=tápəl
Q D/C=IPFV=NMLZ=STAT-set-tree DEIC OBL=DET=table
'Is this table set?' (BP; volunteered when asked to use *keʔ;* volunteered translation)

Consultant's comment on (36b): "It's pretty much saying the same thing [as (36a)], but it's asking the air. She's not directing the comment to anybody."

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which is given in (i). This contains an extra third person possessive ending that should never have been there. The utterance in (35) is grammatically correct, but pragmatically does not fit the greeting context.

(i) * *keʔ keʔ sy̓és?*
keʔ k=eʔ=s=y̓é=s
Q D/C=2SG.POSS=NMLZ=good=3POSS
'Are you good?' (BP)

(37) *Context (adapted from Rudin 2018:38/2022:37, who obtained it from Donka Farkas, p.c., from an interview with Donald Trump on ABC news, July 30th, 2016): Person A is complaining. They say "My life is bad. I work a lot and I'm the boss of many people." Person B replies:*

a. *ḱest n̓ xéʔe?*
ḱes-t=**n̓** xéʔe
bad-IMM=**Q** DEIC
'That's bad?' (BP; volunteered)

b. *keʔ ks ḱests xéʔe?*
keʔ k=s=ḱes-t=s xéʔe
Q D/C=NMLZ=bad-IMM=3POSS DEIC
'Is that bad?' (BP)

Consultant's comment on (37b): "That one you're asking them. But you could have also said *ḱest **n̓** meł xeʔe?* [bad-IMM=**Q** COUNTER DEIC]. That's more when you're trying to find out more information."

Notice again that these are contexts in which the speaker is skeptical that the prejacent is true, but there is evidence that the addressee believes *p*. This confirms that it would not be correct to analyze *n̓*-questions as signalling speaker contingent commitment (as for example in Gunlogson's 2008 analysis of English declarative questions).

4.3.3 Projected speaker and addressee commitments

Malamud and Stephenson (2015) (henceforth M&S) offer a set of contexts designed to tease apart fine-grained nuances with regard to speaker and addressee commitments and also their *projected* commitments. A projected commitment to a proposition *p* means that the expected next step in the discourse is that the relevant agent commits to *p*. The results for M&S's contexts in Nłeʔkepmxcín support my proposal that *n̓*-questions are used when the speaker cannot themselves commit to the prejacent *p*, but *p* is a projected commitment of the addressee.[13]

The first case to consider is given in (38). In this context, the speaker is projecting the addressee's commitment; they expect the addressee to confirm that the neighbour is good looking. The speaker knows nothing about the neighbour, and therefore is not even contingently committing themselves to *p*. Here, one consultant volunteered a version with *n̓* ((38)a), and the other volunteered *keʔ* ((38)b), which fits with the fact that in English also, a neutral polar question is appropriate. The second consultant also judges *n̓* to be perfect, as shown in (38).

[13] Rudin (2018:7–8) argues that the primitive notion of a projected addressee commitment is not necessary; in his analysis of declarative questions, the mere placing of *p* on the Table, in combination with pragmatic competition effects, achieves the same result, namely that the addressee is expected to commit to *p*. I agree with this, and am using the phrase 'projected commitment' here only for convenience.

(38) *Context ('Blushing/Innuendo'; adapted from M&S:5): B. and Lisa are gossiping. B. doesn't know anything about Lisa's neighbour. Lisa says, blushing, "You've GOT to see this picture of my new neighbour!" Without looking, B. replies:*

a. *nem ṅ ẏe sḵʷeṅṅs?*
nem=**ṅ** ẏe s=ḵʷeṅ~ṅ=s
very=**Q** good NMLZ=look~OOC=3POSS
'Is he good to look at?' (KBG; volunteered)

b. *keʔ ks ẏehúsc?*
keʔ k=s=ẏeh-ús=c
Q D/C=NMLZ=good-face=3POSS
'Is he good looking?' (BP; volunteered)

c. *ẏehús ṅ?*
ẏeh-ús=**ṅ**
good-face=**Q**
'Is he good-looking?' (BP)

Consultant's comment on (38c): (laughs) "Yes. it's right on, perfect sentence. It's just funny."

In the next example, both the speaker and the addressee are well-informed about the facts, but the predicate is a taste predicate, so there is still room for negotiating agreement. The speaker here is expressing an opinion and seeking agreement from the addressee. The consultant volunteers an utterance containing the tag-marker *nəst.* For both *ṅ* and *keʔ,* she offers comments indicating that they would not be appropriate in this particular context.[14]

(39) *Context ('Seeking agreement'; adapted from M&S:5): Bev and Lisa are discussing various characteristics of their mutual acquaintances. Lisa says, "I think Bill's good point is that he is just a really nice guy." Bev replies:*

a. *ẏehús wiʔ ʔéɬ ƛ̓uʔ, nəst?*
ẏeh-ús wiʔ ʔéɬ=ƛ̓uʔ **nəst**
good-face EMPH and=ADD **TAG**
'He's good looking as well, isn't he?' (BP; volunteered; volunteered translation)

Consultant's comment on (39a): "I'm trying to get you to agree with me, *nəst*?"

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[14] Besides (39)(39), the consultant also volunteered the version in (ii) which contains *tem,* a form of negation, plus *ṅ.* This will be a target of future research.

(ii) *ẏehús wiʔ ʔéɬ ƛ̓uʔ tem ṅ?*
ẏeh-ús wiʔ ʔéɬ=ƛ̓uʔ **tem=ṅ**
good-face EMPH also=EXCL **NEG=Q**
'He's good looking as well, isn't he?' (BP; volunteered)

Consultant's comment: "*tem ṅ* is like I know it as a fact, and I don't know if you know it. It's more like implying that you and I both know the fact already, we talked about it. Maybe you forgot."

b. *#y̓ehús n̓ wiʔ ʔéɬ ƛ̓uʔ?*
#y̓eh-ús=**n̓** wiʔ ʔéɬ=ƛ̓uʔ
good-face=**Q** EMPH and=ADD
'Is he good looking as well?' (BP)

Consultant's comment on (39b): "I guess you could, but you're asking the other person … [repeats (39b) twice]. Yeah, but it's kind of like you don't know. So you're just asking. I'm asking you, 'Is he good-looking as well?'"

c. *#keʔ ks y̓ehúsc?*
#**keʔ** k=s=y̓eh-ús=c
Q D/C=NMLZ=good-face=3POSS
'Is he good looking as well?' (BP)

Consultant's comment on (39c): "I'm really just either being sarcastic or I don't know [if he's good looking]."

What M&S say about (39) for English is that a reverse-polarity (RP) tag (*isn't he?*) is felicitous, because RP tags add *p* to the speaker's projected commitments, and in this context the speaker can indeed be tentatively committing to *p* (M&S:16). A declarative question (which M&S call a 'non-interrogative rising intonation', NI-rise) is in contrast infelicitous here. According to M&S, NI-rises similarly add *p* to the speaker's projected commitment set, but also raise a metalinguistic issue concerning the utterance of *p*. In a typical declarative question (DQ) context like (7) (*It's raining?*), or the Blushing/Innuendo case in (38), the metalinguistic issue would be whether the speaker's inference is correct. But in (39), the speaker is the sole arbiter of their own taste, so a DQ is infelicitous (M&S:22).

Similar reasoning about (39) applies in Nłeʔkepmxcín. Rephrased to fit the way I have framed my hypothesis (following Rudin 2018, 2022), the reason *n̓*-questions are not good in (39) is that the speaker is in a position to commit to the proposition that Bill is good looking. *keʔ* is inappropriate for a similar reason: the speaker knows Bill, so there is no reason to ask whether he is good looking. Finally, (39) also suggests that the tag-marker *nəst* functions similarly to an English RP-tag, but since *nəst* is not the focus of the current paper, further testing would be required to confirm this.

The final test case from M&S is given in (40). According to M&S, in English a DQ is acceptable here because the speaker, while sure about their own opinion that the neighbour is good looking, raises the metalinguistic issue of whether the neighbour's attractiveness is the right conversational move to make. In (40), we see that the consultant volunteers a version that contains no morpho-syntactic marking of a question, but is uttered with a rising intonation. In (40), we see for the first time a clear divergence between Nłeʔkepmxcín *n̓*-questions and English DQs: *n̓* is infelicitous. This suggests that *n̓* does not function to raise this kind of metalinguistic issue (being unsure of the felicity of one's discourse move).[15]

[15] Although the consultant's comments are very clear here, I have not yet been able to replicate this with the other consultant, nor with a second similar discourse context with the first consultant. However, each of these follow-up attempts has only been tried once so far, and these are extremely tricky discourse contexts to explain. In imminent future research, I plan to use storyboards to ensure that the contexts are fully transparent, and I hope to firm up the generalization.

(40) *Context ('Unsure of move'; adapted from M&S:6): B hasn't met A's neighbour, and asks, "What do you think of your new neighbour?" A isn't sure if B wants to know about neighbourliness or suitability for dating. A replies:*

a. *ẏ́ehús?* [uttered with rising intonation]
ẏ́eh-ús
good-face
'He's good looking?' (BP; volunteered)

Consultant's comment on (40a): "You just do the same as English, you have to watch your tone, your facial expression. But if you're not looking at somebody, if you're talking on the phone, then you have to [say] *ẏ́ehús?* [uttered with rising intonation]."

b. *#ẏ́ehús ṅ́?*
#ẏ́eh-ús=**ṅ́**
good-face=**Q**
'Is he good looking?' (BP)

Consultant's comment on (40b): "No, cause I [= the addressee] have never seen him. No, you can't."

The data in (40) raise a problem for applying M&S's analysis of English DQs to Nłeʔkepmxcín *ṅ́*. The analysis could be tweaked, but we would have to say that there is cross-linguistic variation in the precise types of meta-linguistic issue that are raised. One might even say that the Nłeʔkepmxcín data provide a cross-linguistic reason to be skeptical of M&S's attempted unification of all types of DQs; I return to this issue in Section 5.1 below.

Within a Rudin-style analysis, (40) makes sense. *ṅ́* is predicted to be good when the speaker cannot commit to *p*, but in (40) she can, so *ṅ́* is infelicitous.

4.4 Summary

The hypothesis that *ke?* introduces a neutral bipolar question predicts that *ke?* will be the preferred option when (and only when) the speaker has no epistemic bias about the answer, and also has no strong reason to assume that the addressee believes the prejacent proposition to be true. Section 4.1 showed the results for such fully neutral discourse contexts. As predicted, these are the only cases where *ke?* is preferred over *ṅ́*.

In Sections 4.2 and 4.3 we saw that *ṅ́* is the preferred option when (and only when) the speaker is not themselves in a position to commit to *p*, but they believe the addressee will commit to *p*. Section 4.2 presented contexts where the speaker has no epistemic bias about *p*, but there is evidence in the utterance context that the addressee believes *p*. Here, *ṅ́* is the preferred question form. In Section 4.3.1 we looked at greetings, where the only discourse continuation offered to the addressee is to confirm *p*. Here, *ṅ́* is the only acceptable option. Section 4.3.2 gave data involving incredulity contexts. Here, the speaker has an epistemic bias *against p*, but nevertheless believes that the addressee will confirm *p*, and again, *ṅ́* is preferred.

Finally, in Section 4.3.3 we considered three contexts from Malamud and Stephenson (2015): Blushing/Innuendo, Seeking agreement, and Unsure of move. In the first two of these, *ṅ́*-questions behave similarly to English declarative questions, but in the third, they seem to diverge. In Blushing/Innuendo, the speaker has no information but suspects the addressee believes *p*, so *ṅ́* is good. In Seeking agreement, the speaker can themselves commit to *p*, so *ṅ́* is bad. Finally, in Unsure

of move, *n̓*-questions are not acceptable, at least in preliminary data. This follows from the approach I am adopting, because in this context, the speaker is sure about *p* and therefore should not be able to use *n̓*.

5 Analysis and theoretical consequences

5.1 Analysis

There are a range of semantic analyses of polar questions in English: all the way from the proposal that all polar questions are bipolar (Farkas & Roelofsen 2017; Ciardelli 2021), to the idea that all polar questions are monopolar (Biezma & Rawlins 2012), and in-between, the idea that they can be either bipolar or monopolar (Krifka 2015, 2017). Within monopolar approaches, there are further issues of debate, including which specific speaker and addressee (projected) commitments are introduced.

The difficulty in pinning down the analysis when looking only at English is that positive PQs can be felicitously uttered both in completely neutral discourse contexts, and in contexts where the speaker is seeking to have *p* confirmed by the addressee. The situation in Nɬeʔkepmxcín appears to be a lot clearer. The Nɬeʔkepmxcín data can be accounted for by analyzing *keʔ*-questions as bipolar, and *n̓*-questions as monopolar.

I adopt a standard bipolar analysis of *keʔ*-questions: *keʔ (p)* denotes the set of alternatives {*p*, ¬*p*}.[16] The denotation of *keʔ* is given in (41). This is parallel to Krifka's (2017:382) proposal for a 'wh-operator', which in English is pronounced as *whether* in embedded questions and is null in matrix questions.[17]

(41) $[\![keʔ]\!] = \lambda p_{<s,t>} . \{p, \neg p\}$

We still need to get from this semantic denotation to the discourse effect of the question, namely that the addressee is expected to pick one of the alternative answers to commit to. There are various proposals in the literature about this. For Farkas and Bruce (2010), the question denotation is placed on the Table (roughly, a representation of the current Question Under Discussion), and "[p]lacing a question on the Table steers the conversation towards a state in which the question is resolved" (Farkas & Bruce 2010:94). For Krifka (2017), after the wh-operator *whether* applies to create the alternative set, an illocutionary operator QU imposes a restriction on the addressee that their next contribution will be one of the alternative answer propositions.[18] I will not go into further details here, since the discourse effects of bipolar questions are far less controversial than those of monopolar questions, on which I focus in the rest of this section.

For *n̓*-questions, I adopt Rudin's (2018, 2022) analysis of English declarative questions, which builds (like most work in this area) on seminal ideas found in Gunlogson (2003). According to Rudin, English DQs have the following four defining properties:

[16] Here and throughout, I am not bothering to distinguish an utterance's form from the proposition it denotes, annotating both with the variable *p*.

[17] Krifka later amends this (2021a:60) and claims that the *whether* operator creates a singleton set from a proposition.

[18] For English, Krifka claims that verb movement is an effect of the illocutionary operator QU. Nɬeʔkepmxcín does not have verb movement in polar questions, so there may be cross-linguistic differences in the morpho-syntactic spell-out of the components that make up a polar question.

(42) FOUR CRUCIAL GENERALIZATIONS (Rudin 2022:343–344):

For any [DQ] *p*? whose falling declarative counterpart denotes the proposition *p*

a. NON-ASSERTIVENESS
A speaker who utters *p?* does not commit to the truth of *p*

b. ANSWER SOLICITATION
An utterance of *p?* invites the addressee to weigh in on whether *p* is true

c. VARIABLE SPEAKER EPISTEMIC BIAS
An utterance of *p?* can license an inference that the speaker suspects that *p* is true or that it is false, depending on context

d. ANTICIPATION OF ADDRESSEE COMMITMENT
An utterance of *p?* is only felicitous when the speaker has reason to believe that the addressee believes *p*

Whether English DQs convey projected commitment by the speaker, by the addressee, or neither, has been a matter of some debate; see Gunlogson (2008), Malamud and Stephenson (2015), among others, for approaches involving contingent/projected speaker commitment, and Gunlogson (2003), Krifka (2015, 2017, 2021a,b), Jeong (2018), among others, for approaches involving projected addressee commitment. Choices here partly correlate with whether a researcher believes that so-called 'assertive DQs' should receive a unified analysis with 'inquisitive DQs'. Assertive DQs are those where the speaker is in a position to commit to *p* — indeed is the authority on *p* — but is unsure whether asserting *p* is the correct discourse move; an example is Malamud and Stephenson's (2015) 'Unsure of move' context, given in (40) above. Goodhue (2022), who seeks a unified analysis of all English DQs, argues against an addressee commitment component as in (42), since this generalization only holds for inquisitive DQs. He proposes that what all DQs have in common is simply a lack of speaker commitment to some proposition *q*, which is usually equal to the prejacent proposition (with inquisitive DQs, including incredulity ones), but can be some other proposition (as with assertive DQs).

The reason I adopt Rudin's generalizations for Nłeʔkepmxcín *ṅ*-questions is that, as shown in (40), *ṅ*-questions do not seem to be acceptable in assertive DQ contexts. Thus, in Nłeʔkepmxcín there is a distinction between cases where the speaker cannot themselves commit to *p* but expects that the addressee will do so (marked via *ṅ*), and cases where the speaker can commit but is unsure whether this is the right discourse move (apparently marked via rising intonation, as in (40), although more targeted research is necessary to confirm this). This provides cross-linguistic support for those who argue that inquisitive and assertive DQs are distinct, including for example Jeong (2018).

Another reason to adopt Rudin's proposal is that unlike approaches which rely on contingent or projected speaker commitment to *p* (Gunlogson 2008; M&S, etc.), it successfully captures incredulity cases such as (36) and (37).

Rudin argues (following Truckenbrodt 2006) that in English, rising intonation signals that the speaker's commitments do not change. A DQ, then, involves no speaker commitments, but "raise[s] a singleton Issue, projecting only one future Common Ground" (Rudin 2018:55/2022:360). In

terms of Farkas and Bruce's (2010) model, a DQ based on a proposition *p* puts *p* on the Table, but not into the speaker's discourse commitments.

This approach can be straightforwardly applied to Nłeʔkepmxcín, with the difference that the relevant meaning component is conveyed not by rising intonation, but by the morpheme *ṅ*. The claim that *ṅ (p)* places *p* on the Table but does not add *p* to the speaker's (projected) commitments straightforwardly derives generalizations (42) (non-assertiveness) and (42) (answer solicitation). As for (42) (variable speaker epistemic bias) and (42) (anticipation of addressee commitment), Rudin derives these through principles of pragmatic competition, relying on the Gricean maxims of Quantity and Quality. Applied to Nłeʔkepmxcín, it works as follows.

An *ṅ*-question is in pragmatic competition with two alternative utterance types: a declarative, and a *keʔ*-interrogative. If a speaker utters an *ṅ*-question, they have chosen not to utter either of these other types, and the addressee draws inferences based on this choice.

First, an *ṅ*-question differs from a declarative utterance only in lacking speaker commitment to *p*. Assuming that one should commit to as much as possible (Quantity) while preserving Quality, the inference is generated that the speaker is unable to commit to *p* (generalization (42)). This covers cases of positive speaker epistemic bias, where the speaker has some, but not sufficient, evidence to commit to *p*, and also cases of negative speaker epistemic bias, where the speaker has evidence that *p* is false.

Second, the *ṅ*-question differs from a *keʔ*-question only in not offering ¬*p* as a possible answer/future commitment of the addressee. Assuming that one should project as many possible future Common Grounds as one can (Quantity) without violating any interlocutor's beliefs (Quality), the inference is generated that only *p* is an expected answer (generalization (42)). See Rudin (2018:63–74, 2022:363–368) for this reasoning, justified and spelled out in more detail.

Formally implemented, Rudin's analysis of the English rising intonation is adapted for Nłeʔkepmxcín *ṅ* in (43). The notation T_n stands for the Table at time n, and $DC_{sp,n}$ stands for a speaker *sp*'s discourse commitments at time n. The formalism in (43) says that an utterance *ṅ (p)* by *sp* in context c_n places *p* on the Table, and does not change *sp*'s discourse commitments. The other pragmatic effects of *ṅ*-questions are derived as outlined immediately above.

(43) Contribution of *ṅ* (adapted from Rudin's 2018:20 analysis of English L* H-H% intonation):

For any utterance $u : \langle sp, \dot{n}\ (p), c_n \rangle \rightarrow c_{n+1}$
$T_{n+1} = T_n + [\![p]\!]$
$DC_{sp,n+1} = DC_{sp,n}$

Notice that this analysis does not involve any conditions on contextual evidence, unlike many analyses of various types of PQs in the literature (e.g., Büring & Gunlogson 2000; Gunlogson 2003; Trinh 2014; Goodhue 2021, and references therein).[19] This accords with the Nłeʔkepmxcín facts. For example, we saw in Section 4.3.1 that the greetings require *ṅ*, even though there is not necessarily any evidence in the utterance context that the addressee is doing well. Rather, the critical point is only that the speaker expects the addressee to commit to doing well.

[19] Gunlogson (2008:105) argues against a positive contextual evidence condition for English DQs, citing also Beun (2000) and Poschmann (2008).

5.2 Theoretical consequences

The Nłeʔkepmxcín data have the potential to shed light on several theoretical debates.

First is the issue of bipolar vs. monopolar analyses of PQs. In the literature, all positions are represented: all the way from the claim that all PQs are bipolar, even including DQs (e.g., Farkas & Roelofsen 2017; Ciardelli 2021), to the claim that all PQs are monopolar, even including unbiased ones (Biezma & Rawlins 2012), and in the middle the claim that some PQs, including DQs, are monopolar, while others are bipolar (e.g., Krifka 2015, 2017).

The debate is difficult to settle on the basis of English data alone; empirical evidence is given on all sides, and theoretical assumptions also drive some of the proposals. While I don't take a strong position on English here, I suggest that Nłeʔkepmxcín provides cross-linguistic evidence against the idea that all questions have to share the same semantic denotation.

5.2.1 Not all questions are bipolar

Farkas and Roelofsen (2017; henceforth F&R) argue that DQs and polar interrogatives have the same semantic denotation, illustrated in (44); they both denote a bipolar set of information states. The bolding in (44) indicates that this alternative is highlighted.[20]

(44) a. Did Amalia leave? = Amalia left↑?
b. {{**w : Amalia left in w},** {w : Amalia didn't leave in w}}$^{\downarrow}$ (F&R:263)

One of the main assumptions underlying F&R's proposal that DQs have the same semantic denotation as ordinary polar questions is that DQs are a 'marked' sentence type. The marked status of DQs means that they are allowed to have 'special discourse effects', in addition to the discourse effects that follow automatically from the semantic type of the utterance:

(45) Division of labor principle (F&R:250):

a. The discourse effects of unmarked forms should be fully determined by their semantic content and the basic convention of use, *Fb*.
b. The discourse effects of marked forms should always include the discourse effects that are dictated by their semantic content and the basic convention of use *Fb*. In addition, they may include special discourse effects connected to the particular sentence type involved.

The special discourse effect that F&R propose for DQs is that the speaker has some evidence for the highlighted alternative, but has a credence level in this alternative between 'zero' and 'low' (F&R:269).

An approach of this type could work fine for English, but notice the complexity in the analysis of DQs. First, DQs have a bipolar denotation. Next, one of the alternatives is highlighted, an additional theoretical tool beyond simply having a bipolar set. Finally, a special discourse effect is

[20] The up-arrow ↑ in (44) indicates rising intonation. The superscripted down-arrow $^{\downarrow}$ in (44) indicates that the denotation is a proposition, in an inquisitive semantics sense: 'The proposition expressed by a sentence in inquisitive semantics is not a set of worlds, but rather a set of information states, those information states that are said to support the sentence. Information states are modeled as sets of possible worlds' (F&R:248).

stipulated, which replicates similar pragmatic effects to those of Rudin's (2018, 2022) monopolar analysis. The special discourse effect is allowed to exist because of the 'marked' status of DQs.

Nłeʔkepmxcín offers a different perspective on the relationship between DQ-like questions and neutral polar questions. In this language, *ṅ*-questions are no more marked than *keʔ*-questions. To see this, consider F&R's definition of markedness: "If two forms have the same semantic content, one may be considered more marked than the other because it is formally more complex, or because it is more prone to misinterpretation and therefore less likely to ensure communicative success." If anything, *keʔ*-questions are formally more complex than *ṅ*-questions, since *keʔ* embeds a subordinate clause and *ṅ*-questions are monoclausal. Nor are *ṅ*-questions more prone to misinterpretation. For English, F&R argue that DQs are more prone to misinterpretation than DQs because in DQs, "the only formal feature that signals inquisitiveness is rising intonation … Were this signal to be missed, the conveyed proposition would not be the intended one" (F&R:264). But in Nłeʔkepmxcín, DQs are not marked only by rising intonation. They are marked by an overt morpheme and are no more likely to be misinterpreted than any other utterance type.

Nłeʔkepmxcín *ṅ*-questions are also not a marked utterance type in the sense that, for example, Ciardelli (2021) considers. Like many authors, Ciardelli assumes certain default mappings between sentence types and speech act effects, as shown in Table 1. English DQs do not fit into these default mappings, since they share some content-type properties with statements and some with questions, and they are therefore special in some sense.

Table 1: Ciardelli's (2021:17) 'Favored conceptual picture'

	STATEMENT	QUESTION
CONTENT TYPE	Proposition	Issue
DEFAULT FORCE	Assert	Ask

Again, however, there is no Nłeʔkepmxcín-internal evidence for any default mapping between content type and pragmatic force. First, there is no syntactic distinction between sentences that have the default force of asserting and sentences that have the default force of asking. There is no declarative vs. interrogative syntax in this language: there is no verb or auxiliary movement in any kind of question, and the word order is identical in declaratives, *keʔ*-questions, and *ṅ*-questions. Nor is there any intonational way to distinguish statements from questions. Although no acoustic studies have been done on this yet in Nłeʔkepmxcín, Salish languages for which information is available do not have a final rise in polar questions. Caldecott (2016) shows for St'át'imcets (a Northern Interior Salish language, closely related to Nłeʔkepmxcín) that "while all speakers had increased pitch associated with yes/no questions, none signalled yes/no questions with a final rise." For the Central Salish language Sḵwx̱wú7mesh, Jacobs (2007) finds that there is a final fall in both declaratives and polar questions. Impressionistically in Nłeʔkepmxcín as well, this is the case: neither *keʔ*-questions nor *ṅ*-questions standardly end in rising intonation. In other words, there is no evidence for any part of Ciardelli's favoured conceptual picture in Nłeʔkepmxcín.[21]

Given that Nłeʔkepmxcín *ṅ*-questions are not marked utterance types, there is no principled explanation for why they would be subject to extra discourse effects, over the 'basic' discourse effects of *keʔ*-questions. This removes one of the main conceptual arguments for an F&R-style approach. Instead, it appears preferable to assign *keʔ*-questions and *ṅ*-questions differing semantic

[21] Giannakidou (2013), Giannakidou and Mari (2021a,b) similarly argue against a strict dichotomy between assertions and questions.

denotations, if these are embedded within a theory of discourse that derives their respective pragmatic effects from those denotations (as Rudin's 2018/2022 approach, adopted above, does).

Whether or not this Nłeʔkepmxcín-based argument is a strong argument for the analysis of English, Nłeʔkepmxcín does at least demonstrate that languages exist in which there is no evidence to assign DQ-like utterances the same semantic denotations as bipolar questions.

5.2.2 Not all questions are monopolar

At the opposite end of the spectrum from F&R and Ciardelli (2021), Biezma and Rawlins (2012) propose a monopolar analysis for all polar questions, including even un-biased ones. According to Biezma and Rawlins (henceforth B&R), a Q-operator applied to a proposition creates not a bipolar set, but a singleton set containing one alternative, and the addressee is supposed to choose between that alternative and other salient alternatives. B&R's evidence for this comes largely from a comparison between plain polar questions on the one hand, and alternative questions like *Do you want coffee*$_{L^*H-}$ *or tea*$_{H^*L-L\%}$*?* and *or not*-questions (*Do you want coffee or not?*) on the other.[22]

B&R's proposal that all PQs are monopolar obviously cannot be extended to Nłeʔkepmxcín, if I am right that *keʔ*-questions are bipolar. Alternative questions and *or not* questions have not yet been systematically investigated in Nłeʔkepmxcín. However, there are several reasons to believe that something more is going on in Nłeʔkepmxcín than all questions being monopolar.

First, simply claiming that all polar questions are monopolar begs the question of the pragmatic differences between question-types that almost everybody analyzes as monopolar (for example, English DQs), and those which are usually analyzed as bipolar (English ordinary polar interrogatives). B&R themselves do not provide an account of the pragmatic differences between English PQs and DQs; they merely affirm that both are monopolar (B&R:394). For Nłeʔkepmxcín, analyzing both *keʔ*-questions and *ṅ*-questions as monopolar would immediately raise the question of why *keʔ*-questions, unlike *ṅ*-questions, are so perfectly suited for fully neutral discourse contexts.

Second, part of the motivation for B&R's monopolar analysis of PQs in English comes from interpretive differences between ordinary PQs *(Is it raining?*) and *or not* questions *(Is it raining or not?).* Significantly, preliminary Nłeʔkepmxcín data suggest that *keʔ*-questions behave more like English *or not* questions than like English plain PQs. Consider (46). As pointed out by Bolinger (1978), *or not* is odd here because the speaker knows the question can only be answered in the affirmative. This fits well with B&R's claim that (46) is monopolar.

(46) *Context (adapted from Bolinger 1978:88): You see your brother lying on the sofa with his eyes closed and you say:*

a. Are you awake?
b. # Are you awake or not?

In Nłeʔkepmxcín, an *ṅ*-question is volunteered in this context, and a *keʔ*-question is marginal or dispreferred. This supports the idea that *keʔ*-questions are bipolar, as I have argued. Versions from two speakers are given in (47).

[22] On *or not* questions, Biezma and Rawlins draw partly on data and arguments found in Bolinger (1978).

(47) *Context: As in (46).*

a. *ʔesnqʔíɬ kʷn̓?*
ʔes-n-qʔíɬ=kʷ=**n̓**
STAT-LOC-awake=2SG.SBJ=**Q**
'Are you awake?' (BP; volunteered)

b. *?keʔ keʔ snqʔíɬ?*
? **keʔ** k=eʔ=s-n-qʔíɬ
Q D/C=2SG.POSS=NMLZ=LOC-awake
'Are you awake?' (BP)

Consultant's comment on (47b): "It would probably work but, I don't know. Cause you're using that one *qʔíɬ* ['awake'] word so then any version of that, it'd be like 'ok, I think they're trying to say this.'"

c. *ʔesqíɬ kʷn̓?*
ʔes-qíɬ=kʷ=**n̓**
STAT-awake=2SG.SBJ=**Q**
'Are you awake?' (KBG; volunteered)

d. *?keʔe keʔ sqíɬ?*
?**keʔe** k=eʔ=s-qíɬ
Q D/C=2SG.POSS=STAT-awake
'Are you awake?' (KBG)

Consultant's comment on (47d): "Yeah, it's ok. I'd rather use *ʕʷoy̓téc̓eme kʷn̓?* ['Are you pretending to be asleep?']"

Interestingly, *keʔ*-questions are not *entirely* parallel to English *or not* questions. B&R argue that alternative questions (including *or not* questions) differ from plain PQs in that the former are exhaustive and the latter are not. For example, B&R observe (following Bolinger 1978) that the PQ in (48) is more 'open' (and therefore more pragmatically appropriate) than the *or not* question in (48). In B&R's analysis, this is because *or not* questions "presuppose exactly two salient alternative propositions, which semantically exhaust the space of possibilities." So, (48) offers the water as just one out of potentially many salient options, while (48) offers the addressee only two options: water, or no water.

(48) *Invitations/offers: Your friends just arrived at your house.*

a. Do you want some water?
b. # Do you want some water or not? (B&R:400, adapted from Bolinger 1978)

For B&R, the exhaustivity effect is tied to the falling intonation on English alternative questions, which introduces a closure operator. It is not clear whether *keʔ*-questions and *n̓*-questions are intonationally different; impressionistically, no difference has been detected. If *keʔ*-questions lack a closure operator, this might explain why *keʔ*-questions — while showing some similarities with *or not* questions, as shown in (46) — are *not* ruled out in offer-contexts. This is shown in (49).

(49) *Context: As in (48).*

a. *keʔ keʔ sx̣ʷóx̣ʷst tək qʷúʔ?*
keʔ k=eʔ=s=x̣ʷóx̣ʷst[23] tə=k=qʷúʔ
Q D/C=2SG.POSS=NMLZ=want OBL=DET=water
'Do you want water?' (BP; volunteered first)

b. *x̣ʷox̣ʷst k̓ʷ n̓ tək qʷúʔ?*
x̣ʷox̣ʷst=k̓ʷ=**n̓** tə=k=qʷúʔ
want=2SG.SBJ=**Q** OBL=DET=water
'Do you want water?' (BP; volunteered second)

A lack of exhaustivity in *keʔ*-questions would also explain why *keʔ*-questions, unlike English *or not* questions, are fine in (50) (another case where more 'open' questions are pragmatically preferred).

(50) *Conversation starters (adapted from B&R:400 / Bolinger 1978): You are at your friend Jane's house and she has a few people over. You are trying to start a casual conversation with someone you don't know who you just met there.*

a. *keʔ ks y̓emínəxʷ ʔe q̓ʷyew̓m?*
keʔ k=s=y̓e-mín[-t]=əxʷ ʔe=q̓ʷyew̓-m
Q D/C=NMLZ=good-RLT[-TR]=2SG.ERG D/C=pick.berries-CTR.MID
'Do you like to go berry picking?' (KBG; volunteered first)

b. *y̓emínxʷ n̓ ʔe q̓ʷyéw̓m?*
y̓e-mín[-t]-xʷ=**n̓** ʔe=q̓ʷyéw̓-m
good-RLT[-TR]-2SG.ERG=**Q** D/C=pick.berries-CTR.MID
'Do you like to go berry picking?' (KBG; volunteered second)

Consultant's comment on (50a) vs. (50b): "Both the same, similar."

As predicted by the claim that *keʔ*-questions are non-exhaustive, *keʔ*-questions contrast with overt *or not* questions, as shown in the minimal triplet in (51). This suggests that there is likely a three-way split, rather than a two-way split as assumed in B&R's discussion: monopolar questions (*n̓*), bipolar questions (*keʔ*), and bipolar questions plus exhaustivity (*or not* questions).

(51) *Context: As in (50).*

a. *xiṅ n̓ meł kex sx̣əkpstéxʷ ɬ Jane?*
xiṅ=**n̓** meł k=ex s=x̣ək-p-s-t=éxʷ ɬ=Jane
long.time=**Q** COUNTER D/C=IPFV NMLZ=know-INC-CAU-TR=2SG.ERG DET=Jane
'Have you known Jane for long?' (BP; volunteered)

[23] T&T (1992:77) write that the form *x̣ʷox̣ʷst* 'want' "occurs only with reflexive or immediate inflection, and the reflexive falls immediately after the stem with no transitive suffix." They break it down as *x̣ʷox̣ʷ-st* 'want-REFL'. I have chosen to be skeptical of this breakdown because there is no reflexive meaning.

b. *keʔ ks xiṅs ks x̣əkpstéxʷ ɬ Jane?*
keʔ k=s=xiṅ=s k=s=x̣ək-p-s-t-éxʷ
Q D/C=NMLZ=long.time=3POSS D/C=NMLZ=know-INC-CAU-TR=2SG.ERG
ɬ=Jane
DET=Jane
'Have you known Jane for long?' (BP; volunteered when asked about *keʔ* version)

c. *ʔ keʔ ks xiṅs ks x̣əkpstéxʷ ɬ Jane ʔe tém̓ us nke?*
ʔ**keʔ** k=s=xiṅ=s k=s=x̣ək-p-s-t=éxʷ
Q D/C=NMLZ=long.time=3POSS D/C=NMLZ=know-INC-CAU-TR=2SG.ERG
ɬ=Jane ʔe=tém̓=us=nke
DET=Jane COMP=NEG=3SBJV=EVID
'Have you known Jane for a long time or not?' (BP)

Consultant's comment on (51c): "If they pause, sometimes you could say that too, like if they take a long time to answer, then you could read their face and say *ʔe tem̓us nke* ['or not'] … It might work [as is, no pause], but maybe you already have some information that's telling you."

A final consequence of the Nłeʔkepmxcín data for a B&R-style analysis is that whereas for B&R, alternative questions and *or not* questions are argued to be formed from a monopolar base, in Nłeʔkepmxcín we see evidence for the opposite. Using overt negation after a polar question is (in preliminary elicitations) acceptable only with *keʔ* and not with *ṅ:*

(52) *Context: You want to go berry picking tomorrow, but you don't want to go alone so you ask your daughter to come along. She says, "I'm not sure if I can come, I'll let you know tonight." But she doesn't call. The next morning you call her and say:*

a. *keʔ keʔ sxʷúy̓ cʔes, ʔe tém̓ us nke?*
keʔ k=eʔ=s=xʷúy̓ cʔes ʔe=tém̓=us=nke
Q D/C=2SG.POSS=NMLZ=PROSP come COMP=NEG=3SBJV=EVID
'Are you coming or not?' (BP; volunteered)

b. *# cʔes kʷ ṅ, ʔe tém̓ us nke?*
# cʔes=kʷ=**ṅ** ʔe=tém̓=us=nke
come=2SG.SBJ=**Q** COMP=NEG=3SBJV=EVID
'Are you coming or not?' (BP)

Consultant's comment on (52b): "Hmmmmm. I don't know if I would use that one. It doesn't sound as good as the other one [(52a)]. But if you said it someone would understand."

Full alternative questions in Nłeʔkepmxcín also contain *keʔ,* as shown in (53). Again, this casts doubt on the assumption that alternative questions must be formed from monopolar bases (an assumption also held by Krifka 2021a:57).[24]

[24] Kulkarni (2023) argues that alternative questions in Nłeʔkepmxcín convey a "much weaker" exhaustivity

(53) *keʔ xʷúy̓ ks tíy us x̣ák us nke kápiy us?*
keʔ xʷúy̓ k=s=tíy=us x̣ák=us=nke kápiy=us
Q PROSP D/C=NMLZ=tea=3SBJV know=3SBJV=EVID coffee=3SBJV
'Would you like tea or coffee?' (Kulkarni 2023)

6 Future research

In this section I highlight some avenues for future research: questions containing negation, a difference with English DQs, and the co-occurrence of *keʔ* and *n̓*.

6.1 Questions containing negation

One area for future research is questions containing negation, which I have avoided so far in this paper. These have been the subject of a large literature focusing on English, but there is very little cross-linguistic work in this area. In this section, I provide examples of questions containing negation in Nłeʔkepmxcín. In each case, I give only the version that was volunteered by the consultant(s), leaving comprehensive testing of all options for future research. For the ease of those who are familiar with the theoretical literature, I annotate each example with its prior epistemic bias and its contextual evidence.

Contexts designed to elicit questions that contain negation can be long and/or complex. All the data in this section were elicited using storyboards, so the consultant did not have to listen to long paragraphs being read aloud. Instead, they had visual stimuli to help make each context clear.

In the first case in (54), there is positive epistemic bias and neutral contextual evidence. The consultants both volunteer a negative predicate *tem*, plus *n̓*. In English, the preferred form of the question here contains high negation (*Is**n't** there …,* as opposed to low negation *Is there **no(t)** …*).

(54) *Context (positive epistemic bias, neutral contextual evidence): Mary is at the airport and tells a woman there that she is going to visit her friend Bob in Springtown. The woman says, "Nice! There is a good Chinese restaurant there, you should try it." A couple of days after Mary gets to Springtown, Bob asks her, "Do you want to go out to dinner tonight?" and she says "Yes!". Bob asks, "Where should we go?", and Mary says:*

a. *tem n̓ wiʔ téʔe ks y̓es ʔe cénmən ʔe słaʔx̣áns nʔéye?*
tem=n̓ wiʔ téʔe k=s=y̓e=s ʔe=cénmən ʔe=s-łaʔx̣-áns
NEG=Q EMPH DEIC D/C=NMLZ=good=3POSS DET=Chinese DET=NMLZ-eat-tooth
nʔéye
DEIC
'Isn't there a good Chinese restaurant here?' (KBG; volunteered)

inference than English alternative questions do. For example, giving a non-mentioned option is a felicitous response to (53): *juice=us* (juice=3SBJV) '[I will have] juice.'

The semantic differences between English and Nłeʔkepmxcín alternative questions may derive from their different structures and component parts. Nłeʔkepmxcín lacks a clear disjunctive operator; the alternative question in (53) is more literally 'Are you going to have tea, maybe coffee?'

b. *tem ṅ téʔe ƛ̓em̓ y̓es tək cénmən tək nłaʔx̣anséytn nʔéye?*
tem=ṅ téʔe ƛ̓em̓ y̓e=s tə=k=cénmən
NEG=Q DEIC CMPL good=3POSS OBL=DET=Chinese
tə=k=n-łaʔx̣-ans-éytn nʔéye
OBL=DET=LOC-eat-tooth-prepared.food DEIC
'Isn't there a good Chinese restaurant here?' (BP; volunteered)

Consultant's comment on (54b): "If she was told and so she kinda knows."

The case in (55) has positive epistemic bias and negative contextual evidence. Again, *tem* 'negation' plus *ṅ* is volunteered by both consultants.

(55) *Context (positive epistemic bias, negative contextual evidence): Bob and Rose are chatting, and Olivia walks up. After they greet each other, Olivia says, "I am having a party tomorrow. You are both invited!" Olivia then leaves. Rose looks very excited. Bob says, "You seem pretty excited", and Rose answers, "I love Olivia so much!". Later that evening, Bob and Rose are chatting on the phone. After they have been talking for a while, Rose says, "Yeah so I'm going out of town tomorrow." Surprised, Bob asks:*

a. *tem ṅ (téʔe) keʔ sxʷúy̓ nes wə ɬ Olivia ʔe páti̓s?*
tem=ṅ (téʔe) keʔ=s=xʷúy̓ nes wə=ɬ=Olivia ʔe=páti-s
NEG=Q (DEIC) 2SG.POSS=NMLZ=PROSP go PREP=DET=Olivia DET=party-3POSS
'Aren't you going to Olivia's party?' (BP; volunteered)

b. *tem ṅ xʷuy̓ keʔ snés, xʷuy̓ kt móq̓ʷix wéʔe we ɬe Olivia?*
tem=ṅ xʷuy̓ keʔ=s=nés xʷuy̓=kt móq̓ʷ-ix wéʔe
NEG=Q PROSP 2SG.POSS=NMLZ=go PROSP=1PL.SBJ gather-AUT DEIC
we=ɬe=Olivia
PREP=DET=Olivia
'Aren't you coming to the gathering at Olivia's?'
(KBG; volunteered; volunteered translation)

In (56), there is neutral epistemic bias and negative contextual evidence. Again, *tem=ṅ* is volunteered. This time, English, prefers a low negative question. Notice that the Nłeʔkepmxcín here is basically identical to (54) above, which in English corresponds to a high negative question.

(56) *Context (neutral epistemic bias, negative contextual evidence): Mary is flying to visit her friend Bob in Springtown. She thinks to herself, "I hope there are some good restaurants in Springtown." A couple of days after Mary gets to Springtown, Bob asks her "Do you want to go out to dinner tonight?" and she says, "Yes!". Bob says, "We'll have to eat greasy hamburgers, is that ok?" and Mary replies:*

tem ṅ téʔe ks y̓es tək nłaʔx̣anséytn nʔéye?
tem=ṅ téʔe k=s=y̓e=s tə=k=nłaʔx̣-ans-éytn nʔéye
NEG=Q DEIC D/C=NMLZ=good=3POSS OBL=DET=LOC-eat-tooth-prepared.food DEIC
'Are there no good restaurants here?' (BP; volunteered)

Example (57) has negative epistemic bias and neutral contextual evidence. These cases often contain both high and low negation in English; see Romero and Han (2004:619). The consultant offers a question containing two negations in Nłeʔkepmxcín: *tem* in a higher clause, plus a negated subordinate clause.

(57) *Context (negative epistemic bias, neutral contextual evidence): Mary is at the airport. She meets someone and tells her, "I'm going to visit my friend Bob in Springtown." The woman replies, "Oh! Don't eat Chinese. There are no good Chinese restaurants in Springtown." A couple of days after Mary arrives at Bob's house, he asks her, "Would you like to go out to dinner tonight?" and she replies, "Yes!". Bob says, "Want to eat Chinese food?". Mary replies:*

tem n̓ ƛ̓əm̓ ks tetéʔe tek y̓e tək cénmən tək nłaʔx̣anséytn nʔéye?
tem=n̓ ƛ̓əm̓ k=s=**tetéʔe** te=k=y̓e tə=k=cénmən
NEG=Q CMPL D/C=NMLZ=**NEG** OBL=DET=good OBL=DET=Chinese
tə=k=n-łaʔx̣-ans-éytn nʔéye
OBL=DET=LOC-eat-tooth-prepared.food DEIC
'Aren't there no good Chinese restaurants here?' (BP; volunteered)

Consultant's comment: "So she already has a kind of idea. … She's going on previous information."

Finally, (58) illustrates negative epistemic bias and positive contextual evidence. These cases are infelicitous with negation in English and prefer a marker like *really*. Similarly in Nłeʔkepmxcín, the consultant volunteers the intensifier *nexʷm̓* 'very, really, exceedingly'.

(58) *Context (negative epistemic bias, positive contextual evidence): Bob and Rose are chatting, and Olivia walks up. After they greet each other, Olivia says, "I am having a party tomorrow! You are both invited!". Olivia then leaves. Bob notices Rose is looking unhappy and asks, "Why are you looking upset?". Rose answers, "I don't like Olivia." Later that evening, Bob and Rose are chatting on the phone. After they have been talking for a while, Rose says, "I'm looking forward to seeing you at Olivia's party." Surprised, Bob asks:*

nexʷm̓ n̓ xʷuy̓ keʔ snés we ɬ Olivia ɬ partys?
nexʷ-m̓=n̓ xʷuy̓ keʔ=s=nés we=ɬ=Olivia ɬ=party=s
very-CTR.MID=Q PROSP 2SG.POSS=NMLZ=go PREP=DET=Olivia DET=party=3POSS
'Are you really going to Olivia's party?' (BP; volunteered)

Table 2 summarizes the results from this section and indicates where each type of data can be found. Note that contexts with either negative epistemic bias and negative contextual evidence, or positive epistemic bias and positive contextual evidence, would not result in a question being asked, as the speaker would be very sure about the truth or falsity of the prejacent. Hence, these cells are greyed out. The table also includes reference to the earlier discussion of positive questions in sections 4.1 and 4.2.

Table 2: Examples for each type of epistemic bias-contextual evidence combination

	EPISTEMIC BIAS		
CONTEXTUAL EVIDENCE	positive	neutral	negative
positive		§4.2, *n̓* preferred	(58), *nexʷm̓ n̓*
neutral	(54), *tem n̓*	§4.1, *keʔ* preferred	(57), *tem n̓*
negative	(55), *tem n̓*	(56), *tem n̓*	

As these data show, all negative questions in Nłeʔkepmxcín seem to be formed with *n̓*. In the future it will be useful to explore the predictions that are made about bias when we combine the denotation I have proposed for *n̓* with a negative construction. This is particularly interesting because unlike in English, there is no high / low negation contrast in Nłeʔkepmxcín. The very fact that Nłeʔkepmxcín lacks a high / low negation difference and renders both English high-negative questions and low-negative questions the exact same way is interesting, since many people have argued that English high negation contains something in addition to, or something instead of, ordinary propositional negation (Han 1999; Romero & Han 2004; Goodhue 2019, 2022; Giannakidou & Mari 2021, among others).

6.2 The relevance of addressee authority, and a difference with English DQs

In (33) above (the case with the vet and the canary: *It's dead?*), the consultant expresses a preference for the *n̓* strategy; this fits with the fact that the vet is looking sad and guilty, so the speaker believes the addressee believes *p*. Interestingly, the preference for *n̓* over *keʔ* disappears when the authority gap between addressee and speaker is reduced. This can be seen in (59).

(59) *Context: You hit an animal with your car, and it is lying completely still by the side of the road. You say to the person you are with:*

a. *zuqʷ n̓ʔ*
zuqʷ=**n̓**
die=**Q**
'Is it dead?' (BP; volunteered)

b. *keʔ ks zuqʷsʔ*
keʔ k=s=zuqʷ=s
Q D/C=NMLZ=die=3POSS
'Is it dead?' (BP; volunteered)

Researcher: "Are these the same?"
Consultant: "They're both pretty good."

It makes sense that a *keʔ*-question is fine here, since the speaker could be unsure whether the animal is dead and not wish to convey any bias. The *n̓*-version is also still possible; perhaps the speaker *is* fairly sure the animal is dead, and expects the addressee to confirm it.

The puzzle here is provided by English. At least in my judgment, an English DQ is not very good in (59): in this context, I find it marginal to say *It's dead?* Given that I have assigned *n̓*-questions the exact same denotation as Rudin's analysis of English DQs, further research is

required. Why can an English speaker not use a DQ in (59) to signal that they are unable to commit to *p* and they expect the addressee to commit? Do we need to go back to earlier ideas by Gunlogson (2008) that explicitly encode the role of addressee authority compared to the speaker?

6.3 Co-occurrence of *keʔ* and *ṅ*

As shown above in (10) and (11), *keʔ* and *ṅ* can co-occur. Further examples are given in (60) and (61). In the context for (61), plain *keʔ* was volunteered earlier in example (23), and plain *ṅ* was rejected.

(60) *Context (as in (54)): Mary is at the airport, and tells a woman there that she is going to visit her friend Bob in Springtown. The woman says, "Nice! There is a good Chinese restaurant there, you should try it." A couple of days after Mary gets to Springtown, Bob asks her, "Do you want to go out to dinner tonight?" and she says, 'Yes!". Bob asks, "Where should we go?" and Mary says:*

keʔ ṅ ƛ̓eṃ ks y̓es tək tʔéye cénmən tək nɬaʔx̣anséytn?
keʔ=ṅ ƛ̓eṃ k=s=y̓e=s tə=k=tʔéye cénmən
Q=Q CMPL D/C=NMLZ=good=3POSS OBL=DET=DEIC Chinese
tə=k=n-ɬaʔx̣-ans-éytn
OBL=DET=LOC-eat-tooth-prepared.food
'Isn't there a good Chinese restaurant here?' (BP; volunteered, among other options)

(61) *Context (as in (23)): Rose is at work. Her colleague Bob walks in and they greet each other. Rose immediately says:*

kéʔe ṅ xʷuy̓ ks nq̓ʷəyénks ne spiʔx̣áwt us?
kéʔe=ṅ xʷuy̓ k=s=n-q̓ʷəy-énk=s ne=spiʔx̣áwt=us
Q=Q PROSP D/C=NMLZ=LOC-cook-belly=3POSS PREP=day.removed=3SBJV
'Is it going to be sunny tomorrow?' (KBG)

In the analysis I have given, *keʔ*-questions introduce bipolar alternative sets, and *ṅ*-questions place their prejacent *p* on the Table without committing the speaker to *p*. How might these combine? Their relative syntactic scope is a little unclear. Either way, however, the object that *keʔ* and *ṅ* should place on the Table is different: {*p*, ¬*p*} as opposed to *p*. One possibility is that since the denotation of *ṅ* is a subset of the denotation of {*p*, ¬*p*}, the two should be compatible but *ṅ*'s contribution should be redundant.[25] Further research is needed to determine the pragmatic properties of *keʔ ṅ* questions.

7 Conclusion

Nɬeʔkepmxcín has two strategies for forming polar questions. I have shown that the two strategies have different pragmatic effects, and argued that they have different semantic denotations.

keʔ-questions are bipolar and denote a set of alternatives {*p*, ¬*p*}. This alternative set is placed on the Table and the addressee is expected to commit to one of the alternative propositions. *ṅ*-questions are monopolar and place a single proposition *p* on the Table. Neither type of question

[25] Thanks to Henry Davis for discussion of this.

updates the speaker's commitments. I have shown that this analysis accounts for a wide range of data concerning the discourse properties of the two question-types.

The analysis presented here, if correct, leads to several theoretical conclusions, discussed above. I will end by re-highlighting one of the most important take-home messages from this investigation. In Nłeʔkepmxcín, *n̓*-questions are not a sub-type of *keʔ*-questions, nor more marked than them in any sense. There are simply two different forms, for two different types of question. And there is no empirical or conceptual reason to avoid assigning these two types different semantic denotations.

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