

## Evidential bias in Hungarian polar question forms – an experimental study

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**Introduction.** The paper discusses the results of two experiments that investigated how the availability of contextual evidence influences the choice between positive and negative polar question forms in Hungarian.

**Previous work.** The division of labour between forms expressing positive vs. negative polar questions (PPQ vs. NPQ) is discussed by Ladd (1981), Büring and Gunlogson (2000), van Rooij and Šafářová (2003), Romero and Han (2004), Farkas and Bruce (2010), and Sudo (2013), among others. There is general agreement that the choice between a PPQ and an NPQ in a particular situation is based (at least) on the availability of evidence, the speaker’s beliefs, expectations stemming from the norm/rules or what the speaker desires, and the goals of the interaction. Büring and Gunlogson (2000) propose, based on English and German data, that PPQs and NPQs are licensed in the absence of “compelling contextual evidence” (referred to as *evidence* for short) for the proposition denoted by the negative and the positive answer (corresponding to a negated and a non-negated proposition), respectively.

**Aims and hypotheses.** In the current study, which is the first of its kind on Hungarian, we followed the simplest possible design. We concentrated on the influence of available evidence on the choice between PPQs and NPQs in contexts that did not to make reference to any type of speaker expectation but were compatible with all (cf. Roelofsen et al. 2013 and Domanesci 2017, on interactions between evidential biases and biases stemming from the speaker’s beliefs/expectations).

We investigated the choice between PPQs and NPQs, illustrated in (1a,b), that can each be realized in terms of two string-identical but prosodically different form types, which are also string-identical to the corresponding declaratives (cf. Gyuris 2017 for further discussion): i) positive and negative polar *interrogative* form types marked by a final rise-fall tone, with a peak on the penultimate syllable, and ii) positive and negative *declarative* forms that are pronounced with a rise-fall tone on each stressed word, licensed in contexts where English ‘rising interrogatives’ (Gunlogson 2003) are used.

- (1) a. *Esik az eső?*    b. *Nem esik az eső?*  
     falls the rain       not falls the rain  
     ‘Is it raining?’       ‘Isn’t it raining?’

The following hypotheses were made:

*H1:* In a neutral context the PPQ is preferred to the NPQ.

*H2:* In the presence of evidence for the positive answer, only the PPQ form is felicitous.

*H3:* NPQs are only felicitous if there is no evidence for the positive answer.

**Materials and methods.** The hypotheses were tested in two experiments using 2-alternative forced choice tests. The critical items were presented in writing, which masked the prosodic distinction between PQs expressed by interrogatives and declaratives. In both experiments there was one experimental factor with two levels, and two response types:

	<i>factors</i>	<i>responses</i>
<i>Exp. 1</i>	evidence the positive answer vs. neutral context	PPQ vs. NPQ
<i>Exp. 2</i>	evidence for the negative answer vs. neutral context	PPQ vs. NPQ

Each item consisted of a context description, followed by a PPQ and an NPQ alternative that participants had to choose from, depending on which they would ask in the context. Two lists

were created according to a latin square design, including 16 experimental trials and 32 fillers. Data were collected via an online query form. Each experimental list was filled in by 21 to 45 participants (mean age 38.5 y.), totalling in 752 responses in Exp. 1 and 1168 in Exp. 2. Generalised mixed-effect models with random slopes were applied to the data, evidence as fixed effect and participant and item as random effects.

**Results:** PPQs were clearly preferred over NPQs (81% of all occurrences in the two experiments). Statistical analysis revealed that evidence for the positive answer in the preceding context did not have an impact on the choice of question type ( $p > 0.1$  in both lists of Exp. 1). However, evidence for the negative answer increased the preference for NPQs substantially as opposed to the neutral context condition ( $p < 0.001$  in both lists of Exp. 2), as shown below.

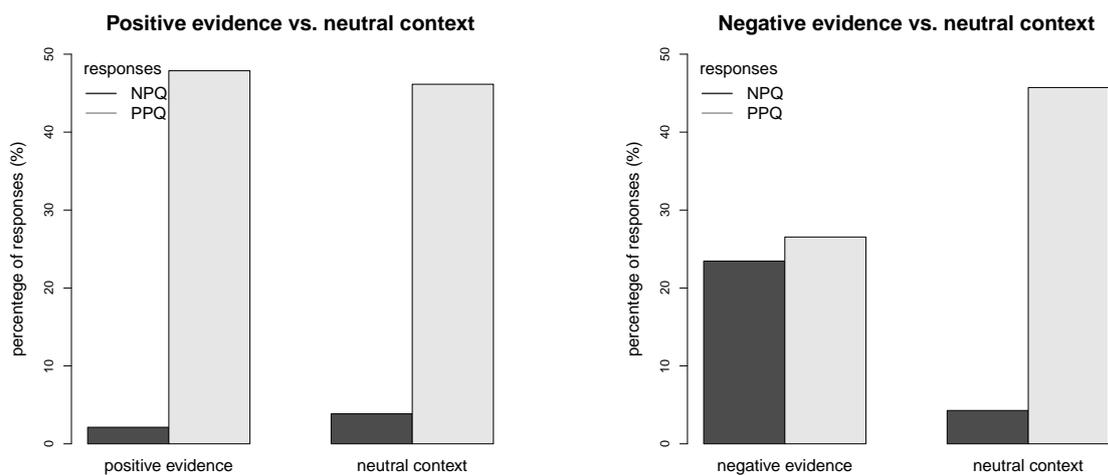


Figure 1: Percentages of preference for NPQs and PPQs with evidence for the positive answer vs. neutral context (left) and evidence for the negative answer vs. neutral context (right).

**Discussion.** All hypotheses were confirmed by the data. Due to the fact that participants could interpret the forms in question as ‘rising declaratives’, the issue of the infelicity of PPQs in the face of positive evidence observed by Roelofsen et al. (2013) did not arise. The fact that in the face of negative evidence, more PPQs (26,54%) than NPQs (23,46%) were chosen comes as a surprise, which the paper will propose reasons for. To mention the one that seems most robust, whenever the contextual evidence for the negative answer pointed to the non-performance of an act on the part of an addressee (particularly when it seemed still possible to amend the situation), speakers were more reluctant to use the NPQ form than otherwise. This points to a more important role of politeness considerations than what they have been given so far.

**References.** Büring, D. and Gunlogson, C. (2000). Aren’t positive and negative polar questions the same? Ms. • Domanesci, F. et al. (2017). Bias in polar questions: Evidence from English and German production experiments. *Glossa*. • Farkas, D. and Bruce, K. (2010). On reacting to assertions and polar questions. *JoS*. Gunlogson, C. (2003). *True to Form*. Routledge. • Gyuris, B. (2017) New perspectives on bias in polar questions. A study of Hungarian *-e*. *IRP*. • Ladd, D. R. (1981). A first look at the semantics and pragmatics of negative questions and tag questions. *CLS* 17. • Romero, M. and Han, C.-h. (2004). On negative yes/no questions. *L&Ph* 27. • Sudo, Y. (2013). Biased polar questions in English and Japanese. In Gutzmann, D. and Gärtner, H.-M. (eds.) *Beyond Expressives*. Brill. • van Rooij, R. and Šafářová, M. (2003). On polar questions. *SALT XIII*.