

The Modal Cycle vs. Negation in Slovenian*

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One of the possible ways of expressing possibility in affirmative sentences in Slovenian is with a modal adverb that combines with a finite verb. Under negation, a modal auxiliary must be used instead of the modal adverb. The pattern with a modal adverb that combines with a finite verb is a peculiarity among other Slavic languages as well as European languages more generally (Hansen 2005, Olmen & Auwera, in press). Looking at diachronic data, which reveal an earlier stage without the modal adverb as well as a subsequent stage with cooccurrence of the modal adverb and the modal auxiliary, we propose that the change be analyzed in terms of the linguistic cycle (van Gelderen 2011), with the modal adverb originating as a reinforcer of the modal auxiliary and then grammaticalizing into a modal. The modal-adverb strategy could not generalize to contexts with sentential negation because of the hierarchical order of the relevant functional projections and the characteristics of the negative particle.

1. Introduction

Standard Slovenian, as well as many of its dialects, expresses possibility primarily in two ways: with a modal auxiliary, (1a), and with a modal adverb, (1b). The first option combines the modal auxiliary *moči* with a main verb in the infinitive, the second option combines the modal adverb *lahko* with a finite main verb.¹ Whereas the first strategy is common among Slavic and more generally European languages, the second is not; when possibility is expressed with a modal adverb, it normally combines the modal adverb (and often an auxiliary) with an infinitival main verb or with a main verb in a 'that'-complement (Hansen 2005: 234, 226, Olmen & Auwera, to appear). The existence of the second option thus already makes Slovenian somewhat of a peculiarity both among Slavic languages and among European languages more generally (ibid.). Further, as reported in Hansen (2005: 225), the two structures are in a sort of complementary distribution: as shown in (1)-(3), the modal auxiliary is generally used with sentential negation, while the modal adverb is used elsewhere (ibid., cf. also Lenček 1996: 231, Babula 1980: 112, Toporišič 1982: 234, Greenberg 2006: 130, Roeder and Hansen 2007: 159). This has been noted to make Slovenian, together with

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¹ Throughout the paper, we will refer to the possibility modal auxiliary as *moči*, which is the infinitival form, regardless of the actual form it occurs in in a specific example. All of its forms will be identifiable through the English gloss *can*. Similarly, irrespective of the exact dialectal/diachronic/spelling version in which the possibility modal adverb occurs in a specific example we will refer to it as *lahko* while its various forms will be identifiable through the gloss 'easily'.

Russian, stand out from the rest of the Slavic languages in that it has a modal specialized for expressing impossibility (Hansen 2005: 225).^{2,3}

- (1) a. *Ne morem iti v kino.*
not can_{1SG} go_{INF} in cinema
'I can't go to the cinema.' (Hansen 2005, Greenberg 2006: 130)
- b. *Lahko grem v kino.*
easily go_{1SG} in cinema
'I can go to the cinema.' (Hansen 2005, Greenberg 2006: 130)
- (2) a. * *Morem iti v kino.*
can_{1SG} go_{INF} in cinema
- b. * *Ne lahko grem v kino.*
not easily go_{1SG} in cinema (Hansen 2005)
- (3) *nič več ne more, lahko se samo vrne tja, od koder je prišel*
nothing more not can_{1SG} easily REFL only return there from where AUX come
'There's nothing else he can do, he can only return to where he came from'
(www.24ur.com: 2011, Gigafida corpus)

In this paper we will explore how the situation outlined above with respect to Slovenian possibility modals came about, what conditioned it, and how it fits in the bigger picture of language change. We will argue that the current situation is a result of a development typical of cyclical change (van Gelderen 2011), in which the adverbial modal started out as a strengthener of the modal auxiliary, then grammaticalized (cf. Lenček 1996: 233, fn. 8), but has failed to generalize to negative contexts due to morphosyntactic characteristics of the negative particle. In the process, we will also provide a fine-tuning of the somewhat simplified description of the distribution of the two strategies given in (1)-(3). In section 2, we briefly present the so called linguistic-cycle view of (morpho)syntactic language change, section 3 provides data from earlier stages of Slovenian, Section 4 discusses the change observed in Slovenian, Section 5 discusses some residual issues, and Section 6 concludes the paper.

2. Cyclical change

The so-called Jespersen's cycle (Dahl 1979) is a type of language change, a series of processes during which the original negative marker is first weakened ((4), Stage 2), then strengthened with an additional marker of negativity ((4), Stage 3), and eventually omitted in favor of the newly introduced negative marker ((4), Stage 4). This cyclic change (Stage 4 can act as a new source for Stage 1) has been observed in the development of many languages, e.g. French, as in (4), or English, as in (5).

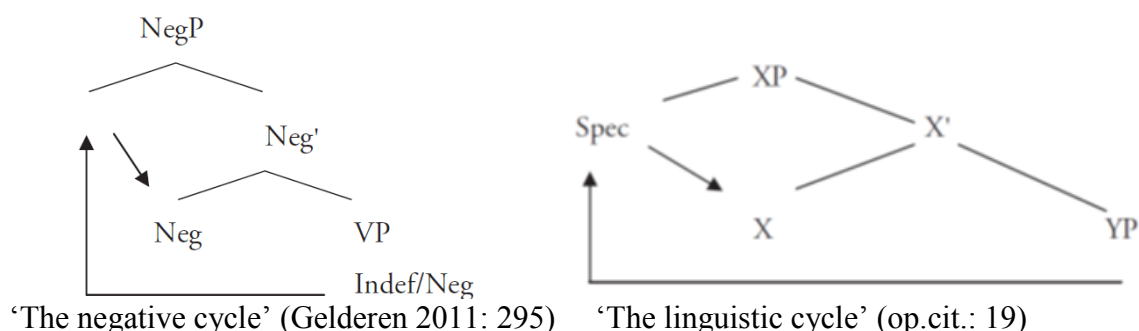
² The modal that Hansen (2005: 225) reports as specialized for impossibility in Russian is *nel'zja* 'it is not possible'. Historically, the form combines a negative particle *ne* and *l'zja*. The latter probably also derives from a form of 'easy' (cognate with Slovenian *lahko*) but it does not, unlike its Czech cognate *lze*, occur without the negative particle; both the Russian *nel'zja* and Czech *lze* only combine with an infinitive (op.cit.: 234).

³ In addition to possibility, *lahko* is also used to express permission. In this use, it is also generally restricted to contexts without sentential negation, although it then stands in complementary distribution to the auxiliary *smeti* 'be allowed to' rather than *moči* 'can' (Greenberg 2006: 130).

- (4) STAGE 1 STAGE 2 STAGE 3 STAGE 4 (Gelderen 2004)
non dico *jeo ne dis* *je ne dis pas* *je dis pas*
 NEG say I NEG say I NEG say NEG I say NEG
 ‘I do not say’
 (Latin) (Old French) (Modern Stand. Fr.) (Modern Colloq. Fr.)
- (5) a. *ic ne secge* (English diachrony, Jespersen 1924: 335-6)
 b. *i ne seye not*
 c. *i say not*
 d. *i do not say*
 e. *i don't say*
 ‘I don't say.’

Van Gelderen (2011) proposes that Jespersen's cycle is only a subtype of a more general cyclic change observed also in other domains (Subject agreement cycle, Copula cycle, Definiteness, Future and Aspect Auxiliary, etc.) during which an element from inside the complement phrase is first moved to the Specifier position of a particular functional head as part of the strengthening of the weak head and later, after the original head is lost, reanalyzed as the head, (6).

(6)



We will follow this approach and propose, on the basis of diachronic data, that the pattern currently observed with Slovenian possibility modals is a result of a partially generalized linguistic cycle, during which the original modal auxiliary (*moči*) was lost in favor of a manner adverb (*lahko*) that got reanalyzed as a possibility modal head. This change attests a new subtype of the linguistic cycle in the modal domain (see Gergel 2009 for a slightly different type of the “modal cycle” and Lohndal 2009 and Gelderen 2011 for other applications of the linguistic cycle in the modal domain).

3. The diachrony of *lahko* and *moči*

Historically, the possibility *lahko* from (1) above is an adverb derived from the adjective *lahk* ‘easy’, ‘light’ (cf. Hansen 2005: 234, Roeder & Hansen 2007: 157). In fact, a manner adverb *lahko* ‘easily’ continues to exist in Slovenian, but is clearly an element separate from the modal *lahko*. This is suggested by the fact that certain modifiers which are acceptable with the manner *lahko* are not acceptable with the possibility *lahko* (cf. Lenček 1996: 230) and that the possibility and manner *lahko* can co-occur in the same clause, (7). Furthermore, in many modern varieties of Slovenian, the possibility *lahko* has developed phonological variants which are not shared by the manner adverb. For example, in Ljubljana Slovenian, the

phonologically reduced form *loh* is admissible as a possibility modal but not as a manner adverb, (8).⁴

- (7) *Janez (*precej) lahko zleze na Triglav precej lahko.* (Standard Slovenian)
 Janez fairly easily climb_{3SG} on Triglav fairly easily
 ‘Janez can climb Mt. Triglav fairly easily.’
- (8) *Janez (*precej) loh zleze na Triglav precej {lahko / *loh}.* (Ljubljana Slov.)
 Janez fairly possibly climb_{3SG} on Triglav fairly easily possibly
 ‘Janez can climb Mt. Triglav fairly easily.’

3.1 Earliest Slovenian

The oldest Slovenian texts—the Freising text fragments from around 1,000 A.D. (possibly a century earlier)—show the possibility auxiliary *moči* used both in contexts with and without sentential negation, that is, both in contexts in which modern Slovenian would use the possibility auxiliary *moči* and in contexts in which modern Slovenian would use the possibility modal *lahko*, (9). At the same time, the use of *lahko* is not attested (neither as a possibility modal nor as a manner adverb), although not much can be concluded from this absence given the small amount of text in the Freising text fragments. Nevertheless, non-negative contexts with a possibility modal *are* attested, and they exhibit the modal auxiliary *moči*, unlike what would be the case in spontaneous modern Slovenian.

- (9) a. *Tīge se mosem i mui este buiti [...]*
 like.that PRTC can_{1PL} and we still be_{INF}
 ‘We can still be like them’
- b. *[...] egose ne mosem nikimse liza ni ucriti [...]*
 whose not can_{1PL} noone face us hide
 ‘before his face we cannot hide behind anyone’⁵

Moreover, whereas a cognate of *moči* is also attested in Old Church Slavonic⁶ (Hansen 2005: 223, Hansen 2009: 481), no other Slavic language apart from Slovenian has an equivalent of *lahko*, which strongly suggests that *lahko* must be an innovation (Hansen 2005: 234). If this is the case, we know that regardless of what is not attested in the Freising fragments, there must have been a stage at which Slovenian did not yet encode possibility with *lahko*.

3.2 16th Century

Slovenian texts from the 16th century still exhibit the use of the possibility auxiliary *moči* both in contexts with sentential negation, like in modern Slovenian, and unlike in modern Slovenian, in contexts without sentential negation, as shown in (10d).

⁴ The text in (i) provides a long example—two consecutive sentences—from the comments section of an internet news portal where both uses of *lahko* are present in the first sentence and a negative possibility modal verb in the second sentence (www.rtvsllo.si/evropska-unija/ecb-nujna-likvidnostna-pomoc-grskim-bankam-ostaja/368507#comments):

(i) *Slovinci smo lahko odšli iz Jugoslavije relativno lahko, saj so bili največji problemi generali in Milošević. Iz EU ne moreš, ker birokrati jasno kažejo, kako močna orodja imajo.*
 ‘Slovenes could exit Yugoslavia relatively easily as the biggest problems were the generals and Milošević. But you can't exit the EU, as the bureaucrats clearly show the power of their tools.’

⁵ Transliteration, word-for-word gloss and translation based on Ogrin (2007).

⁶ An example with *moči*'s cognate in Old Church Slavonic is in (i), taken from Lunt (2001).

(i) *eda možetъ slěpъcъ slěpъca voditi* (L 6:39)
 ‘can a blind man lead a blind man?’

- (10) a. ... *taku ta isti ne more priti v tu Božye kraljevstvu.*
 so this same not can come in this god's kingdom
 '[...] so this same person cannot come into god's kingdom.' (Trubar 1557)⁷
- b. *Ie li fe more jéfti, kar je neflanu?*
 AUX Q REFL can eat what AUX unsalted
 'Can one eat what is not salted?' (Dalmatin 1584)
- c. ... *kir tim ludem [...] bi mogla iz take nadluge pomagati.*
 because these people would can from such trouble help
 '... because she could help these people out of such trouble.' (Trubar 1557)
- d. ... *de tu istu more inu hoče per pravim času sturiti,*
 that this same can and wants at right time do
 '... that he can and wants to do the same thing at the right time.' (Trubar 1557)

At the same time, they also exhibit cases with *lahko* used as it is used in modern Slovenian, i.e. combining *lahko* with a finite main verb in non-negation contexts, as in (11) (cf. Lenček 1996: 233, fn. 8).

- (11) a. ..., *taku iz tiga vsaki lahku zastopi, de*
 so from this everyone easily understands, that ...
 'so that everyone can understand that ...' (both examples from Trubar 1557)⁸
- b. *Mi bi te iste lahku, z volnim srcem, popolnoma ... držali.*
 we would these same easily with-willing heart totally held
 'We could have wholeheartedly completely abode by these commandments'

However, what is also prominent in these texts is the cooccurrence of the possibility auxiliary *moči* with *lahko* in non-negative contexts (cf. Lenček 1996: 233, fn. 8), as in (12)-(13). In some instances of the cooccurrence of the modal auxiliary *moči* and *lahko*, such as (12), the function of *lahko* is clearly an expression of manner, as shown by the fact that it is coordinated with the manner adverb *dobru* 'well' (cf. Lenček 1996: 230). However, in the examples in (13), and in particular in (13a), the adverb is more likely an additional marker of the possibility expressed by the modal auxiliary, i.e. some sort of modal reinforcer.

- (12) *Iz tiga tudi more en vsaki zastopni človik lahku inu dobro zastopiti,*
 from this also can one every reasonable man easily and well understand
 'Every reasonable man can easily and well understand from this ...' (Trubar 1575)
- (13) a. *Le-to zapuvid bi Adam inu Eva bila cilu lahku mogla deržati [...]*
 this commandment COND Adam and Eva were whole easily can hold
 'Adam and Eve could follow this commandment ...' (Trubar 1557)
- b. ... *more en vsaki dobri kersčenik lahku zastopiti inu soditi, ...*
 can one every good christian easily understand and judge
 'any good christian can understand and judge ...' (Trubar 1562)

⁷ Examples (10a,c,d), (11a,b), and (13a) are quoted here as presented in Vinkler (2012). Examples (13b,c,d) are quoted as given in Vinkler (2005). Example (12) is quoted as given in Kranjc – Vrečko (2003).

⁸ In such examples it is perfectly possible that *lahko* is actually used as a manner adverb, in which case the translation should be 'so that everyone easily understands that ...'. We have no way of telling what this example's target interpretation was; however, this is not crucial for our purposes. Given our explanation from section 4 below, we might actually expect this to be the manner use of *lahko*.

- c. ... *iz tige mi moremo lahko zastopiti inu zamerhati* ...
 from this we can easily understand and notice
 ‘we can easily notice and understand from this ...’ (Trubar 1564)
- d. *Iz tige vsiga ie očitu inu sledni lahko more zastopiti inu zamerhati*, ...
 from this all AUX obvious and last easily can understand and notice
 ‘It is obvious from this and anyone can notice and understand ...’ (Trubar 1564)

Notice that there does not seem to be any strict ordering between *moči* and *lahko*. In (13a) and (13d), *lahko* precedes *moči*, while in (13b-c), *moči* precedes *lahko*; and in (13b) *moči* and *lahko* are not even adjacent. The examples in (12) and (13b-d) differ only minimally, which suggests that the cooccurrence of *moči* and *lahko* is not structurally dependent. Attestations of *moči-lahko* cooccurrences are abundant, so the cooccurrence does not appear to be a peculiarity of a single type of syntactic frame or some sort of an idiom. Moreover, such cooccurrences are also exhibited in Jurij Dalmatin’s translation of the Bible from 1584, suggesting that they are not specific to a single author/Trubar’s idiolect. In Dalmatin’s texts, too, *moči* and *lahko* occur in both orders, (14)-(15).

- (14) ... *inu njemu povém, koku je on more lahko dobiti*, ...
 and him tell how AUX he can easily get
 ‘... and I tell him, how he can get ...’
- (15) *Sakaj GOSPVD slednimu lahko more vsmèrti povèrniti, kakòr je saflushil*.
 because lord last-ones easily can in-death return as AUX earned
 ‘Because after death, the lord can give to everyone what he deserves.’

At this point, we do not have a proper corpus analysis of 16th-century Slovenian, but it appears that *moči* alone is most often used in negative contexts, while the combination of *moči* and *lahko* is more common in (perhaps especially declarative) non-negative contexts.

3.3 17th Century

In the few texts from this time, expressing possibility has not changed significantly. The modal verb *moči* is found in both negative and non-negative contexts, as shown in (16)-(17).

- (16) ... *taku dolge roge, de nej fìim mogal s' kusi obene urata*.
 such long horns that not AUX could through no door
 ‘... such long horns that I couldn’t go through any door.’
- (17) ... *kateru je mogal v' Cerkvi en nepokoren samovolen shlishat*:
 which AUX could in church one disobedient stubborn hear
 ‘... which a disobedient stubborn person could hear in the church.’

And just like in the 16th century, we can find occurrences of *lahko* used together with the modal *moči* as in (18)-(19). *Lahko* is never used without the modal verb *moči* in these texts, but given the very small number of texts from this period, nothing can be concluded from this (we only found two instances of *lahko* and both were used with a modal (*moči* and *zmorem*)).

- (18) a. *Katero refnizo lahko morem poterdit s' exempelni*.
 which truth easily can confirm with examples
 ‘Which truth can we confirm with examples?’ Svetokriški (1695)

- b. *Dokler vřak dan lahku řa morite takorshne zhuda dellat, ...*
 until every day easily can this-kind miracle do
 ‘Until you can do such miracles every day, ...’ Svetokriřki (1695)

3.4 18th Century

The 18th century reveals a very similar situation. As shown in (19)-(20), the modal verb *moči* was used in both negative and non-negative contexts.

- (19) *oh ř de bi mogla enkrat vmert,*
 oh that COND could once die
 ‘Oh, if only I could die’ (Marušič 1715-1727)
- (20) *... na katerim uřsi Angelzi se namoreio Sadosti nagledat,*
 on which all angels REFL not-can enough on-watch
 ‘... of which no angels can get enough of watching’ (Marušič 1715-1727)

At the same time, we also find cooccurrences of the possibility auxiliary *moči* and *lahko*, as in (21)-(23).

- (21) *morete lohku is tega doli uřseti sami,*
 can easily from this down take alone
 ‘you can take it down from this alone’ (Marušič 1715-1727)
- (22) *Kteri ako je glih dobro veřzeljé leiko mogo meti, je on kris preterpo*
 who if AUX just well joy easily can_{PTCP} have AUX he cross through.suffered
 ‘who if he could just get joy, he ...’ (Sever 1747, cited in Novak 2006)
- (23) *jeli vnyem, ali pa zvüna nyega, bodo le'zi mogli 'živeti*
 either in.it or PTCL outside it will more.easily can_{PTCP} live_{INF} (Küzmič 1754,
 ‘they will be able to live more easily either in it or outside of it’ cited in Novak 2006)

The sentence in (22) is from a text from 1747 and its use of *lahko* (in an orthography reflecting north-eastern Slovenian phonology) is listed in the Dictionary of Old Standard Prekmurje Slovenian (Novak 2006) in a subentry with the meaning ‘possibility’ rather than in the subentry with the meaning ‘with ease’ (i.e., manner). On the other hand, the sentence in (23), also from a text from the same period, is given as an example of *lahko* acting as a manner adverb. The same texts also include examples where *lahko* alone seems to have been used as a possibility modal (according to the same historical dictionary – Novak 2006), (24). These seem to be the earliest attestations of *lahko* in what may be/is reported to be a modern-like possibility modal use (without a cooccurring modal auxiliary) – although it is not entirely clear to us that the *lahko* of (24) could not also be functioning as a manner adverb.

- (24) *da li tebé mám, Leihko vřze ta driüga nehám* (Sever 1747,
 that Q you have easily all the other stop cited in Novak 2006)
 ‘If I have you, I can quit everything else.’

3.5 19th Century

In the 19th century, the possibility auxiliary *moči* is likewise attested in both negative and non-negative clauses, as shown in (26) and (25), respectively. (26) is actually an instance of the modal auxiliary appearing together with *lahko*, but given that the latter is in the comparative form (*laže* = “more easily”) it must presumably be an instance of a manner use (the modal *lahko* does not allow the comparative or superlative forms in contemporary Slovenian and it seems unlikely that it could have allowed them even at this earlier stage).

- (25) ... *tudi more celo družino v drug panj predjati.*
 also can whole family in another beehive move
 ‘... he can also move a whole colony of bees into another beehive’
- (26) ... *umetnih rojev ne moreš laže narejati, kakor pa s takimi panji.*
 artificial swarms not can easier make than PTCL with such beehives
 ‘... one cannot make artificial swarms more easily than with such beehives.’
 (both 1871, Kmetijske in rokodelske novice)

Similarly as in earlier centuries, we can also find examples where the possibility auxiliary *moči* and *lahko* co-occur, as in (27). Interestingly, roughly from the mid-19th century to the early 20th century, modal doubling is attested also in negated sentences, (28), with what very much seems like a modal use of *lahko*.

- (27) *taki lahko morejo vsaki dan svoje buče obiskovati ...*
 such easily can each day their bees visit (1871, Kmetijske
 ‘such people can visit their bees every day’ in rokodelske novice)
- (28) a. *Da pa je [...] veliko dela, o tem pač ne more lahko še kdo dvomiti.*
 that PTCL AUX a-lot work of this PTCL not can easily still anyone doubt
 ‘But that there is a lot of work, noone can doubt.’ (1891, Slovenski gospodar)
- b. *Dalje s piscem ne morem lahko o tej reči govoriti. Iz njegovega članka je namreč razvidno, da niti najmanjšega pojma o pomenu izraza ‘liberal’ nema.*
 further with writer not can easily of this thing speak from his
 article AUX namely clear that not-even smallest idea of meaning
 term liberal not-has (1877, Slovenski narod)
 ‘I cannot discuss this further with the author – his article makes it clear that he does not have the faintest idea what the term ‘liberal’ means.’

And just as we have seen in the 18th-century section above (3.4, example (24)), 19th-century texts also reveal cases in which *lahko* occurs without the modal auxiliary *moči* and appears to be used to express possibility modality rather than manner.

- (29) *Kedar večje živali blizo panjev pridejo, tudi lahko jezne postanejo.*
 when bigger animals close hives come also easily angry become
 ‘They can also get angry when large animals come close to the hives.’
 (1882, Slovenski gospodar)

In the texts from this period (e.g. Cigler 1836, Trdina 1882-88), we can actually frequently observe the coexistence of the modal auxiliary being used in both negated and various types of non-negated clauses and the modal adverb *lahko* used only in non-negated sentences and

without a cooccurring modal auxiliary. This state of affairs seems to persist into the first half of the 20th century.

3.6 Contemporary (Standard) Slovenian

In contemporary Slovenian (roughly starting from the second half of the 20th century) modal doubling is not attested; there are no such examples in general text corpora such as Gigafida (www.gigafida.net), which include both standard and non-standard Slovenian, or in texts from this period in the text collection of the Digital Library of Slovenia (dlib.si). Generally speaking, doubling of the modal adverb *lahko* with the modal auxiliary is judged unacceptable in present-day Slovenian (but cf. next paragraph). As described in Section 1 above, the two ways of expressing possibility—the modal *lahko* with a finite-form main verb and the modal auxiliary *moči* with an infinitival main verb—are in some sort of complementary distribution.

However, the cooccurrence of *moči* and *lahko* is in fact still attested in present-day Slovenian in its extreme western dialects, the dialects of Resia Valley and Slavia Veneta in Italy, which Breu (2011) has labeled “linguistic enclaves” due to their many archaisms and idiosyncrasies and their pronounced geographic and political separation from the rest of the Slovenian-speaking territory. The examples in (30) are from a bilingual Italian–Resian Slovenian tourist information panel at the church of St. Anna di Carnizza/Sv. Ana v Krnici above the Resia/Rezija Valley, whereas (31) is from the internet.

- (30) a. [...] *blizu cirkvice šcalē našnji din se mörē lehku vīdēt ise klančiče.*
 close church still our day REFL_{IMPS} can easily see these piles
 ‘[...] close to the church one can see even today these glacial deposits.’
 b. [...] *drügi klančiči, ka se mörē lehku vīdēt [...]*
 other pile where REFL_{IMPS} can easily see
 ‘[...] other glacial deposits where one can see [...]

- (31) [...] *ku de so reči, ki [...] jih moremo lahko pustiti, naj gredo po svoji poti.*
 as that are things that them can easily let PTCL go on their way
 ‘as if they are things which can be left to go their own way’

(www.dom.it, posted 2014)

Note that the Italian counterparts of (30a-b) on the Italian–Resian Slovenian bilingual tourist information panel exhibit no element that would correspond to the meaning ‘easily’/‘with ease’; the parts corresponding to Resian Slovenian *se mörē lehku vīdēt* ‘one can see’ are just a generic *si osserva* (REFL_{IMPS} see_{3SG}) ‘one sees’ in the case of (30a) and a generic *sono visibili* ‘are visible’ in the case of (30b). This suggests that these two cooccurrences of *moči* and *lahko* (= *lehku*) indeed represent modal doubling rather than a cooccurrence of *moči* as the sole exponent of possibility on the one hand and of *lahko* used as a modality-independent non-bleached manner adverb meaning ‘with ease’ on the other hand.

So the possibility modal situation from the second half of the 20th century and the 21st century can be described as follows. The often archaic extreme western dialects of Resia Valley and Slavia Veneta in Italy still exhibit modal doubling, with *moči* and *lahko* cooccurring. Most of Slovenian varieties from this period, however, do not exhibit this: on the one hand, modal doubling is attested neither in general corpora such as Gigafida nor in texts in collections such as The Digital Library of Slovenia, and on the other, it is also not judged acceptable in present-day varieties such as those of Ljubljana (central Slovenia) or Nova Gorica (western Slovenia). Moreover, as mentioned in the introduction, present-day

Slovenian, both standard and many dialects, exhibits a kind of complementary distribution with *moči* used in contexts with sentential negation and *lahko* used in contexts without sentential negation (but see Section 5 below for refinement).

3.7 Summary

Summarizing the use of the three ways that possibility modality has been expressed through the history of Slovenian, we arrive at the following table (first version):

Table 1: Possibility Modality in Diachrony

		Negation	No negation
11 th c. (Freising fragments)		<i>moči</i>	<i>moči</i>
16 th c. (Trubar)		<i>moči</i>	<i>moči</i> / <i>moči+lahko</i> / <i>lahko</i> ⁹
17 th c. (Svetokriški)		<i>moči</i>	<i>moči</i> / <i>moči+lahko</i>
18 th c. (Marušič, Novak 2006)		<i>moči</i>	<i>moči</i> / <i>moči+lahko</i> / <i>lahko</i> ¹⁰
19 th , early 20 th c. (newspapers)		<i>moči</i> / <i>moči+lahko</i>	<i>moči</i> / <i>moči+lahko</i> / <i>lahko</i>
late 20 th , 21 st c.	dialects of Resia, Slavia Veneta	<i>moči</i>	<i>moči+lahko</i> / <i>lahko</i>
	Standard and many dialects, e.g. Ljubljana	<i>moči</i>	<i>lahko</i>

In the earliest stages of Slovenian, the modal auxiliary *moči* was the only option for expressing possibility. In the 16th century, the modal auxiliary verb *moči* starts to cooccur with the adverb *lahko*, and in almost all early cooccurrences of *lahko* and possibility modal *moči* from that time, *lahko* seems to be interpretable as a manner adverb meaning ‘easily’. Its basic manner meaning—‘easily’—makes *lahko* an obvious candidate for developing into a semantically bleached possibility-modal strengthener. In many later cooccurrences of the modal auxiliary *moči* and the adverb *lahko*, a manner meaning of *lahko* is no longer readily discernible. In many modern Slovenian dialects, *lahko* established itself as the only option for expressing possibility in contexts without negation. In contexts with negation, on the other hand, *moči* has survived, and in many modern dialects thus reestablished itself as the only option for expressing possibility in negated clauses.

4. Towards an explanation

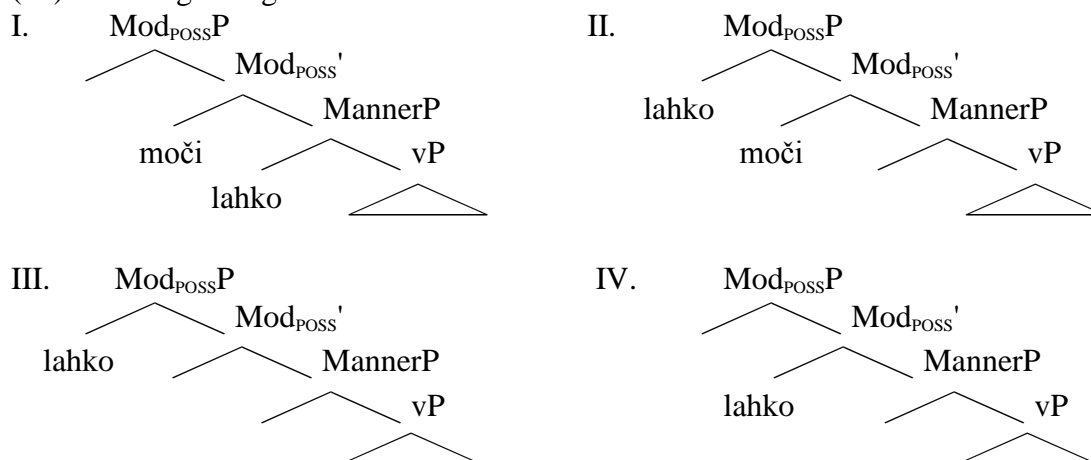
Assuming that the standard position of modal auxiliary verbs is as in Cinque (2004), *moči* started out as the head of Mod_{POSS}P. *Lahko*, on the other hand, started out as a manner adverb with the meaning of ‘easily’, located just above vP (cf. Cinque 1999), as shown in (32-I). Slowly losing its original meaning, *lahko* became semantically bleached, used primarily for strengthening Mod_{POSS}P. As a consequence of semantic bleaching, *lahko* grammaticalized as a Mod_{POSS}P element, (32-II). In the last two stages, *lahko* gets reinterpreted as a modal adverb

⁹ As mentioned in Section 3.2 above, in most if not all 16th-century examples which feature *lahko* and a finite form of the main verb (i.e. without *moči*), *lahko* might in principle be analyzable as a manner adverb, so the inclusion of this construction in the 16th century slot should be read with this reservation.

¹⁰ As mentioned in Section 3.4 above, it is not entirely clear that the 18th-century examples which feature *lahko* and a finite form of the main verb (i.e. without *moči*) could not be exhibiting a *lahko* that functions as a manner adverb, so the inclusion of this construction in the 18th century slot should be read with this reservation.

of possibility, with the consequence that the modal auxiliary *moči* is no longer needed for modal interpretation. In the last stage, the adverb *lahko* is reanalyzed as the Mod_{POSS} head, (32-IV).

(32) Four stages of grammaticalization of *lahko*

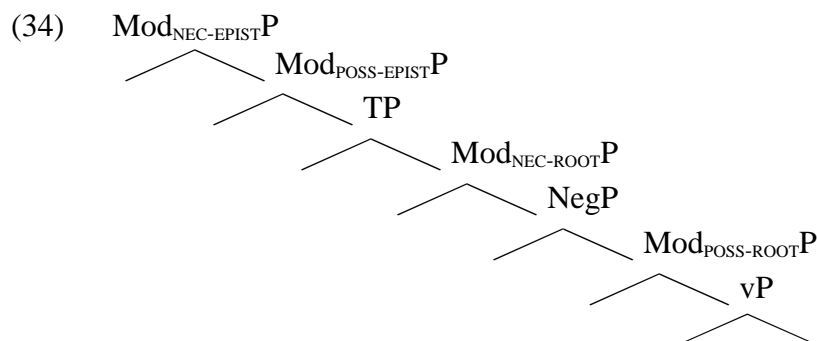


4.1 Why did *lahko* not generalize to contexts with sentential negation?

Given the developmental path proposed in Section 4, it is not immediately obvious why the modal *lahko* would remain restricted to affirmative contexts rather than generalizing also to negative contexts. An explanation for this restricted generalization seems to be linked to the nature of the Slovenian negative particle. The (sentential) negative particle *ne* in Slovenian has been argued to be the head of NegP, sandwiched between vP and TP (Ilc & Milojević Sheppard 2003). And while *ne* is clearly realized as a proclitic on the finite verb, it has, moreover, been claimed to form not just a phonological but actually a syntactic constituent with the finite verb form (ibid.). This explains why the two together can serve as a host to 2P clitics, as shown in (33) (Milojević Sheppard & Golden 2000: 96, cited in Ilc 2008: 68).¹¹

- (33) *Ne dam ti ga.* (Ilc 2008: 68)
 NEG give you_{DAT.CL} it_{ACC.CL}
 'I won't give it to you.'

As for the position of ModP_{POSS}, it has been argued to be between NegP and vP, as in (34) (adapted from Butler 2003: 988).



¹¹ Alternative proposals exist, e.g. Rivero (1991) has placed Slovenian NegP above TP.

So, as *ne* is a verbal clitic, it has to be realized on the finite verb. Following Ilc and Milojević Sheppard (2003), this is obtained via verb movement to the Neg⁰ head. However, since *lahko* is not an affixal element, it acts as an intervener, blocking movement of the V⁰ head to the Neg⁰ head (cf. English *not*). As a result, *lahko* cannot be used in cases with sentential negation, and could not have, diachronically, generalized to contexts with sentential negation.

Note that in the texts from the 19th and early-20th century, we find ample attestation of *lahko* and *moči* cooccurring in a context with negation, as in (35) (repeated from (28a) above).

- (35) *Da pa je [...] veliko dela, o tem pač ne more lahko še kdo dvomiti.*
 that ptcl AUX a-lot work of this ptcl not can easily still anyone doubt
 ‘But that there is a lot of work, noone can doubt.’ (1891, Slovenski gospodar)

Given the explanation that we have just put forth for why *lahko* did not generalize to negative contexts (=because as a non-affixal head, it would prevent cliticization of the negative particle onto the verb), it may appear at first sight that we predict that we will not be able to find cooccurrences of *lahko* and *moči* in negated sentences. There is, however, a straightforward explanation for how such cooccurrences of *lahko* and *moči* could have been possible: they instantiate Stage 2, in which *lahko* is not yet the head of the Mod_{POSS-ROOT}P but its specifier, whereas its head is occupied by the modal auxiliary *moči*. Therefore, *lahko* did not, at this stage, block the negative particle from cliticizing onto the finite verb. Such an explanation assumes that cases like (35) exhibit *lahko* in its modal/ModP use. If (35) nevertheless turned out to be a case of *lahko* used as a manner adverb, as in Stage 1, the cooccurrences of *lahko* and *moči* in negated sentences can also easily be explained: as manner adverbs do not block the negative particle from cliticizing onto the verb, there is no obstacle for the negative particle to cliticize onto the verb.¹²

In summary, the reason for the failure of *lahko* to generalize also to negative contexts lies in the interplay of the affixal status of the negative particle, the non-affixal status of *lahko*, and the structure in (34), in which *lahko* is higher than the verb; this blocks the cliticization of the negative particle onto the finite verb.

5. Fine-tuning our data

5.1 *Lahko* and negation

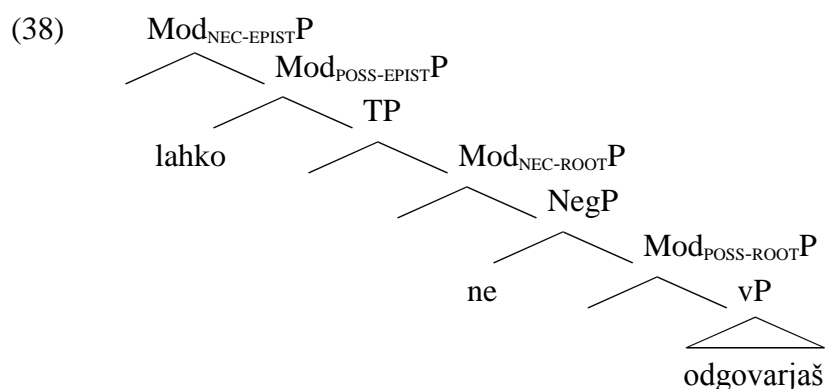
Despite what we have been saying in the context of the complementary distribution in (1)-(3) above, *lahko* is actually not banned from sentences with negation just across the board. For example, it is possible to have *lahko* preceding constituent or VP-negation, as in (36). Similarly, *lahko* is possible with negation when it is used as an epistemic (rather than root) possibility modal, as in (37).¹³

¹² Following Ilc & Milojević Sheppard (2003), we assumed that the negative particle *ne* is a head. An alternative approach could be to treat the negative particle as a phrasal element originating in the specifier of NegP (cf. Cinque 1999) and cliticized onto the verb (which makes a certain amount of sense given that one might expect heads to be linearized among the affixal elements following the verbal root). If the negative particle is a specifier and is positioned higher than Mod_{POSS-ROOT}P, it has to follow the hierarchy of adverbs. According to the hierarchy presented in (34), *ne* has to precede *lahko*. One shortcoming of this approach is that it is not clear why, if *ne* and *lahko* are just adverbs that have to be strictly positioned, the verb cannot move to the Neg head and host the negation clitic from there. After all, *lahko* does not need to precede the verb in every sentence.

¹³ A reviewer states that (37) is not an example of epistemic modality but rather of circumstantial modality. There may be an issue of terminology here. We use the term epistemic strictly in the sense of Butler (2003), see

- (36) *Lahko se tudi ne oglasiš.*
 easily REFL also not answer
 ‘You can also not answer.’
- (37) a. *Kako lahko tega ne maraš?*
 how easily this_{GEN} not like
 ‘How can you not like this?’
- b. [blood drive ... ‘And they will actually tell you your type before they take that half liter of your blood’]
Potem jim pa itak lahko še ne odgovarjaš (piercing ... (www))
 then they_{DAT} PTCL also easily still not suit
 ‘And then it’s also possible that you don’t suit them (because of piercing ...)’

Despite the fact that they feature *lahko* together with negation, such cases are not problematic for our account. If (36) contains constituent/vP negation, in which negation is adjoined at the vP level, the modal *lahko* will originate above both the verb and the negation, so it will not interfere with the cliticization of *ne* onto the finite verb. And similarly in the case of (37): since epistemic modals are located above TP (e.g. Butler 2003) and therefore also higher than regular sentence negation, as shown in (38), *lahko* will not interfere with the cliticization of *ne* onto the finite verb.



In fact, we can also find cases in which *lahko* cooccurs with negation and *moči* in a structure in which the auxiliary *moči* is used as the lower, root possibility modal, and is negated, while *lahko* is used as an epistemic possibility modal higher in the clausal structure, (39). The acceptability of (39) is thus also not a counterexample to our proposal, since in this configuration, *lahko* is again not predicted to prevent the negative particle from cliticizing onto the finite verb form.

below. For our purposes, the relevant point of this example is that the position of *lahko* is higher than the position of the subject and thus also higher than what we assume to be the position of negation (see section 4.1 above).

- (39) [...] *ker se mokra čebela lahko ne more več vrniti v panj, smo se umaknili v zadnji del čebelnjaka.* (www)
 as REFL wet bee easily not can more return to hive AUX REFL
 retreated in rear part hive
 ‘... because a wet bee could be unable to return to the hive, we retreated into the rear part of the hive.’

5.2 *Lahko* and negation – more western dialectal variation

As mentioned in Section 4.1, Standard Slovenian and Slovenian dialects like that of Ljubljana have a sentential negation particle *ne* which must be proclitic on the finite verb (e.g. Ilc & Milojević Sheppard 2003). However, in some western dialects, such as Gorica Slovenian, the sentential negation particle *ne* is sometimes stressed and split from the finite verb (cf. Skubic 1997, Zuljan 2003), as in (40).

- (40) *Človek se vpraša, če ti né že malo manjka.* (Nova Gorica, * in Lj.)
 man REFL asks if you_{DAT} not already little misses
 ‘You ask yourself if you haven’t gone a bit nuts.’

In such dialects, conditions appear to have been met for complete generalization of *lahko* to all contexts, including those with negation, since *ne* is not (always) a clitic and does not need the finite verb to act as its host, so the problem of *lahko* blocking the cliticization of *ne* onto the finite verb will not arise. Interestingly, this dialect indeed allows the cooccurrence of *lahko* and negation, as in (41), thereby lending support to our explanation from Section 4.1 as to why *lahko* has not generalized to negative contexts in Standard Slovenian or Ljubljana Slovenian.¹⁴

- (41) *A vam né lahko tako naštimajo, da bi blo ...?* (Nova Gorica, * in Lj.)
 Q you_{DAT} not easily thus arrange that would been
 ‘Can they not arrange it so that it would ...?’

Note that the auxiliary *moči* is not really used in Gorica Slovenian nowadays, and a different auxiliary verb—*upati*—is used in its place, (42). Nevertheless, the replacement of one lexical item with another as the modal auxiliary is not really important for our purposes, and alternative modal auxiliaries (either side by side with *moči*, or instead of *moči*) also exist in other varieties of Slovenian. What is relevant for our purposes is that *lahko* is also used as an expression of possibility in Nova Gorica, and that it is also possible in a negated sentence like (41), which is in sharp contrast with Standard and Ljubljana Slovenian, where *ne* is obligatorily a proclitic on the finite verb and where *lahko* cannot occur in a negated sentence like (41).

- (42) *Peter ne upa skočit na mizo.*
 Peter not can jump on table
 ‘Peter cannot jump on the table.’

¹⁴ Given what Ilc (2011) reports about negation in some north-eastern dialects, a comparable situation might be expected in those dialects.

With the fine-tuning regarding the distribution of *lahko* that we have seen in this section, we can now update Table 1 from above, as in Table 2 below. We limit the information to cases of clear root modality, as the separation of root modality from epistemic modality in historical data can be tricky.

Table 2: Root Possibility Modality in Diachrony, version 2

		Negation	No negation
11 th century		<i>moči</i>	<i>moči</i>
16 th century		<i>moči</i>	<i>moči</i> / <i>moči+lahko</i> / <i>lahko</i> ¹⁵
17 th century		<i>moči</i>	<i>moči</i> / <i>moči+lahko</i>
18 th century		<i>moči</i>	<i>moči</i> / <i>moči+lahko</i> / <i>lahko</i> ¹⁶
late 19 th , early 20 th century		<i>moči</i> / <i>moči+lahko</i>	<i>moči</i> / <i>moči+lahko</i> / <i>lahko</i>
present-day Slovenian (late 20 th and 21 st century)	dialects of Resia, Slavia Veneta	<i>moči</i>	<i>moči+lahko</i> / <i>lahko</i>
	Standard and many dialects, e.g. Ljubljana	<i>moči</i>	<i>lahko</i>
	dialect of Nova Gorica	<i>upati</i> / <i>lahko</i>	<i>upati</i> / <i>lahko</i>

5.3 *Moči* persists also in some contexts without negation

Despite the complementary distribution of *lahko* and *moči* exemplified in (1)-(3) above, the modal auxiliary *moči* can also be found in some non-negative contexts in Standard Slovenian and (to varying degrees) in many dialects, as shown in (43a)-(45a). As has been observed by Roeder and Hansen (2007: 159), the *moči* construction seems more acceptable in questions, specifically in phrases with *wh*-movement, both matrix and embedded. Note that in all of these cases, possibility modality can also be expressed with the *lahko* construction (in the Ljubljana dialect, this is the most spontaneous option), so these environments are not like those with negation, where *lahko* is impossible.

- (43) a. *Kako moreš tako govoriti?*
how can thus speak_{INF}
'How can you speak like this?'
- b. *Kako lahko tako govoriš?*
how easily thus speak_{2SG}
(='(43a)')
- (44) a. *Pomagaj si, kakor si moreš.*
help self how self can
'Help yourself whichever way you can.'
- b. *Pomagaj si, kakor si lahko.*
help self how self easily
(='(44a)')
- (45) a. *Reši se, kdor se more.*
save_{IMP} self who_{REL} refl can
'Save yourself, whoever can.'
- b. *Reši se, kdor se lahko.* (www)
save_{IMP} self who_{REL} refl easily
(='(45a)')

It is possible that *moči* has been able to persist in these contexts due to the fact that they share some semantics with negated clauses – both are downward entailing environments. *Moči* may

¹⁵ See footnote 9 above.

¹⁶ See footnote 10 above.

have been interpreted as a type of negative polarity item and thus used in other NPI-licensing contexts. However, *moči* could not simply be a typical NPI, as it is not at all possible just in any questions, (46).

- (46) a. * *A moreš komurkoli pomagati?* b. *A lahko komurkoli pomagaš?*
Q can_{2SG} anyone help_{INF} Q easily anyone help_{2SG}
‘Can you help anyone?’

Importantly, note that (43a)-(45a) are not counterexamples to our account of the change, that is, our account does not predict *moči* to be impossible in such contexts. It says how *lahko* came to be used as a possibility modal, how it could come to supplant *moči*, and it predicts to what contexts *lahko* could not have spread. But it does not predict that *moči* could not have persisted in some of the contexts where *lahko* can occur. In fact, some room might have to be left for paradigmaticity (cf. Lehmann 2015) also in view of cases like (47), in which the negative particle surfaces cliticized on the auxiliary and the modality is still encoded with a participial *moči*, not with *lahko* (contrast with (1)-(2) above)). Again, as far as we see, this does not invalidate our account for how *lahko* developed into a modal and why it could not generalize to negative contexts.

- (47) a. *Nisem mogel iti v kino.* b. **Nisem lahko šel v kino.*
not-AUX can_{PTCP} go_{INF} to movies not-AUX easily gone_{PTCP} to movies
‘I couldn’t go to the movies.’

5.4 German as source of *lahko*?

Hansen (2005) has suggested that the Slovenian *lahko* emerged as a consequence of contact with German. Specifically, he states that like *lahko*, German modal particle *vielleicht* ‘maybe’ (=much.lightly) is also derived from the adjective ‘light’/‘easy’, but that unlike in German, *lahko* started to replace the auxiliary modal. With respect to this claim, it should be noted that if there was an effect of German, it is more likely that the source would have been cooccurrences such as *können leicht* ‘may/can well’ (=can easily) and *leicht möglich* ‘(quite/easily) possible’ (=easily possible). At the same time, we should also add that cooccurrences such as ‘easily possible’, with little discernible manner meaning on ‘easily’, also seem to be attested in Croatian (J. Willer Gold, p.c.) and south-east Serbian (B. Arsenijević, p.c.), where an effect of German is less likely. If such cooccurrences were the origin of the Slovenian introduction of the *lahko*+finite.verb modal construction, as we have claimed, then we are at most looking at a strengthening influence of German, or the development of the Slovenian modal adverb might even have been completely independent of German.

6. Conclusion

We discussed a typological peculiarity of Slovenian—the expression of possibility modality with a modal adverb (*lahko*) and a finite verb form—and its peculiar complementary distribution with the modal auxiliary *moči*. We discussed diachronic data, showing that Slovenian went through a stage when the auxiliary *moči* was used both with negation and without it, through a subsequent stage in which *moči* was doubled with *lahko*, leading to the stage in which *lahko* is generally used in affirmative contexts and *moči* in negative contexts. We analyzed the current situation as a product of established patterns of language change, in

which *lahko* started out as a strengthener of *moči* and then grammaticalized to $\text{Mod}_{\text{POSS}}^0$. We claimed that *lahko* is a non-affixal head, and as such prevents the formation of the *ne*+finite-verb unit, which is why *lahko* is not used in contexts with sentential negation. We found additional support for this account in a dialect in which the negative particle can be non-affixal, and in which *lahko* is also attested with sentential negation.

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