

Variations in Quantifier Interactions in South Saami Heritage Speakers

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SUMMARY

This squib presents an experimental pilot-study that investigates quantifier interactions in South Saami bilingual heritage speakers. The speakers of the language vary with regards to whether or not they accommodate inverse scope interpretations in doubly quantified sentences. This pattern also extends to the majority language, Swedish. If a speaker rejects inverse scope in Saami, inverse scope will be rejected in Swedish as well, and vice versa. In this squib, I argue that this variation is a consequence of simplicity of processing, rather than syntactic change, and that it is restricted to one type of bilinguals.

RÉSUMÉ

Cet article présente une étude expérimentale pilote qui examine les interactions des quantificateurs chez les locuteurs bilingues de langue d'héritage du same du Sud. Les locuteurs de cette langue varient selon qu'ils acceptent ou non les interprétations de portée inverse dans les phrases doublement quantifiées. Ce schéma s'étend à la langue majoritaire, le suédois. Si un locuteur rejette la portée inverse en same, il la rejettera également en suédois, et vice versa. Dans cet article, je soutiens que cette variation est une conséquence de la simplicité de traitement, au lieu de changements syntaxiques, et qu'elle se borne à un type de locuteur bilingue.

1 Introduction

When confronted with doubly quantified clauses like (1), some native speakers of South Saami readily accept two interpretations, whereas others predominantly only allow one interpretation:

- (1) Soelege fierhte-m baanghke-m rebpield-i.
thief.Nom every-Acc bank-Acc rob-Pst.3s
'A thiefrobbed every bank.' (√∃>∀;¬/*∀>∃)

Both groups of speakers converge on the reading where the existential subject soelege 'thief.Nom' takes wide scope over the universally quantified object fierhte-m baanghke-m 'every-Acc bank-Acc.' In contrast,

*The first time I encountered Lisa Travis's work was when I was on an undergraduate exchange in Japan in the late 1980s. *Parameters and Effects of Word Order Variation* was one the key reasons why I became determined to become a linguist. A few years later, when I found out that Lisa was at McGill, I knew that McGill was the right place for graduate studies. As it happened, I was not only accepted to McGill, but Lisa also became my thesis supervisor. She instills in her students the joy of doing syntax, and she is an exemplary role model of how a supervisor should be. Although this squib has a somewhat different character from what I am usually doing, it has greatly benefitted from Lisa's input.

I would also like to thank Lydia White for making me aware of some key issues in experimental work, and my thanks also extend to Roumyana Slabakova for important input on experiment design.

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speakers diverge on whether or not they allow the inverse reading, where the object takes wide scope over the subject.

In this squib, I suggest that the variation in the judgments that occur in doubly quantified clauses in South Saami is a consequence of not only the fact that all native speakers are bilingual, but also that the language qualifies as a non-immigrant heritage language. In turn, there are also differences in how the speakers achieved their bilingualism. The speakers who accept both interpretations of (1) acquired South Saami before the dominant language, whereas those who are simultaneous bilinguals overall reject inverse scope. Interestingly, the patterns observed in relation to (1) carry over to the dominant language, Swedish:

- (2) En tjuv rånade varje bank.
 a thief robbed every bank ($\sqrt{\exists} > \forall; \sqrt{\forall} > \exists$)

The sequential bilinguals, whose first exposure to Swedish coincided with school age, allow both the surface and the inverse readings of (2), on a par with monolingual speakers of Swedish. The simultaneous bilinguals, in contrast, reject the inverse reading. In short, while judgments differ, they are consistent at an individual level.

It is well known that bilingual heritage speakers exhibit a wide range of variation in both their linguistic competence and performance (see Benmamoun, Montrul and Polinsky 2013a, Montrul 2016). Recent studies on quantifier interactions in heritage speakers have revealed that ease of processing is favored over syntactic complexity (Ronai 2017, Scontras, Polinsky, Tsai and May 2017). Indeed, covert syntactic operations like May's (1985) QR are challenging for the purposes of processing, not only for heritage speakers, but for monolinguals as well, since QR inevitably results in an LF representation that is misaligned with the PF representation (see among others, Anderson 2004). However, the degree at which simplification is manifested differs sharply between heritage speakers and monolinguals. To rephrase Scontras, Polinsky, Tsai and May (2017) and Ronai (2017) on the situation in heritage speakers, if there is a canonical PF with two competing LFs, the one that matches the PF string is almost inevitably preferred. These authors argue that a *prima facie* plausible factor like transfer is not at play in the relevant heritage contexts, in contrast to scenarios involving L2 acquisition (for instance, White 1989). Granted that Swedish/Norwegian are dominant languages in the areas where South Saami is spoken, a transfer account would predict that all speakers would accept inverse scope, contrary to fact. At the same time, it would be too strong a position to claim that simplification applies in all heritage speakers, as witnessed by the judgments of (1) and (2). Rather, in the presence of daily use of the heritage language, age of exposure appears to be the defining factor.

The paper is organized as follows. Section 2 provides an overview of quantifier interactions in heritage contexts. Section 3 gives a brief summary of the South Saami language situation and the important arenas of the language. The method and the design of the experiments are presented in Section 4. The results of the experiments are presented in section 5 and section 6 provides a general discussion. Finally, some concluding remarks are given in section 7.

2 Heritage Speakers and Quantifier Interactions

In essence, a heritage speaker is an L1 speaker of another language than the surrounding dominant language, and who is bilingual in the heritage language as well as the dominant language (Valdés 2000). Speakers of heritage languages exhibit a number of characteristics that reflect an imbalance in their bilingualism (Montrul 2016). For instance, the exposure to the heritage language is less extensive and less continuous than the exposure to the dominant language (Benmamoun, Montrul and Polinsky 2013b). The languages may be acquired sequentially, with the heritage language acquired prior to the dominant language, or they may be acquired simultaneously. Over time, the heritage speaker is increasingly exposed to the dominant language, and by early adulthood the dominant language has often become the speaker's primary language (Benmamoun, Montrul and Polinsky 2013b, Benmamoun, Montrul and Polinsky 2013a). As a result, heritage speakers can exhibit changes in their grammars, for instance in inflectional

morphology (Håkansson 1995, Montrul, Bhatt and Girju 2015), as well as in the syntactic domain (Polinsky 2011). Benmamoun, Montrul and Polinsky (2013b) make a strong case that it is the functional structure in the clause that is susceptible to change, which is further supported in work by Lohndal (2013) as well as Alexiadou, Lohndal, Áfarli and Grimstad (2015), to mention a few. Indeed, morphological and syntactic change can often be viewed as two sides of the same coin. Furthermore, the interfaces are assumed to be particularly vulnerable (Polinsky 2011, Sorace 2011), and it is here that quantifier interactions are found.

It is known from numerous studies that quantifier interactions are challenging in both L1 and L2 acquisition (Crain, Thornton, Boster, Conway, Lillo-Martin and Woodams 1996, Ionin 2002, Marsden 2009, Ziel 2012). While there is some controversy regarding the path of L1 acquisition, there is a consensus that children do not master scope ambiguities before age 5, but rather soon thereafter (Musolino and Lidz 2006, Ambridge and Lieven 2013, Lidz 2016). In L2 acquisition, it is generally assumed that the L2 grammar will be influenced by the L1 grammar, although the L2 is susceptible for improvement. Marsden (2009) investigates whether or not L2 learners of Japanese successfully acquire scope rigidity in Japanese.¹ She shows that English L2 learners of Japanese incorrectly overuse inverse scope in the L2, which suggests L1 transfer. The transfer account is supported by the behavior of Korean L2 learners of Japanese. Similarly to Japanese, Korean too is a scope rigid language. Marsden's study shows that Korean learners of Japanese transfer the scope rigid property of the L1 to the L2, and they perform on a par with the target grammar.

The situation in heritage contexts is more complex. Scontras, Polinsky, Tsai and May (2017) present a study where the heritage language is Mandarin Chinese and the majority language is English. Since Mandarin Chinese is a scope rigid language (Huang 1982, Aoun and Li 1993) and English is not, the basic setting is comparable to Marsden's (2009) study. The heritage speakers tend not to employ QR in Mandarin, and consequently they perform almost on a par with the monolingual Mandarin control group. Interestingly, the test group disprefers inverse scope in English as well. Scontras, Polinsky, Tsai and May (2017) notice that this result could at first sight suggest that transfer takes place from the heritage language to the majority language (see for instance Cook 2003), contrary to what is generally assumed about transfer effects (Slabakova 2008). However, the authors argue that transfer is not the underlying reason for this surprising effect, but rather Anderson's (2004) Processing Scope Economy Principle; that is, speakers prefer to determine scope relations from the linear string. The central claim in Scontras, Polinsky, Tsai and May (2017) is that when there are two competing grammatical systems in a bilingual heritage speaker, the simplest system wins, where the simple system is represented by a grammar that lacks covert QR. Therefore, the scope rigidity of Mandarin prevails over English, notwithstanding the fact that English is the dominant and primary language.

Ronai (2017) presents a study that replicates Scontras, Polinsky, Tsai and May (2017), with the exception that the dominant language, Hungarian, exhibits scope rigidity (Kiss 2002), in contrast to the heritage language, English. Ronai shows that among the heritage speakers, surface scope prevails in both the dominant and the heritage language. The absence of inverse scope in the dominant language refutes any hypothesis that transfer takes place from the weaker language in a bilingual individual to the primary language. On the other hand, Ronai's study supports the general tenet in Scontras, Polinsky, Tsai and May (2017), that if there are two competing grammatical systems in a bilingual heritage speaker, the simplest system wins, primarily for reasons of processing (Anderson 2004). However, Ronai speculates that simplification may not be contingent on the presence of scope rigidity in one of the language of the heritage speaker. Rather, simplification is an emergent phenomenon that is a consequence of heritagehood. Ronai's suggestion predicts that simplification can emerge in heritage speakers, even if both languages are equally complex in the relevant sense:

¹Unlike English, Japanese is a scope rigid language, on a par with for instance Chinese, Korean and German (Huang 1982, Hoji 1985, Aoun and Li 1993, Bobaljik and Wurmbrand 2012).

(3) Simplification across the board (Ronai 2017)

In the domain of scope, the interaction of a dominant and a heritage grammar results in simplification (i.e. loss of ambiguity) across the board.

With this as a backdrop, we now turn our attention to South Saami.

3 The South Saami Language Situation

South Saami is a Finno-Ugric language spoken in the central areas of Sweden and Norway. The language is estimated to have approximately 700-1000 L1 speakers (Scheller and Vinka 2016), all of whom are bilingual in Swedish/Norwegian. Bilingualism became widespread in the late 1800s and early 1900s. Probably the single most important reason why the language is not only alive, but is also experiencing a modest increase in the speaker population, is the fact that the traditional nomadic reindeer herding culture has resisted the external pressures from the Scandinavian regimes.

Reindeer herding provides a unique arena for the language and the culture and it has an ameliorating effect on speaker density, which may otherwise have a detrimental effect on language vitality (Grenoble and Whaley 2006). Although the speakers are widely dispersed, herding is a labor intensive and social activity that brings people together throughout the year. It is not a coincidence that the critical mass of speakers is found among the active herding families. Reindeer herding provides a parallel society that is sharply distinct from the surrounding politically and linguistically dominant Scandinavian society, and it is the bastion of the South Saami language and culture.

4 Method and Design

4.1 The Participants

This study includes four participants, all of whom grew up in traditional families and have remained active members of herding communities. All participants acquired the language naturalistically, and by all assessments they are strong speakers of South Saami; for instance, they use the language daily and their literacy in South Saami is well developed.

Two of the participants were in their late 60s at the time of testing, and they grew up speaking the language in all contexts and situations. Their first clear recollection of exposure to the majority language coincides with school age, which suggests that they are sequential bilinguals. However, outside the school situation, they continued to speak South Saami. In other words, in their pre-pubertal years, South Saami was dominant in their immediate surroundings and no doubt it was their primary language.

The other two participants were aged below 60 at the times of testing. South Saami and the majority language were acquired simultaneously. One of them spoke South Saami with both parents and with older relatives and other elders. However, the majority language was used in communication with siblings and peers. The other spoke South Saami with one parent and with older relatives and other elders. The majority language was used in most other contexts. Both received some instruction in South Saami at school.

In sum, the test group consists of two speakers who are sequential bilinguals, and two who are simultaneous bilinguals.

4.2 Test Data and Experiment Design

The data that was used in the experimental study was elicited in a series of standard fieldwork sessions with a native speaker of South Saami.² The speaker was presented with doubly quantified clauses, and it was tested whether or not inverse scope was available, in addition to the straightforward surface scope reading. The speaker also provided important feedback on choices of words, to ensure that the data is perceived as idiomatically correct.

²This speaker did not participate in the experiment.

- (4) a Dåaktere fierhte-m skiemtjohke-m goereht-i.
 doctor.Nom every-Acc patient-Acc examine-Pst.3s
 'A doctor examined every patient.'
- b Niejte fierhte-m gaahtoe-m daajesj-i.
 girl.Nom every-Acc cat-Acc pet-Pst.3s
 'A girl petted every cat.'
- c Almetje fierhte-m tjaste-m byöpmed-i.
 person.Nom every-Acc icecream-Acc eat-Pst.3s
 'A person ate every ice cream.'
- d Álma fierhte-m háagkhstaavra-m steer-i.
 man.Nom every-Acc fishing rod-Acc hold-Pst.3s
 'A man held every fishing rod.'

The informant accepted both surface scope and inverse scope. In order to ensure that the relevant, intended readings were elicited, the informant was aided by pairs of pictures for each scenario.

Once it was confirmed that the sentences in (4) are scopally ambiguous, they were recorded by a native speaker and it was controlled that the sentence intonation was neutral, in order to avoid prosodic patterns that could favor one interpretation over the other. After the recordings were done, it was checked that the audio strings were compatible with both of the intended readings.

The design of the experiment was based on Marsden (2009). For each test item, the participants were presented with a picture on a computer screen. After 10 seconds, the test sentence appeared in audio as well as in writing. Then the picture and the written sentence remained on screen for another 15 seconds. This strategy had the intention to prevent that the participants create their own scenario, and in that way potentially exclude the other possible interpretation. The participants were asked to respond whether the sentence accurately described the picture, on a 5-grade scale, where 5 was the highest grade, and 1 the lowest. Ratings from 3 and up were deemed as acceptance. 1 and 2 counted as rejections. Additionally the option 0, "I don't know," was also included. There were a total of 8 test scenarios and 16 distractors.

The participants were also given a test in Swedish, whose design was identical to the South Saami design described above. The Swedish test sentences were the following:

- (5) a En läkare undersökte varje patient.
 a doctor examined every patient
- b En flicka klappade varje katt.
 a girl petted every cat
- c En person åt varje glass.
 a person ate every ice cream.'
- d En man höll varje fiskspö.
 a man held every fishing rod.'

The Swedish test was also taken by a control group that consisted of 12 adult monolingual Swedish speakers.³

5. Results

This section reports the results for each experiment. 5.1 presents the results from the monolingual Swedish control group. The heritage speakers' results from the Swedish experiment are given in 5.2. The results from the South Saami experiment are presented in 5.3, and 5.4 provides a more detailed presentation of South Saami, where the order of acquisition is taken into account.

³ The Swedish control group was part of another experiment, where quantifier interactions served as distractors.

5.1 The Swedish Control Group

The results of the Swedish control group are presented in (6). The results of the raw data are given within parentheses throughout this section:

- (6) Swedish monolingual control group
Surface scope $\exists > \forall$: 93.75% (45/48)
Inverse scope $\forall > \exists$: 60.4% (29/48)

The acceptance rate for surface scope was 93.75%. Inverse scope was accepted in 60.4% of the cases. The acceptance rates in (6) are comparable to Marsden's (2009) English control group, where surface scope was accepted in 98% of the cases, in contrast to 67.8% for inverse scope.

The fact that the acceptance rate of inverse reading is considerably lower than surface scope, is standardly attributed to processing (Anderson 2004). The general idea is that inverse scope, which involves covert movement, is more costly for the purposes of processing. Notice however, that at 60%, the acceptance rate of inverse scope nevertheless is well above chance.

5.2 Results for Heritage Bilinguals and Swedish

This experiment too involved quantifier interactions in Swedish, but this time with the bilingual test group. The results for the heritage speakers are presented in (7):

- (7) Heritage speakers' Swedish
Surface scope $\exists > \forall$: 81.25% (13/16)
Inverse scope $\forall > \exists$: 50% (8/16)

The results show surface scope is unproblematic, with an acceptance rate of 81.25%. Nevertheless, the result is at a lower level than what is found in the Swedish control group, (6). However, what stands out is that inverse scope is accepted at the rate of guessing, 50%. In the control group the result is well above chance.

5.3 Results for Heritage Bilinguals and South Saami

This experiment tested quantifier interactions in South Saami. The results are given in (8):

- (8) Heritage speakers' South Saami
Surface scope $\exists > \forall$: 75% (12/16)
Inverse scope $\forall > \exists$: 56% (9/16)

The heritage bilinguals reached an acceptance rate of 75% for surface scope in South Saami. Inverse scope was accepted at 56%. In terms of raw data, the test group accepted one test sentence less with regards to surface scope than they did in Swedish. As for inverse scope, the test group accepted one test sentence more in South Saami than in Swedish.

5.4 Results: Sequential and Simultaneous Bilinguals

At this point it is instructive to consider the results obtained when the sequential and simultaneous bilinguals are viewed separately, (9) and (10):

(9)	Sequential bilinguals		
		<u>Swedish</u>	<u>South Saami</u>
	Surface scope $\exists > \forall$:	87,5% (7/8)	87,5% (7/8)
	Inverse scope $\forall > \exists$:	75% (6/8)	75% (6/8)
(10)	Simultaneous bilinguals		
		<u>Swedish</u>	<u>South Saami</u>
	Surface scope $\exists > \forall$:	62,5% (5/8)	62,5% (5/8)
	Inverse scope $\forall > \exists$:	25% (2/8)	37.5% (3/8)

The sequential bilinguals, (9), accept both surface and inverse scope at levels well above chance in both languages. The acceptance rates for surface and inverse scope are 87.5% and 75% respectively, in both languages. This is comparable to the Swedish controls, in the sense that the acceptance rates are above levels of guessing.

The simultaneous bilinguals, (10), accept surface scope at 62.5% in both languages, which is above chance but considerably below the scores obtained from the control group and the sequential bilinguals. Inverse scope is accepted at rates that are below chance, at 25% and 37.5% for Swedish and South Saami respectively.

6 Incomplete acquisition, transfer and attrition

The results presented above reveal that the sequential bilinguals allow scope interactions in doubly quantified clauses. Overall they perform on a par with the monolingual Swedish control group, in both Swedish and South Saami. The simultaneous bilinguals, on the other hand, have a strong preference for surface scope. This group rejects inverse scope in Swedish in 75% of the cases and the rejection rate in South Saami is 62.5%. It can be concluded that there are sharp differences between the two types of heritage speakers with regards to quantifier interactions.

One issue that calls for attention is the lack of an explicitly defined South Saami control group. Research on heritage languages usually involves a test group with bilingual heritage speakers, and a control group with monolingual speakers of the dominant language, and another control group of monolingual speakers of the other language, that resides outside the immigrant territory. For instance, heritage speakers of Russian in New York can be measured against monolingual speakers of Russian in Moscow.

The standard methodology is problematic for indigenous languages like South Saami. The language has no monolingual speaker population, and there is no external territory where a monolingual speaker base is found. Thus, if we have a strict conservative view on the necessity of a monolingual control group, experimental studies of a large majority of the world's endangered and understudied languages could not be carried out successfully. Sasse (1992) raises several relevant questions that pertain to issues of data reliability when working with endangered languages. Needless to say, the responsibility regarding the demands of care and awareness that burden the investigator cannot be trivialized.

As we have mentioned numerous times, the grammars of heritage speakers are different from their monolingual counterparts (Polinsky 2011, Benmamoun, Montrul and Polinsky 2013a, Scontras, Fuchs and Polinsky 2015, Scontras, Polinsky, Tsai and May 2017). One reason for this divergence can be attributed to incomplete or divergent acquisition (Montrul 2008), which is the result of impoverished input. Another factor is attrition (Polinsky 2011), which may arise in speakers who have not used their L1 for a considerable period of time. The grammar of heritage speakers may also be influenced by the dominant language (Slabakova 2016). In addition to rapid language change and potential language death, the cumulative effect of these factors present challenges as to how indigenous languages should be approached, as pointed out by Sasse (1992), and they raise questions whether there are ways in which the challenges can be circumnavigated.

Recent work by Santos and Flores (2016) suggests that incomplete acquisition and attrition may not affect all aspects of the grammars of heritage languages. In their study on VP ellipsis in heritage speakers

of Portuguese whose dominant language is German, Santos and Flores (2016) argue that attrition can be controlled for by focusing on children, since the onset of attrition is associated with adults who have not used the L1 over a considerable period of time. By comparing the bilingual heritage speaking children with monolingual Portuguese speaking children and adults, as well as adult L2 learners of Portuguese, the authors show that the test group is comparable to the control group that consists of monolingual children. Moreover, Santos and Flores (2016) claim that under the right circumstances, the heritage language is successfully acquired, at least what concerns grammatical properties that are known to be acquired reasonably early. Their conclusion is that incomplete acquisition is not necessarily at stake in early acquisition of heritage languages.

This brings us back to the sequential bilinguals in the present study. These speakers received their first exposure to the majority language around age 7. Following the logic of Santos and Flores (2016), it is reasonable to assume that the path of their L1 acquisition of South Saami was on a par with L1 acquisition in general. As mentioned in section 2, there is a consensus that children do master scope ambiguities when they are around 5 to 7 years old (Musolino and Lidz 2006, Ambridge and Lieven 2013, Lidz 2016). All things being equal, since the sequential bilinguals were dominant in South Saami at the very least until school age, they should have had a non-divergent acquisition of QR. This implies for instance that their adult acceptance of surface and inverse scope in South Saami cannot be due to early transfer from the dominant language. Moreover, recall the gist of both Scontras, Polinsky, Tsai and May (2017) and Ronai (2017), that the presence of scope rigidity in one language has the consequence that the more complex system is defeated by the simpler system. If the sequential bilinguals mastered deep properties of quantification in South Saami, and if this system had been one of scope rigidity, their Swedish would also have been scope rigid. However, the results reported in this study refutes such a conclusion. Therefore, it should be the case that the quantifier interactions found in the sequential bilinguals reflect a deep property of South Saami. Furthermore, since the sequential bilinguals in this study have remained daily users of the language, and because they have spent their entire lives in traditional Saami settings where South Saami is the primary means of communication, it is highly unlikely that they would be significantly affected by attrition.

The simultaneous bilinguals that participated in the study exhibit a clear effect of what Ronai (2017) calls simplification across the board. The results show that these speakers have a pronounced preference for surface scope. The fact the sequential bilinguals exhibit a keen sensitivity to scope interactions in both of their languages has important implications for the preference for scope rigidity in the simultaneous bilinguals. Specifically, Swedish allows inverse scope and by hypothesis, South Saami does too. If this is correct, then scope rigidity among the simultaneous bilinguals cannot reduce to a case where the simplest system wins, as long as it is viewed as competition between systems that reside in two different languages. Rather, the simpler system emerges out of nowhere, as it were. The only reasonable way to view the emergence of scope rigidity under these circumstances is that it is a consequence of Anderson's Processing Scope Economy:

- (11) Processing Scope Economy (Anderson 2004:48):
The human sentence processing mechanism prefers to compute a scope configuration with the simplest syntactic representation (or derivation). Computing a more complex configuration is possible but incurs a processing cost.

What sets the simultaneous bilinguals apart from the sequential one, is the fact that they face harder processing challenges, due to the fact that one grammar is less dominant than the other, which has an impact on both languages (see Ronai 2017). In other words, it is processing capacity, rather than substantial differences in the computational systems, that leads to the emergence of simplification.

In this regard, it should be noted that the simultaneous bilinguals did not reject all cases of inverse scope, which suggests that it would be too strong a claim to say that their grammars radically lack QR. The inverse readings of (12) are accepted by both of the simultaneous speakers, and one speaker also accepts the inverse reading of (13a):

- (12) a Dåaktere fierhte-m skiemtjohke-m goereht-i.
 doctor.Nom every-Acc patient-Acc examine-Pst.3s
 'A doctor examined every patient.'
 b En läkare undersökte varje patient.
 a doctor examined every patient
- (13) a Niejte fierhte-m gaahtoe-m daajesj-i.
 girl.Nom every-Acc cat-Acc pet-Pst.3s
 'A girl petted every cat.'
 b En flicka klappade varje katt.
 a girl petted every cat

If QR was radically missing, then the inverse reading of for instance(12) would be inaccessible to the simultaneous bilinguals, contrary to fact. Indeed Anderson's Processing Scope Economy is responsible for the general tendency that inverse scope is accepted at lower rates than surface scope across the board.

7. Conclusion

In this squib I have presented a pilot-study of quantifier interactions in South Saami heritage speakers. The results of the experiments show that sequential bilinguals have a stronger command of quantifier interactions than simultaneous bilinguals. The results support the hypothesis presented in Scontras, Polinsky, Tsai and May(2017) and Ronai (2017), that heritage speakers favor simplicity of processing over syntactic complexity. To the extent that this study is reliable, it has been shown that simplification can occur, even in the absence of competing grammars. This is what is expected if processing considerations are what underlies the apparent loss of QR in languages that independently allow inverse scope.

It should be kept in mind that this is a pilot-study, and accordingly there are some obvious caveats and limitations. A future study should involve a higher number of participants, and an increase in test scenarios and test types.

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