Bite one's thumb and turn one's nose: A minimal pair of focus assignment in *Romeo and Juliet*

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1 A natural experiment

There are various types of linguistic evidence, in particular observing of how people talk, write, or sign in their regular communicative behavior, and observing how they do this in carefully designed experiments. The latter has the advantage that one can cleverly construct the experimental situation so that one's research question can be answered with a minimal amount of effort. It has the disadvantage, however, that the experiment often asks people to do something quite unnatural, especially in experiments that ask for their linguistic judgments.

But every once in a while, there occurs what one could call a "natural experiment": A situation that happens to be as if a clever experimenter had constructed it so that it bears on a particular research question. In this short paper I will discuss such a serendipitous situation, one that even can be checked across dozens of languages. It occurs in Shakespeare's "Romeo and Juliet", and it speaks to the way how focus in human languages is realized.¹

The natural experiment can be found in Act 1, Scene 1, lines 54 to 61, where the servants of the house of Capulet, Sampson and Gregory, get into an argument with the servants of the house of Montague, Abraham and Balthasar. The former discuss how they should deal with the approaching Montague servants. There is a strict order in Verona not to start one of these notorious fights, and so it is important that the other side can be blamed with any incriminating actions.

¹This topic will hopefully remind Katharina of her time at the CRC (SFB) 632, "Information structure: The linguistic means for structuring utterances, sentences and texts" that ran from 2003 to 2015. I hope that this is an appropriate birthday gift for her.

(1)	1	SAMPSON	Let us take the law of our sides; let them begin.
	2	GREGORY	I will frown as I pass by, and let them take it .
			as they list
	3	SAMPSON	Nay, as they dare. I will bite my thumb at them;
			which is a disgrace to them, if they bear it.
	4	Enter ABRAHA	AM and BALTHASAR
	5	ABRAHAM	Do you bite your thumb at us, sir?
	6	SAMPSON	I do bite my thumb, sir.
	7	ABRAHAM	Do you bite your thumb at us, sir?
	8	SAMPSON	[Aside to GREGORY] Is the law of our side,
			if I say ay?
	9	GREGORY	No.
	10	SAMPSON	No, sir, I do not bite my thumb at you, sir,
			but I bite my thumb, sir.

This is how the central passage is rendered in the Bodleian First Folio.²

(2) Abra. Do you bite your Thumbe at vs fir?
 Samp. I do bite my Thumbe, fir.
 Abra. Do you bite your Thumb at vs, fir?
 Sam. Is the Law of our fide, if I fay I?
 Sam, No fir, I do not bite my Thumbe at you fir: but I bite my Thumbe fir.

Sampson wants to insult the Montague servants by biting his thumb in order to provoke them to some aggressive action. What did this gesture mean? The site myshakespeare.com explains it as follows³: "To bite your thumb at someone was to flick your thumb from behind your upper teeth. It was an obscene gesture similar to giving someone the finger". According to the Folger Shakespeare Library⁴, the gesture is still known in Sicily but was foreign to Elizabethan English, which explains why Shakespeare felt the pressure to explain it explicitly in Line 3: "which is a disgrace to them". The gesture might have added some exotic Italian color to the action. Also, being foreign to England, it might have had the advantage that it did not provoke censorship by the London authorities.

Now, there is an important semantic difference between the two-argument, or transitive, structure 'x bites x's thumb' and the three-argument, or ditransi-

²https://firstfolio.bodleian.ox.ac.uk/

³https://myshakespeare.com/romeo-and-juliet/act-1-scene-1-popup-note-index-item-bite-m y-thumb-them

⁴https://www.folger.edu/blogs/shakespeare-and-beyond/excerpt-how-to-behave-badly-in-eli zabethan-england-by-ruth-goodman/

tive, structure 'x bites x's thumb at y'. The first is an innocent, even childish act; the second one was considered an insult. In Line 5, Abraham activates the insulting interpretation; in Line 6, Sampson activates the innocent interpretation, and in Line 10, Sampson juxtaposes the two readings against each other. Notice that the insulting meaning truth-conditionally entails the innocent meaning: Whenever x insults y by biting x's thumb, x also bites x's thumb (but not necessarily vice versa).

2 Prosodic differentiation in English

Lines 5/6, and Line 10, present two instances of an interesting minimal pair between the transitive and ditransitive use of to bite one's thumb. But I want to focus on the even more interesting minimal pair presented by lines 5 and 7:

(3) 5 ABRAHAM Do you bite your thumb at us, sir?
 7 ABRAHAM Do you bite your thumb at us, sir?

But is this a minimal pair at all? The two lines are string-identical! Yet a casual listening to several performances of the play, as made available by Youtube, reveals that actors produce the two lines regularly with different intonation patterns. They are generally consistent with the following focus assignment and accent structure:⁵

$\langle A \rangle$	5	ABRAHAM	[DO you bite your THUMB at us] _F , SIR?
(4)	7	ABRAHAM	Do you bite your thumb [at US] _F , sir?

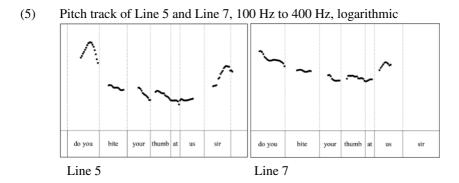
For example, in the performance of the scene in the 1936 Hollywood production by American director George Cukor we have the following prosody. (The last world sir in Line 7 was deaccented and did not leave any F0 trace in PRAAT, which may be due to the quality of the sound.)

⁵Cf. Emporia State University, https://www.youtube.com/watch?v=juSn_IAnwNc, New York SA,

https://www.youtube.com/watch?v=1bIgRoIcMRU,

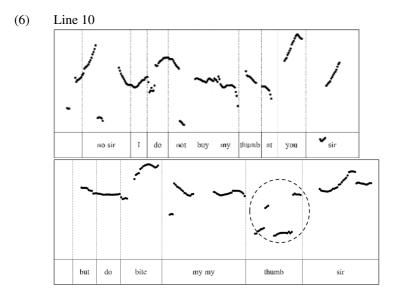
The King's Academy, https://www.youtube.com/watch?v=FkrIcmXvv18,

and in particular the collection https://www.youtube.com/watch?v=D9D_4A7yYzc.



Clearly, the prosody on *at us* in Line 5 is level, but rising in Line 7. This is consistent with narrow focus on at us in Line 7 and broad focus in Line 5, where the pronominal DP *at us* is deaccented (cf. Féry 2017).

Let us look at the second instance of the other minimal pair in Line 10, which are assertions that correspond to the questions in Line 5 and Line 7.



The second clause is not very clear, as there is laughter in the background about the joke of Sampson. But accent on *thumb* is clearly falling in the first clause and rising in the second. This is consistent with the following focus structure, with narrow focus on *at you* in the first case, and broad focus on *bite my thumb*.

(7) I do not bite my thumb [at YOU]_F, sir, but do [bite my THUMB]_F sir.

Alternatively, we may analyze this minimal pair as a contrast between the ditransitive and the transitive use of 'bite my thumb', with broad focus on the VP. This can be realized as in (8), with final accent on *at you*.

(8) I do not [bite my thumb at YOU]_F, sir, but do [bite my THUMB]_F, sir.

The performances I could access via Youtube typically show the pattern (8). One exception is the 1976 production by Canadian director Alvin Rakoff, where the first clause of Line 10 is completely deaccented, with accent on *sir*; this is possible because the VP *bite my thumb at you* was mentioned in Line 5 and 7, and hence can be treated as given.

3 Translation into German

"Romeo et Juliet" must have been translated into dozens, if not hundreds of languages. And this makes the natural minimal pairs at the beginning of this drama even more interesting because we can investigate them cross-linguistically. In particular, what we know about the realization of focus in different languages raises the expectation that the prosodic minimal pair of Lines 5 and 7 result in different syntactic structures, as good translators should be sensitive to the situational meanings of these expressions and apply the resources of their respective languages.

In this section we will look at a few German translations. The best-known one is by August Wilhelm Schlegel⁶ from 1797. It is a bit disappointing, except perhaps by the translation of the gesture by *einen Esel bohren*, 'to bore a donkey', a gesture used at the time which mimics the ears of a donkey by a poking gesture with the index finger and the little finger spread out.⁷ But there is no distinction between Lines 5 and 7:

(9)	5	ABRAHAM	Bohrt Ihr uns einen Esel, mein Herr?
	6	SIMSON	Ich bohre einen Esel.
	7	ABRAHAM	Bohrt Ihr uns einen Esel, mein Herr?
	 10	SIMSON	Nein, mein Herr. Ich bohre Euch keinen Esel, mein Herr. Aber ich bohre einen Esel.

The earlier rendering by Christoph Martin Wieland⁸ of 1766 translates both Lines 5 and 7 closer to the original, but again without any difference between

⁷https://idiome.de-academic.com/681/Esel

⁸https://de.wikisource.org/wiki/Romeo_und_Juliette

⁶https://books.google.de/books?id=jWoHAAAAQAAJ\&pg=PP15\&redir_esc=y\#v=onepa ge\&q\&f=false

Lines 5 and 7. But the use of the particle *doch* in Line 10 can be seen as allowing for a focus position of *meinen Daumen*, cf. Diesing (1992) for the position of discourse particles relative to focus in German.

(10)	5	ABRAHAM	Beißt ihr euren Daumen gegen uns, Herr?
	6	SAMPSON	Ich beiße meinen Daumen.
	7	ABRAHAM	Beißt ihr euren Daumen gegen uns, Herr?
	 10	SAMPSON	<i>laut</i> Nein, Herr, ich beisse meinen Daumen nicht gegen euch Herr. Aber ich beisse doch meinen Daumen, Herr.

The translation of Heinrich VoB^9 of 1818 is the first one that renders Line 5 and Line 7 in slightly different ways:

(11)	5	ABRAHAM	Beißt ihr euren Daum gegen uns, Herr?
	6	SAMSON	Ich beiße den Daum, Herr.
	7	ABRAHAM	Beißt ihr den Daum gegen uns, Herr?

In Line 5 the object is given as possessive, *euren Daum*, and in Lines 6 and 7 as definite, *den Daum*. This definite nominal is more readily prosodically integrated with the verb, hence it allows more easily for a focus on *gegen uns* 'against you' (cf. Jacobs 1993).

The translation by Wilhelm Otto Benda¹⁰ of 1825 indicates focus typographically by spacing the letters, which was a common highlighting device at the time. It translates *bite one's thumb* as *ein Schnippchen schlagen*, which actually does not denote a gesture but rather 'getting the upper hand over someone'.

(12)	5	ABRAHAM	Schlagt ihr uns ein Schnippchen, Herr?
	6	SIMSON	Ich schlage ein Schnippchen.
	7	ABRAHAM	Schlagt ihr u n s ein Schnippchen?

Ernst Orlepp¹¹ in 1839 translates Lines 5/7 in the same way but offers a new translation of the gesture, *ihr reckt die Hände vor uns über die Ohren empor, mein Herr?* 'you stretch your hands above the ears in front of us, sir'. It also uses spacing to highlight *vor uns* in Line 10. Friedrich Bodenstedt in 1868 translates the gesture as *Schneidet Ihr uns ein Gesicht, Herr?* 'do you make a face at us, sir', but does not vary between Line 5 and 7.

⁹https://archive.org/details/shakspearesromeo00shak/page/7/mode/1up.

Heinrich Voß was the son of Johann Heinrich Voß, the translator of Homer's Iliad and Odyssey ¹⁰https://books.google.com/books?id=7mYoAAAAYAAJ&pg=PA1

¹¹https://books.google.de/books?id=o7AXAAAAYAAJ&pg=PA59&redir_esc=y\#v=onepage &q&f=false

The last translation I would like to discuss is by Erich Fried, well-known for his love lyrics. It was first published in 1974. Fried does not only find an excellent translation for the obscure gesture – *eine Nase drehen* 'turn a nose', a childish mocking gesture which is outdated but still known in the Germanspeaking world. He also translates Lines 5/7 differently:

(13)	5	ABRAHAM	Dreht Ihr uns eine Nase, Herr?
	6	SAMPSON	Ich drehe eine Nase.
	7	ABRAHAM	Dreht Ihr eine Nase uns, Herr?
	10	SAMPSON	Nein, Herr. Ich drehe die Nase nicht Euch,
			Herr. Aber ich drehe eine Nase.

In Line 7, the pronoun *uns* 'to us' is right-dislocated into a clause-final focus position, followed by the vocative phrase *Herr*. Clearly, *uns* has to be stressed, and its position facilitates that. Such right dislocations for the purpose of focusation are unusual in modern German but are reported from somewhat earlier stages, cf. Bies (1996). We find a similar clause-final position of *nicht Euch* in Line 10, where the negation particle *nicht* is in a position to focus the object *Euch* (cf. Jacobs 1982). This focusation is supported by the change of *eine Nase* to the definite *die Nase*, which results in scrambling of this expression. As a result, *nicht Euch* ends up in a clause-final position allowing for narrow focus (cf. Krifka 1998).

4 Translation into other languages

We have seen that some German translations capture the different information structure of Lines 5 and 7. Let us have a look at some translations in other languages.

Dag Haug provided me with three Norwegian translations that also have different versions of the gesture (beyond the Shakespearean *bite seg i tommen* 'bite oneself in the thumb' we find *smelle fingrom* 'beat the finger' and *rekke tunge* 'stick out the tongue'). The translations generally do not show variations between Line 5 and Line 7, but the following one by Andre Bjerke (1970) uses italics as a typographic highlighting device.

(14)	5	ABRAHAM	Min herre, rekker De tunge til oss?
	6	SAMSON	Jeg rekker tunge, min herre.
	7	ABRAHAM	Min herre, rekker De tunge <i>til oss</i> ?

The Dutch translation of 1897 by L. A. J. Burgersdijk applies the same strategy that we saw with Erich Fried: the narrow focus of Line 7 is marked by placing the adversative argument, here the PP *tegen ons* 'against us', in a final focus position, presumably by scrambling *op je duim* from its orginal preverbal location. Also, we find the same placement of focusing negation in Line 10.

(15)	5	ABRAHAM	Bijt je tegen ons op je duim, kerel?
	6	SAMSON	Ik bijt op me duim, kerel.
	7	ABRAHAM	Bijt je op je duim tegen ons, kerel?
	 10	SAMSON	Neen, kerel, ik bijt op me duim niet tegen jou; maar ik bijt op me duim, kerel.

Moving to Romance languages, we should assume the use of syntactic devices like cleft constructions to mark narrow focus (cf. Zubizarreta 1998, Lambrecht 2001). Consider the following French translation by M. Guizot from 1864.

(16)	5	ABRAHAM	Est-ce à notre intention, monsieur, que vous mordez votre pouce?
	6	SAMSON	Je mords mon pouce, monsier.
	7	ABRAHAM	Est-ce à notre intention, monsieur, que vous mordez votre pouce?
	 10	SAMSON	Non, monsieur, ce n'est pas à votre intention que je mords mon pouce; mais je mords mon pouce, monsieur.

The translation uses a cleft construction, but surprisingly the sentence is rendered as 'Was it your intention that you bit your thumb'. The same form is also used in the assertion, Line 10. Hence this translation is irrelevant for our purpose as it is too far from the original.

Let us check a Spanish translation (from Luarna Ediciones). It translates the gesture fairly generically by *hacer burla* 'make fun of', but it introduces a distinction between Lines 5 and 7.

(17)	5		¿Nos hacéis burla, señor?
	6	SAMSON	Hago burla.
	7	ABRAHAM	¿Nos hacéis burla a nosotros, señor?
	•••		
	10	SAMSON	No, señor, no os hago burla. Pero hago burla,
			señor.

The questions are distinguished insofar as in Line 5, 'to us' is expressed by a clitic *nos*, whereas in in Line 7, it is expressed also by a full pronoun, *a nosotros*. This is required under the analysis proposed in (7), as clitics cannot be stressed, and hence cannot carry focus. Following this line of argumenta-

tion, there is no narrow focus on 'to us' in the first sentence of Line 10 either, contrary to the structure proposed in (7) but consistent with the structure in (8).

Closer to home where *Romeo and Juliet* actually takes place, we find that the following Italian translation by Goffredo Raponi (thanks to Carlotta Viti for assistance):

(18)	5 6 7	ABRAMO SANSONE ABRAMO	Per noi ti mordi il pollice, compare? Io sì, mi mordo il pollice. Ti sto chiedendo s'è verso di noi che te lo mordi. Rispondimi a tono.
	 10	SANSONE	No, compare. Se mi mordo il pollice, non è per voi. Però mi mordo il pollice.

Lines 5 and 7 are clearly distinguished: Line 7 use a cleft construction \dot{e} verso di noi 'it is to us', which is consistent with the assumption that it is in focus; it also is more embellished than *per noi* in Line 5. Interestingly, the sentence is introduced by *ti sto chiedendo* 'I am asking you', which might be due to the fact that Italian has no syntactic marking of questions, and the prosodic question marking may conflict with the cleft construction. The first assertion in Line 10 is compatible with the analysis of narrow focus in (7), but expresses this quite differently; it is literally 'if I bite my thumb, it is not for you'.

Let us consider a Slavic language. I thank Hana Filip for looking up the following Czech translations, one by Josef Václav Sládek from 1900, the other by Jiří Josek from 1985. Only the latter one distinguishes between Line 5 and Line 7.

(19)	5	ABRAHAM	To jste si odpliv před náma, pane? be.2sg REFL spit in.front us mister
	6	SAMSON	Odpliv jsem si. spit be.1sg REFL
	7	ABRAHAM	Odplivl jste si před náma, pane? spit.PST be.2SG REFL in.front us mister
	 10	SAMSON	Ne, pane. Neodplivl jsem si před váma, no mister NEG.spit.PST be.1SG REFL in.front you pane nýbrž odplivl jsem si, pane? mister but spit.PST be.1SG REFL mister

The main verb *odplivl* 'spitted' is fronted in Line 7. Hana Filip reports the impression that this puts the finite verb in focus. One possibility is that this marks verum focus. This is not the focus proposed in (7), which would be on *před náma* 'in front of us'. Verum focus might also be the case in the second

clause of Line 10.

Beata Gyuris provided me with an Hungarian translation, by Károly Szász (1871). We can observe here a difference that makes use of the Hungarian focus position.

(20)	5	ÁBRAHÁM	Figét mutat kend, koma? fig.ACC show.3SG you(HON) mate
	6	SÁMSON	Figét mutatok, koma. fig.acc show.2sg mate
	7	ÁBRAHÁM	Nekünk mutat kend figét, koma? we.DAT show.3sg you(HON) fig.ACC mate
	10	SÁMSON	Nem, koma, nem kendteknek mutatok figét, no mate not you(HON).DAT show.1sG fig.ACC csak figét mutatok, koma. only fig.ACC show.1sG mate

Line 5 and Line 7 differ insofar only Line 7 contains the dative object, *nekünk* 'to us', which is also in the focus position, supporting analysis (7). Similarly, only the first clause in Line 10 contains the dative object, also in focus position there.

Kazuko Yatsushiro found several Japanese translations that handle the minimal pairs in various ways, often quite far removed from the text. One example is the following:

(21) 5 ABR. Kochira-ni mukatte yubi-o kam-are-ru-no-ka? this.direction-DAT toward finger-ACC bite-HON-NPAS-NMLZ-Q '(you) are biting your finger toward me?'
7 ABR. Yubi-o kande-iru-no-wa kochira-ni mukete-na-no-ka? finger-ACC bite-PROG-NMLZ-TOP this.direction-to toward.COP-NMLZ-Q 'Is it toward us that you are biting your fingers?'

In Line 7, *kochira-ni mukete* 'to this direction', which corresponds to 'to us', is marked as focus by a cleft construction; the non-focused parts are rendered as a topic, which requires nominalization.

The Vietnamese translation that Tue Trinh obtained for me does not make a clear distinction between Line 5 and Line 7, except that Line 7 takes up the more explicit form 'spit saliva' vs. 'spit'. It is unclear by which mechanism this allows to highlight *vào chúng-tôi* 'at us'.

(22)	5 ABR.	Quý-ông nhổ vào chúng-tôi đấy phải-không?	
		the-gentleman spit at us there right	
	6 SAM.	Vâng, đúng là tôi nhổ nước-bọt đấy, thưa quý-ông.	
		yes correct that I spit saliva there my gentleman	
	7 ABR.	Quý-ông nhổ nước-bọt vào chúng-tôi phải-không?	
		the-gentleman spit saliva at us right	
	•••	2	
10 SAM. Không, tôi không nhô	Không, tôi không nhổ vào quý-ông.		
		no I not spit at the-gentleman	
		Nhưng đúng là tôi nhổ đấy.	
		but correct that I spit there	

One language that should be particularly interesting to consider is Turkish because of its explicit focus marking in questions (cf. Kamali and Krifka 2020). In this language, polar questions are marked by a clitic -mI that exhibits vowel harmony; it occurs in a sentence-final position or is attached to subconstituents of the question that are in focus. Thanks to my colleague Beste Kamali, who provided me with two translations.

(23)	5 A	BR.	Başparmağını bize mi ısırıyorsun efendi?
			thumb.your.ACC to.us q bite.2sg master
	6 S	AM.	İsırıyorum başparmağımı efendi.
			bite.1sg thumb.my.ACC master
	7 A	BR.	Başparmağını bize mi ısırıyorsun efendi?
(24)	5 A	BR.	<i>y y y</i>
		A 70.07	hey to.me look thumb.your.ACC to.us Q bite.2sg
	0 8	ANI.	Evet, başparmağımı ısırıyorum. yes thumb.my.acc bite.1sg
	7 A	BR.	Peki, bize mi ısırıyorsun başparmağını?
			alright to.us q bite.2sG thumb.your
			TT 1 V
	10 8	AM.	Hayır, size ısırmıyorum başparmağımı.
			no to.you bite.NEG.1SG thumb.my
			Ama başparmağımı da ısırıyorum.
			but thumb.my.ACC too bite.2sg

We find focus marking by the polar question particle *mI* on *bize* 'to us' in both Line 5 and Line 7. This corresponds to the narrow-focus analysis proposed in (7) for Line 7, but seems to be at odds with the assumption of broad focus marking for Line 5. However, focus marking on an argument can also project to larger constituents, as shown in Kamali (2015). Hence, focus marking on *bize*

is also compatible with broad focus marking. But notice that the translator in (24) extraposes *basparmağımı* 'my thumb' in Line 7, which is possible as it is a 'given' constituent at this point. By this move, the direct object *basparmağımı* cannot be part of the focus anymore, different from Line 5. This is consistent with the idea that focus in Line 7 is more narrow than in Line 5.

Line 10 in (24) also supports an analysis of different foci. In the first sentence, *basparmağımı* is again extraposed, hence focus is restricted, most plausibly to 'to you'. This contrasts with the second sentence, where *basparmağımı* is not extraposed, even though it is given. This makes it possible to integrate it into the focus domain. This can be seen as supporting analysis (8).

5 Conclusion

When asking for the relevance of *Romeo and Juliet* for linguistics, people would probably come up with Romeo's line "What's in a name? That which we call a rose / By any other name would smell as sweet", which reveals, perhaps surprisingly, an anti-iconic view of language. This small article points out that there are other linguistic gems in this masterpiece. It would be worthwhile to hunt for other translations of this little passage, and perhaps for similar close variants in other literary texts.

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