

Topicalized PPs: Movement or External Merge?

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1 Introduction

In this paper, we discuss the **scope properties of topicalized prepositional phrases in Italian**; we are especially interested in whether the presence of clitic resumption plays a role in allowing or disallowing a topicalized PP to reconstruct IP-internally. We are then interested in what reconstruction possibilities reveal of the derivation of topicalized PPs in Italian.

In Italian, the process of *topicalization* results in an internal argument or an adjunct surfacing in the left periphery of a clause. Importantly, the topicalized constituent is resumed by a corresponding IP-internal clitic, matching the fronted expression for case. Below we illustrate the process of topicalization for an object DP: note the presence of the case-matching accusative clitic (in bold).

- (1) *Il postino l'ho visto ieri.*
The mailman **it**_{CL}-I-have seen yesterday
'I have seen the mailman yesterday' or 'the mailman, I have seen yesterday'

Topicalized constituents like that in (1) are often interpreted as old or given information (Frascarelli & Hinterhölzl, 2007; Brunetti, 2009). The structure in (1) is also compatible with a contrastive-topic interpretation (Frascarelli & Hinterhölzl, 2007). of the topicalized DP: a possible continuation for (1) could be an additional proposition stating that some other individual (e.g. the milkman, the delivery guy) was spotted on a day other than yesterday. Note that topicalization is often also referred to with the acronym *CILD* (**C**litic **L**eft **D**islocation), first used in Cinque (1990) (see also Cinque, 1977).

While both DPs and PPs can be the target of topicalization, we observe a fundamental asymmetry between the two types of constituent with respect to the obligatoriness of clitic resumption (CR). While a resumptive clitic is mandatory with topicalized DPs, it is optional with topicalized PPs (Benincà, 1988; Cinque, 1990). The optionality of CR with PPs is illustrated in (2): both (2a) – variant with CR– and (2b) – variant without CR– are perfectly acceptable in Italian:

- (2)
- | | | | | | | | |
|----|----------|-------------------|----------------------|-------------|-------------|---------------|---------------|
| a. | <i>A</i> | <i>Alessandro</i> | <i>gli</i> | <i>ho</i> | <i>dato</i> | <i>un</i> | <i>libro.</i> |
| | to | Alessandro | to-him _{CL} | I-have | given | a | book |
| b. | <i>A</i> | <i>Alessandro</i> | <i>ho</i> | <i>dato</i> | <i>un</i> | <i>libro.</i> | |

'I have given Alessandro a book' or 'To Alessandro I have given a book'

If we compare Italian with other Romance languages with an equally rich clitic inventory, such as Sicilian or Catalan, we see that this DP-PP asymmetry is peculiar to Italian: Catalan or Sicilian display no optionality of sort (Cruschina, 2006, 2012; Villalba, 2000)). This is illustrated in (3) below, from Sicilian, which shows how a topicalized PP must co-occur together with the coindexed "ci" dative clitic:

- (3) *Maria, a Salvo, *(ci) av' a regalari un libbru.*
 Maria, to Salvo, *(to-him)_{CL} has to give a book
 'Mary will give a book to Salvo'

(Cruschina 2006: 366)

Likewise, we see no optionality of CR in Spanish. This language's clitic system is considerably poorer than that of Italian or Sicilian in that it lacks partitive and oblique clitics. Spanish does have dative clitics, however, and these are always mandatory in topicalized constructions:

- (4) *A José *(le) di un libro.*
 to José *(to-him)_{CL} gave a book
 'I gave a book to José'

The optionality of CR with PP topicalization in Italian thus appears to be an isolated phenomenon within the Romance language group. The unexpectedness of this kind of optionality raises the question of whether sentences like (2b), which feature no CR, are indeed just variants of 2a, or whether in fact a different derivation underlies the two structures. For instance, one might speculate that whereas (2b) is the result of movement, in (2a) the PP has been base-generated directly in the left periphery; this would account for why CR is present in the latter but not in the former. This paper sets out to investigate precisely these types of claims. In particular, we will be reporting the results of an online acceptability-judgment task testing the reconstruction properties of different types of topicalized PP structures. Our goal is to use reconstruction data -i.e. whether reconstruction for scope is possible or not- to speculate on whether topicalized PPs are the result of movement or of a base-generation derivation.

This paper is organized as follows. In Section 2 we start with a brief literature review on the topic of clitic resumption in Italian: we discuss Frascarelli (2000, 2004), Cecchetto (2001) and Cruschina (2012). In Section 3 we describe the structure and the rationale of our experiment. In section 4 we present the results of our linear mixed model analysis, which we discuss in Section 5. Finally, Section 6 provides a brief summary of the key points of this article.

2 Existing Literature

For our existing literature review, we have chosen to focus on three different authors: Frascarelli, Cecchetto and Cruschina. This is because all of them discuss topicalization in Italian, directly touching upon the issue of the derivation of clitic-resumed structures. Remarkably, they all reach different conclusions regarding the status of topicalized expressions.

Frascarelli's (2000, 2004) articles discuss the differences between Italian clitic-left vs. clitic-right dislocation (see also Frascarelli & Hinterhölzl, 2007). While she does not directly address the PP/DP asymmetry, she does tackle the issue of clitic optionality; this is a key point in her papers since clitic resumption is always optional when a topic is dislocated to the right periphery.

Frascarelli argues that the derivation of clitic-resumed topics is fundamentally different from that of non-clitic resumed ones. On the basis of binding properties and minimality effects, she argues that CR-ed topics are merged directly in the CP and are connected with their thematic role through binding an argument *pro*. Non-clitic-resumed topics, on the other hand, are internally merged in the CP and are then reconstructed for interpretation.

Example (5), which we take from Frascarelli & Hinterhölzl (2007:9) shows how CR-ed topics supposedly do not reconstruct. The topicalized DP object contains a referential expression (*Leo*) which is coreferential with the pronominal subject of the clause. If the left-peripheral

topic were to reconstruct IP-internally, a violation of principle C would ensue. As (5) is grammatical, she concludes that the object DP must not have reconstructed.

- (5) *La mia foto con Leo_i lui_i non l'ha ancora vista.*
 the my picture with Leo_i he_i not it_{CL}-has still seen
 'Leo still hasn't seen my picture with him'

Frascarelli takes examples like that in (5) as evidence that non-CR-ed topics are not the result of internal merge but rather they are base-generated directly in the CP.

Frascarelli's system is thus extremely clear-cut: everything which is CRed is base-generated, everything which is not CRed is moved. **Cecchetto** (2001) presents an equally sharply delineated system, but unlike Frascarelli's, Cecchetto's pivot is not the presence of CR but rather the type of constituent which is topicalized. More specifically, the author suggests that whereas topicalized DPs are moved to the left periphery, topicalized PPs are base-generated directly in the CP; this is regardless of whether these clitic-resumed or not.

Cecchetto's claims are based on examples like the one in (6), supposedly showing that topicalized PPs do not reconstruct for scope. (6) is a *doubly quantified* sentence: it features two quantified constituents. This will be the same kind of structure we will use in our experiment:

- (6) *In qualche cassetto, Leo ci tiene ogni*
 In some drawer, Leo there_{CL} keeps each
carta importante.
 paper important
 'In some drawer, Leo keeps every important paper'

Cecchetto (2001:20)

Cecchetto points out that (6) can only mean that there is a single drawer in which all important documents are stored ($\exists < \forall$), *not* that every important paper is stored in a different drawer ($\forall < \exists$). He argues that examples like (6) show that topicalized PPs are base-generated directly in the CP: if they were moved from the IP, they would be able to reconstruct to a position below the direct object, yielding the $\forall < \exists$ interpretation as a possibility. Note that Cecchetto assumes split scope for topicalized PPs: while he assumes that these do not reconstruct for scope, he takes them to reconstruct for binding properties.

What about DPs? Cecchetto assumes that these are moved to the left periphery and, as a result, they are free to reconstruct or not reconstruct IP-internally.

Finally, let us consider **Cruschina** (2012). Cruschina (2012) specifically focused on topicalized PPs and on the optionality of CR. The author argues that the two instances of PP topicalization (with and without CR) differ under a number of respects: for example, whereas topicalization with CR can cross a clause boundary, CR-less topicalization is clause-bound; whereas there can be more than one instance of CRed topicalization, CR-less topicalization is unique. As far as the derivation is concerned, Cruschina argues that a movement derivation underlies both CRed and CR-less topicalization, but what is moved is crucially different depending. In CRed structures, we have movement out of a complex constituent: the topicalized PP is extracted out of a syntactic phrase containing the PP as well as a coindexed clitic (see Cecchetto's *big DP hypothesis*, Cecchetto, 2000; see also Belletti, 2005). This operation leaves the clitic stranded in situ. In CR-less structures, we have movement of an entire constituent to the left periphery, leaving a trace behind.

While Cruschina does not directly discuss reconstruction-for-scope properties of different types of topicalized PPs, if it is true that both CR-ed and CR-less instances of PP topicalization are the result of internal merge, we expect reconstruction to be possible for both types of structures.

We have seen three considerably different accounts on the derivation of topicalized PPs:

- Frascarelli (2000, 2004) argues that all topicalized constituents which are *not* accompanied by CR are moved to the left periphery.
- Cecchetto (2001) argues that only DP topics are the result of a movement operation: PP topics are base-generated directly in the left periphery. For Cecchetto, the optionality of CR with PP topicalization is indeed just that: optional, as it does not point to a different underlying structure.
- Cruschina (2012) argues that all types of PP topics are the result of a movement operation, whether they are CRed or not.

Assuming that only constituents which have been moved to the left periphery can reconstruct IP-internally, we then derive the following predictions:

- Frascarelli: topicalized PPs *with* CR will not be able to reconstruct, but topicalized PPs *without* CR will.
- Cecchetto: Topicalized PPs will never reconstruct, regardless of whether CR is present or not.
- Cruschina: Topicalized PPs will have the option to reconstruct, regardless of whether CR is present or not.

In the next section, we set out to test which account comes closest to making the correct predictions.

3 The Experiment

To determine whether topicalized PPs can reconstruct for scope, we ran an online acceptability-judgment questionnaire testing the interpretation of **doubly-quantified sentences in Italian**. We set up our experimental items to look like Cecchetto’s doubly-quantified example in (6); our goal was to empirically test his claim that topicalized PPs do not reconstruct for scope, regardless of whether they are CRed or not. We did by testing different types of quantifiers as well as by having CR as one of our independent variables.

3.1 The experimental Items

The rationale for our experimental items was the following: we chose contexts which enforced an inverse-scope interpretation of the topicalized PP in our doubly quantified sentences, and ask participants to judge the acceptability of our items. If participants found our items to be acceptable, that meant that they accepted an inverse-scope interpretation of topicalized PPs and hence that these can reconstruct after all.

Accordingly, each experimental item consisted of three parts: a preceding context, a doubly quantified sentence and a continuation sentence. The preceding context set the tone for the doubly quantified sentence, ensuring this did not sound like an out-of-the-blue scenario. In the example below, the preceding context is about lawyers and clients; this is because the doubly-quantified sentence (as we will see) will be about drawers and documents.

(7) **Preceding Context** (from an actual test item)

Luigi è un noto avvocato Milanese. Nonostante abbia un sacco di clienti, è così organizzato che non ha bisogno di alcun aiuto con la catalogazione dei documenti.

‘Luigi is a lawyer from Milan. He is extremely organized, and as such, even though he has many clients, he doesn’t need any help filing his documents’

The quantified sentence was the core of the experiment. It consisted of a single clause featuring one topicalized PP. The topicalized PP always featured a quantified expression (in the example below, we have an existential quantifier). The direct object of the clause was also quantified: in all examples, we had a universal quantifier. Note that this is an exact calque of Cecchetto's original example in (6):

- (8) **Doubly Quantified sentence** (from an actual test item)

<i>In</i>	<i>un</i>	<i>cassetto,</i>	<i>Luigi</i>	<i>ha</i>	<i>riposto</i>	<i>ogni</i>	<i>documento</i>
In	a	drawer,	Luigi	has	stored	every	document

The doubly quantified sentence was followed by a continuation sentence, which was presented in bold font. *The continuation sentence was set up such that it would only make sense were the doubly quantified sentence to be assigned an inverse-scope interpretation, i.e. were the topicalized PP to be reconstructed in a position lower than that in which the universal object takes scope:*

- (9) **Continuation sentence** (from an actual test item)

Infatti, ha messo i testamenti nel cassetto di mogano, le compravendite nel cassetto di ebano, e le successioni nel cassetto della scrivania

‘As a matter of fact, he placed the wills in the mahogany drawer, the purchase agreements in the ebony drawer, and the inheritance documents under his desk’

Participants were asked to judge whether the continuation sentence was acceptable and made sense given what preceded it (i.e. given the doubly quantified sentence and the preceding context). They were asked to express their judgments by clicking on YES or NO:

- (10) **Instructions**

“Is the sentence in bold (=continuation sentence) acceptable given what precedes it?”

☐ YES

☐ NO

Participants were told this was *not* an experiment checking their proficiency with the grammatical rules of Italian, and were instructed to focus on the meaning of sentences and on whether these made sense rather than obsessing over their form.

All parts of our experimental items, including the instructions and the *yes* and *no* tick boxes, were presented on a single screen. No time limit was given to provide a response.

3.2 More on the Rationale of the Experiment

The continuation sentence in (9) describes a situation where different documents are being stored in at least three different drawers. This situation is only compatible with an inverse-scope interpretation of the doubly quantified sentence in (8). Under an inverse-scope interpretation of (8), the existential QP contained in the topicalized PP takes scope under the object universal (see 11a below); this results in an interpretation according to which we have multiple drawers. The surface scope (11b) interpretation of (8), on the other hand, is not compatible with the continuation in (9), as having the universal take scope over the existential means stating that there is a single drawer in which all documents are stored:

- (11) Possible interpretations for “*In a drawer, Luigi has stored every document*”

a. $\forall < \exists$

For every document, there is a different drawer.

b. $\exists < \forall$

There is a single drawer which contains all the documents.

If participants could access the inverse-scope interpretation of (8), they would have been able to mark the continuation sentence in (9) as being acceptable, hence clicking on YES. If they could not access the inverse scope interpretation, they would have found (9) to be unacceptable and they would have clicked on NO instead.

We purposefully chose to resort to categorical judgments (YES or NO) instead of non-categorical ones (such as values on a Likert scale). Accessing the inverse-scope interpretation of a doubly quantified structure is an intrinsically demanding task, as it has been well-documented in the literature (Fodor & Sag, 1982; Kurtzman & MacDonald, 1993; Tunstall, 1998; Anderson, 2004). Moreover, there is a general propensity towards going with the surface scope interpretation of a doubly quantified structure, as that requires the least number of transformations. Had we chosen to ask our participants to select values on a Likert scale -say, ranging from -2 to +2-, we would have run the risk of obtaining several “0” judgments simply because an inverse-scope interpretation is not the most natural interpretation of a doubly quantified sentence. A particular interpretation not being the most natural does not mean it is impossible, however. We thus decided to go for categorical values like YES and NO: these provide a less fine-grained but more robust attestation of the (im)possibility of an inverse-scope interpretation of a topicalized PP.

3.3 Lexical alternations & the Structure of the Experiment

We maintained the type of the object quantifier constant through different experimental items, but varied the type of quantifier featuring in our topicalized PP. While the QP in object position was always the universal “ogni x” (*every x*), our topicalized PP featured either an existential (either *some x* (Italian: *qualche x*), or *an x* (Italian: *un x*) or the modified numerals *at least an x* (Italian: *almeno un x*).

(12) Types of quantifiers

<i>Qualche</i> (some), e.g.	<i>In qualche cassetto, Luigi ha riposto ogni documento</i>
	In some drawer, Luigi has stored every document
<i>Un</i> (a), e.g.	<i>In un cassetto, Luigi ha riposto ogni documento</i>
	In a drawer, Luigi has put every document
<i>Almeno un</i> (at least a), e.g.	<i>In almeno un cassetto, Luigi ha riposto ogni documento</i>
	In at least a drawer, Luigi has put every document

More than one type of quantifier was included to control for any possible quantifier-specific effect on the likelihood of a quantified PP to take wide rather than narrow scope on any linearly lower QP.

As we were also interested in the effect of the presence vs lack of CR on reconstruction properties, we included a CR-ed and CR-less alternation of each experimental item:

(13) a. **With clitic**

<i>In un cassetto,</i>	<i>Luigi ci</i>	<i>ha</i>	<i>riposto ogni documento</i>
In a drawer,	Luigi there_{CL}	has	stored every document

b. **Without clitic**

<i>In un cassetto,</i>	<i>Luigi ci</i>	<i>ha</i>	<i>riposto ogni documento</i>
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We thus had two independent variables, both categorical: type of quantifier (three values: Some, A, At least A) and Clitic Resumption (2 values: present or absent, i.e. yes or no), for a total of 6 experimental conditions, as illustrated in Table 1.

Table 1. Experimental Conditions

	Some	A	At least a
Clitic Resumption	<i>Some</i> with CR	<i>A</i> with CR	<i>At least a</i> with CR
No Clitic Resumption	<i>Some</i> without CR	<i>A</i> without CR	<i>At least a</i> without CR

Our dependent variable was also categorical: either a positive or a negative response.

Note that we also controlled for a possible effect of the argument vs. adjunct status of the fronted PP by including both types of constituent. An example of an adjunct PP was already provided in (8). One of the argument PPs actually used in the experiment was the following:

- (14) *A un cliente, Lucia (gli) ha dato*
ogni formaggio
To a customer, Lucia (to-him_{CL}) has given
every cheese

3.4 Participants, Number of Experimental Items and Total Number of Observations

We administered this test using Surveygizmo, an online-survey platform. Participants were recruited through Facebook and other social media platforms; they had a mean age of 23.2 and came from several different Italian regions. They received no compensation for their participation in the experiment.

As our experimental items were long, and since doubly quantified sentences are intrinsically taxing to process, we tried limiting the number of experimental items each participants had to judge to complete the experiment: each participant saw 12 experimental items – 2 items per each experimental condition- and 10 fillers, for a total of 22 items. Even so, a considerable number of participants did not complete the test: out of the 50 people that started the experiment, only 38 completed it. We believe this reflects just how taxing inverse scope and doubly quantified structures can be, a supposition which is confirmed by our results as we will see. Out of these 38 participants, we subsequently removed an additional 6 participants who had failed to respond correctly to our fillers. We were left with 32 participants, who provided a total of 384 judgments to work on, i.e. a total of 64 judgments for each of the 6 experimental conditions.

4 The Results

Let us start by considering the broader picture. The table below (Table 2) illustrates the overall percentage of YES responses for each of the six experimental conditions. Recall that a *yes* response means that the participant could access the inverse-scope interpretation of the doubly-quantified sentences.

Table 2: percentage of YES responses for each of the 6 experimental conditions

	Condition	Overall Percentage of YES responses
Existential 1	<i>Some</i> , with CR	42,6%
	<i>Some</i> , without CR	51,5%
Existential 2	<i>A</i> , with CR	8,8%
	<i>A</i> , without CR	14,7%
Modified Numeral	<i>At least a</i> , with CR	39,7%
	<i>At least a</i> , without CR	47,1%

We see that the existential “*a*” (Italian: *un*) performs worse than all quantifiers: only 9% of *yes* responses in the condition with CR, as opposed to 43% for *some* and 40 % for the modified numeral *at least a*. We also see that inverse scope is slightly easier to access if CR is not present, for all three quantifiers. Finally, we see that even for the best performing conditions. i.e. *at least a* + CR, and *some* + CR, the percentage of *yes* responses is still around a very modest 50%. The overall negative trends in our participants’ responses is also evident from Figure 1, which illustrates the number of positive and negative responses according to the type of quantifier. Figure 2 then shows the proportion of positive vs. negative responses as dependent on the presence vs. lack of a clitic resumption strategy:

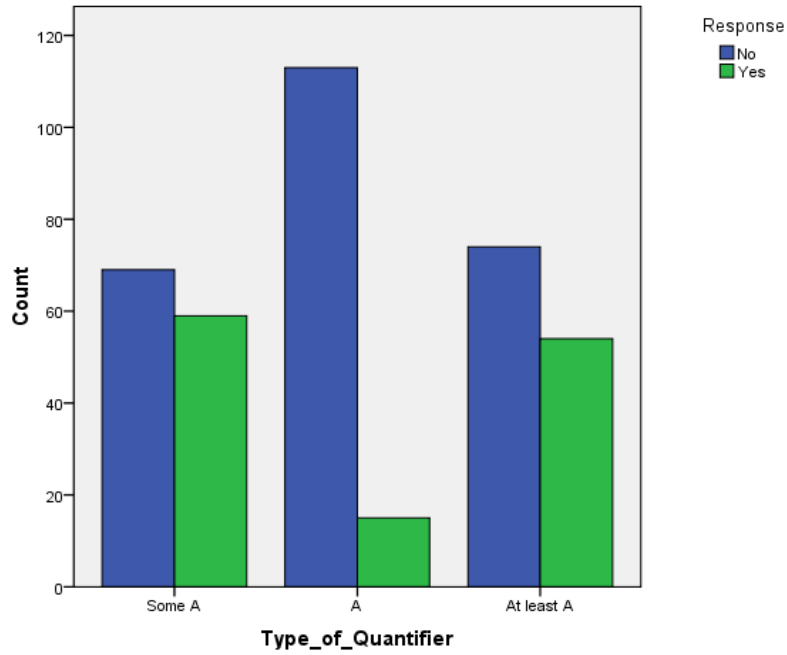


Figure 1. Number of positive and negative responses for type of quantifier

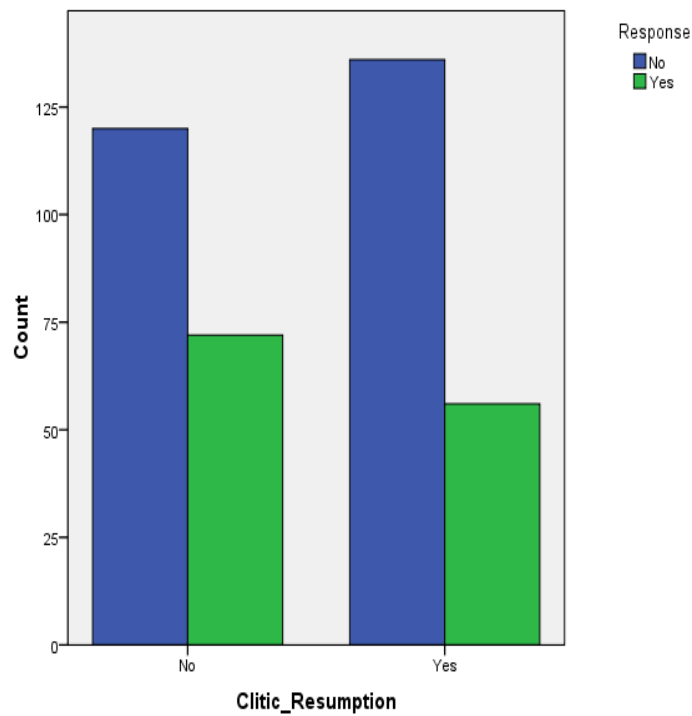


Figure 2. Number of positive and negative responses depending on the presence or absence of CR.

Chi-square interactions between different conditions for aggregated data (i.e. the means as expressed in table 2) revealed that the presence vs. absence of CR was not a statistically significant factor, for any of the three pairs of quantifiers ([Some +] vs [Some -] = X^2 : 1.0625, p-value: .302; [A +] vs [A -] = X^2 : 1.1333, p-value: .287; [At least +] vs [At least -] = X^2 : 0.7484, P-value: .386). The difference between types of quantifier was statistically significant when comparing A vs *Some* ([Some +] vs [A +] = X^2 : 20.352, p-value: .00001) and A vs *At least a* ([At least +] vs [A +] = X^2 : 16.77, p-value: .00042). On the other hand, there was no statistically significant difference between *Some* and *At least a* ([Some +] vs [At least +] = X^2 : 0.1214, p-value: .727).

We also analyzed our data using generalized estimating equations (GEE) (SPSS 26.0), choosing an independent correlation structure. GEE results essentially patterned with those preliminary results we obtained with chi-square statistics: they revealed a significant effect of our predictor *Type of Quantifier*, but for the existential “a” only. No significant effect caused by the presence or absence of clitic resumption was detected.

Table 3. Tests of Model Effects from GEE analysis

Effect	Wald Chi-Square	Df	Sig.
Type of Quantifier	44.868	2	.000
Clitic Resumption	2.300	1	.129
Subject ID	252474661.6	5	.000
Quantifier * CR	.403	2	.817

Table 4. Parameters from GEE analysis

Effect	Beta Estimate	Std. Error	95% Wald CI	Wald Chi-Square	df	Sig.
Intercept	-1.760	.2133	(-2.178 ; -1.342)	68.058	1	.000
“A”	-1.963	.4538	(-2.852 ; -.1073)	18.700	1	.000
“At least a”	-.151	.3195	(-.778 ; .475)	.225	1	.636
Presence of CR	-.380	.4051	(-1.174 ; .414)	.881	1	.348

As can be seen from Table 3. and 4. GEE also highlighted a statistically significant effect caused by subject ID: different subjects gave statistically significant different responses. This is also

evident from Figure 3., which displays the proportion of positive responses per individual participant.

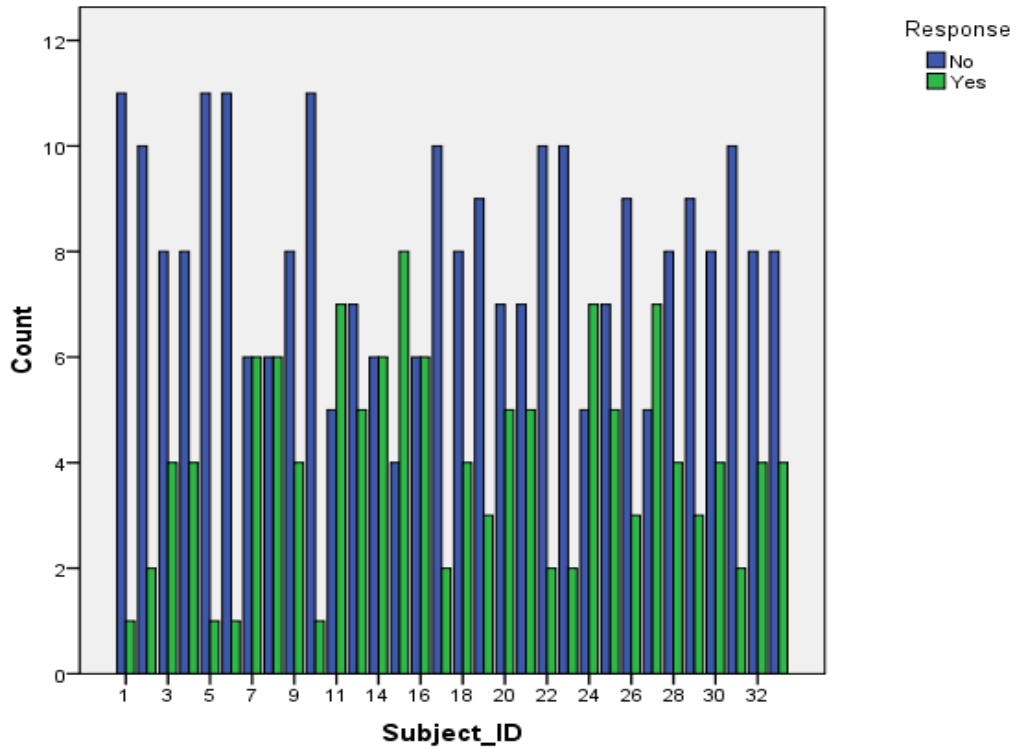


Figure 3. Proportion of positive vs. negative responses per individual participant

5 Discussion

Let us start by discussing the most robust and uncontroversial findings. Based on the results we have obtained in Section 4, the following three conclusions seem fairly uncontroversial:

- A. Overall, we observe a tendency *not* to reconstruct a quantified topicalized PP. Speakers seem to prefer the surface scope interpretation to the inverse scope one even when strongly compelled to accept the inverse-scope interpretation (i.e., because the context requires them to do so). This is true regardless of the quantifier involved, although we do see that some quantifiers are clearly better than others in allowing for an inverse-scope interpretation (see conclusion in B.).
- B. We see strong effect of the specific type of quantifier involved on the possibility of reconstructing the topicalized PP for scope. In fact, the type of quantifier involved massively outweighs other parameters such as the presence vs. absence of clitic resumption.
- C. Far from being a general feature of the language, the possibility to reconstruct topicalized PPs appear to depend on the grammar of the individual speaker. In this respect, we see considerable variation among different speakers: some of our participants consistently rejected inverse scope, regardless of the combination of CR and type of QP,

whereas others participants were very much okay with the possibility of reconstructing a topicalized PP for interpretation (see again Figure 3.).

We already expected conclusion A to be an outcome of our experiment: as already discussed in Section 3, there is plenty of existing literature highlighting how surface-scope interpretation is essentially easier and generally preferred to the inverse-scope one. The already well-established tendency to favor surface-scope interpretation was responsible for the specific design we chose for the experiment, not to mention for our choice to go for a categorical dependent variable rather than a continuous one (see again Section 3 for more details).

Conclusion B is on the other hand more unexpected. None of the three authors we reviewed in Section 2 consider the effect of the specific type of quantifier in licensing or prohibiting the reconstruction for scope of a topicalized constituent. Rather, they treat reconstruction as a unified phenomenon, which applies homogeneously on the basis of the presence or lack of CR (Frascarelli), or on the basis of the DP/PP status of the topicalized constituent (Cecchetto). The significantly lower ratings associated with the existential quantifier “a”, however, invite for less generalist accounts, and for analyses which take more into consideration the specific semantics of the different quantifiers involved. In the case of the existential “a”, for example, the strong bias against an inverse-scope interpretation is likely due to a tendency to interpret this as an indefinite specific rather than as an actual generalized quantifier (Fodor & Sag, 1982; Enç 1991; Reinhart, 1997; Kratzer, 1998). Consider the experimental item in (15):

- (15) *In un cassetto, Luigi ha riposto ogni documento*
 In a drawer Luigi has stored every document

Presumably, participants interpreted sentences like (15) as describing a situation where there is a specific drawer being discussed. This forced an interpretation of (15) according to which there is a single drawer rather than multiple ones, as an inverse-scope interpretation of (15) would require.

We cannot talk about an “expected” or “unexpected” result when discussing conclusion C, as this is the first study that empirically tests scope-reconstruction properties for topicalized PPs. On the other hand, though, one could argue that if the possibility to reconstruct a topicalized PP had simply been due to the topic being a DP/to the absence of a corresponding resumptive clitic, as claimed by Cecchetto and Frascarelli, we would not have expected this much variation among different participants. In this sense, conclusion C is very much an unexpected result. Together with the specific effect of different types of quantifiers, subject variation goes to show that the possibility to reconstruct for scope is a much less unitary phenomenon than we thought.

We now move to those questions to which our experiment provided less straightforward answers. What motivated this experiment was the following question: “can topicalized PPs reconstruct for scope?”. It turns out that answering this question is considerably more complicated than anticipated. If we remove from our data those experimental items which feature the existential “a”, which we saw to be problematic, and focus on “some” and “at least alone”, which performed better, we have around 47% of positive responses with “some” (51,5% if including only those items with no CR) and 42% of positive responses with “at least a” (47,1% if including only those items with no CR). On the one hand, our participants managed to access the inverse-scope interpretation, and hence to reconstruct the PP for scope, in around half of items with which they were presented; this shows that reconstructing a topicalized PP is indeed an option. On the other hand, in more than half cases they could not; this is particularly remarkable if we consider that our examples were set up so as to force reconstruction of the topicalized PP. One would expect that if the grammar of a speaker allows them to reconstruct a topicalized PP for scope in some cases, they would be able to reconstruct in most cases where reconstruction

is strongly compelled. Clearly, this is not so. Moreover, let us not forget that we observed dramatic differences between different subjects, with some participants being pretty much unable to reconstruct, and some being able to reconstruct in more than half cases. We conclude that while reconstruction for scope of topicalized PPs does seem to be a possibility, it is clearly both disfavored and very much subject to speaker variation.

The effect on clitic resumption on scope properties is also difficult to define. On the one hand, clitic resumption was never a statistically significant effect, for any of the three quantifiers tested. This would lead us to believe that clitic resumption with topicalized PPs is indeed just optional -its effect on scope at least-, as Cecchetto (2001) argued. On the other hand, we also see a clear trend in our data: the inverse scope interpretation was easier to access when the clitic was not there, for all the three quantifiers included in our study. It is possible that CR failed to be a significant predictor because of the limited size of our dataset: perhaps with more observations, the difference between CR-ed and CR-less items will become statistically significant.

Now that we have fully reflected on our data and their significance, we can also go back to the three analyses we first discussed in Section 2 and we can try determining which account comes closest to empirical facts. We saw that topicalized PP in general *can* reconstruct for scope -albeit with some important provisos-; this appears to falsify Cecchetto's (2001) claim that only topicalized DPs have the option of reconstructing for scope. We saw that clitic resumption (presence of a coindexed clitic, or lack thereof) was not a statistically significant factor in licensing or hindering access to an inverse-scope interpretation. Differently put, reconstruction seemed to be possible in at least some of those experimental items where the topicalized PP was clitic-resumed. These findings go against Frascarelli (2000, 2004), who had postulated that only those expressions which are not resumed by a corresponding clitic have the ability to reconstruct for interpretation. Our findings rather go in the direction of Cruschina (2012): in our experiment, both CR-ed and cliticless topicalized PPs could reconstruct for scope, something which supports a movement derivation for both types of constituents as suggested by the author.

6 Conclusions

In this short paper, we have presented the results on an online acceptability-judgment questionnaire testing the interpretation of doubly quantified sentences featuring a topicalized PP constituent. We set up our experimental items so as to elicit an inverse-scope interpretation of the doubly quantified sentences: the doubly quantified sentence only made sense given the context if participants could access the inverse scope interpretation, and hence could reconstruct for scope the topicalized PP.

We tested three different types of quantified expressions: two existentials, *qualche* ("some") and *un* ("a"), and the modified numeral *almeno un* ("at least a"). We also investigated a possible effect on scope properties of the presence vs. lack of a clitic-resumption strategy; this is possible because in Italian topicalized PPs may appear both with or without a coindexed IP-internal clitic.

We found a statistically significant effect of the type of quantifier, but for the existential "a" alone: there was no statistically significant difference between the existential "some" and the modifier numeral "at least a". We also found a statistically significant effect for subject ID: different participants gave considerably different answers, with some participants very much inclined to accept inverse scope and some others rejecting it almost everywhere. Inverse scope appeared to be easier to access whenever CR was not adopted, for all three types of quantifiers, but this effect was never statistically significant. Overall, our participants gave a higher number of negative responses (meaning that they could not access the inverse scope interpretation) than positive ones, even with those quantifiers which performed best. This further highlights the preference towards surface scope interpretation already discussed by several authors (Fodor & Sag, 1982; Kurtzman & MacDonald, 1993; Tunstall, 1998; Anderson, 2004).

Our results support Cruschina (2012) analysis of PP topicalization: while reconstruction for scope is generally disfavored, it is at least a possibility both with clitic-resumed and with non-clitic-resumed topicalized PPs. This supports an analysis of these two types of constituents according to which both are the result of a movement derivation: reconstruction is possible because both constituents originate in the IP and leave a copy there.

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