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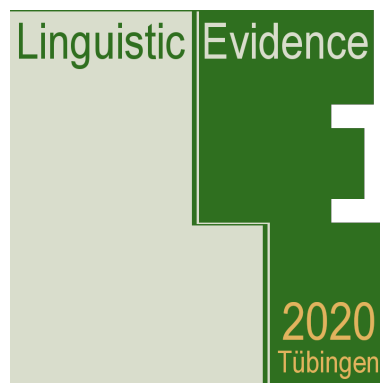
Topicalized PPs: Movement or External Merge?

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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 determining whether the presence of clitic resumption plays a role in allowing or disallowing a topicalized PP to reconstruct IP-internally. We are also interested in what reconstruction properties tell us about 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 the clause, as illustrated in (1) and (2)[1]. Importantly, the topicalized constituent can (and sometimes *must*, as we will see) be resumed by a corresponding IP-internal clitic. This clitic matches the topicalized expression for case and sometimes also gender and number:

(1) *Il   pane   **lo**   mangio   tutti   i   giorni.*
     the   bread ACC.masc.sing$_{CL}$ eat   every the   days
     'Bread, I eat every day.'

(2) *In   Svezia   pro   **ci**   va   in   vacanza.*
     in   Sweden   pro   there$_{CL}$ goes   in   holiday
     'In Sweden, he/she goes on holiday.'

Topicalized constituents are generally discourse-old constituents (Benincà, 1988) or constituents that are newly introduced or newly returned to (Frascarelli & Hinterhölzl, 2007). The structures in (1) and (2) are also compatible with a *contrastive* interpretation (Frascarelli & Hinterhölzl, 2007; Brunetti, 2009; Callegari, 2018) of the topicalized XP: a possible continuation for (1) could be an additional proposition stating that some other food (e.g. vegetables, rice) is *not* consumed every day. A possible continuation for (2), on the other hand, could be a sentence like "In Norway, she goes shopping". Note that topicalization is often also referred to with the acronym *ClLD* (**Cl**itic **L**eft **D**islocation), first used in Cinque (1990), particularly when referring to the topicalization of arguments.

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[1] We are using the term topicalization as an umbrella term to refer to structures which present an identical surface syntax (i.e. left dislocation and clitic resumption of a constituent which would otherwise appear IP-internally, as in (1) and (2)). This does *not* mean that we believe arguments and adjuncts to be exactly alike, just like one can accept that an identical trigger likely underlies the fronting of both argument and adjunct wh-constituents, while not necessarily having to assume that the derivation of adjunct and argument questions will be completely identical. We believe that the use of an umbrella term is justified given the obvious pragmatic and semantic similarities between examples like (1) and (2), such as the fact that in both cases the topicalized expression can be interpreted as contrastive, as detailed in the text (see also Callegari, 2018).

While both DPs and PPs can be the target of topicalization in Italian, 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 (3): both (3a) – variant with CR – and (3b) – variant without CR – are perfectly acceptable in Italian:

(3) a. *Ad*   *Alessandro*   *gli*   *ho*   *dato*   *un*   *libro.*
         to   Alessandro   to-him$_{CL}$ I-have   given   a   book
     b. *Ad*   *Alessandro*   *ho*   *dato*   *un*   *libro.*

'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, 2010; Villalba, 2000). This is illustrated in (4) below, from Sicilian, which shows how a topicalized PP *must* co-occur together with the coindexed "ci" dative clitic:

(4) *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:

(5) *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 (3b), which feature no CR, are indeed just variants of (3a), or whether in fact a different derivation underlies the two structures. For instance, one might speculate that whereas (3b) is the result of movement, in (3a) the PP has been base-generated directly in the left periphery; this could explain why CR is present in the latter but not in the former. It is precisely these types of questions that this paper sets out to investigate. In particular, we will report 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 or not reconstruction for scope is possible – to speculate on whether topicalized PPs are the result of movement or base-generation.

This paper is organized as follows. In Section 2 we start with a brief literature review on the topic of clitic resumption in Italian. 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 summary of the key points of this short paper.

2   Existing Literature

For our literature review, we will focus on three different papers: Cecchetto (2001), Cruschina (2010) and Frascarelli & Hinterhölzl (2007). These articles all discuss topicalization in Italian, directly touching upon the issue of the derivation of clitic-resumed structures. We have chosen

these specific articles because they each present a different take on topicalization, that we believe are each interesting to reason upon.

In **Cecchetto´s (2001)** system, the type of XP which undergoes topicalization is extremely important in that it determines the derivation of the topicalization process. Specifically, the author argues 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 are clitic-resumed or not.

Cecchetto's claims are based on examples like (6), which is meant to illustrate the scope properties of topicalized PPs. (6) is a *doubly quantified* sentence: it features two quantified constituents. Cecchetto argues that (6) can only mean that there is a single drawer in which all important documents are stored ($\exists > \forall$), and *not* that every important paper is stored in a different drawer ($\forall > \exists$).

(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)

The author argues that (6) shows 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 $\forall > \exists$ as a possible interpretation. Different types of topicalized PPs behave identically with respect to scope properties: in his paper, Cecchetto discusses both locative PPs and dative PPs, and concludes that neither can reconstruct VP-internally[2]. Note that Cecchetto assumes split scope for topicalized PPs: while he assumes that these do not reconstruct for scope, he assumes that they reconstruct for binding.

Cruschina's (2010) paper directly touches upon the issue of CR optionality. The author argues that CRed and CR-less PP topicalization differ in 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 takes both instances of PP topicalization to be the result of movement, but assumes that what is moved is crucially different depending on whether or not CR is present. 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.

Finally, let us consider **Frascarelli & Hinterhölzl´s (2007)** analysis. F&H´s (2007) article discusses topicalization in both Italian and German, different pragmatic types of topics and the differences between left and right topicalization. While the authors do not directly address the PP/DP asymmetry, they do tackle the issue of clitic optionality; this is a key point of the paper since clitic resumption is always optional when a topic is dislocated to the right periphery.

F&H argue 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, they argue that CRed topics are merged directly in the CP and are connected with their thematic role

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[2] See page 26 and footnote 21 of Cecchetto (2001) for more details on how locative and dative PP topics pattern alike.

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.

One of the examples used by F&H (2007) to argue in favor of a base-generation analysis of CRed topics is provided in (7). In (7), the topicalized DP object contains a referential expression (*Leo*) which is coreferential with the pronominal subject of the clause. According to F&H, (7) displays anti-reconstruction properties: if the left-peripheral topic were to reconstruct IP-internally, a violation of principle C would ensue. As (7) is grammatical, F&H conclude that the object DP must not have reconstructed, and hence that it must have been generated directly in the left periphery.

(7) *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 & Hinterhölzl, 2007:9)

By now, we have seen three considerably different accounts of the derivation of topicalized constituents:

- Cecchetto (2001) argues that only DP topics are the result of a movement operation: PP topics (whether argument or adjunct) 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 (2010) argues that all types of PP topics are the result of a movement operation, whether they are CRed or not.

- F&H (2007) argue that topicalized constituents which are *not* accompanied by CR are moved to the left periphery.

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

- Cecchetto: Topicalized PPs will never reconstruct, regardless of whether CR is present or not.

- Cruschina: Topicalized PPs will always have the option to reconstruct, regardless of whether CR is present or not.

A third prediction can be obtained if we extend F&H's analysis so as to cover the optionality of CR with PP topics: if only CRed topics are base-generated, then CRed PP topics must be externally merged in the left periphery, whereas CR-less PP topics must have been moved there. Note that this is a prediction we draw ourselves based on F&H´s logic: while the authors do include examples of PP topicalization in their paper, they do not address the question of whether the presence or lack of CR in PP topicalization points to a different underlying derivation.

- F&H (inspired): topicalized PPs *with* CR will not be able to reconstruct, but topicalized PPs *without* CR will.

In the next section, we set out to test which prediction comes the closest to capturing empirical data.

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.**

In Italian, sentences containing two or more quantified expressions can give rise to scope ambiguities (Delfitto, 1985; Longobardi, 1988; Crisma, 2012; Pulicani, 2016, 2020). Whether or not a sentence containing more than one quantifier will be scopally ambiguous depends on a number of factors, such as information structure (Pulicani, 2020), and location of the quantified expressions (Crisma, 2012; Pulicani, 2016). For example, inverse scope is particularly easy to obtain in structures like (8) below, where both QPs appear as internal arguments (Crisma, 2012: 521 describes this example with the words "perfect ambiguity"):

(8)	*Ho*	*assegnato*	*quattro*	*relazioni*	*a*	*due*	*studentesse.*
I-have	assigned	four	essays	to	two	students
'I assigned four essays to two students.'

<div align="right">(Longobardi, 1988, ex. 132)</div>

Inverse scope is on the other hand harder to get if one of the two quantified expressions appears in subject position (see in particular Pulicani, 2016): the wide-scope interpretation of the direct object in (9), for example, is not accepted by all speakers (Crisma, 2012).

(9) | *Tre* | *professori* | *hanno* | *corretto* | *100 esami.*
--- | --- | --- | --- | ---
| three | professors | have | graded | 100 exams
'Three professors graded 100 exams.'

<div align="right">(Crisma, 2012: 520)</div>

We set up our experimental items to look like Cecchetto's doubly-quantified example in (6), which we repeat below:

(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.'

<div align="right">(Cecchetto, 2001:20)</div>

Recall that Cecchetto argues that topicalized PPs do not reconstruct for scope, regardless of whether they are CRed or not. Our goal was to empirically test this claim.

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 a doubly quantified sentence, and asked participants to judge the acceptability of the test item. If participants found our items to be acceptable, that meant that they accepted an inverse-scope interpretation of the topicalized PP, and hence that topicalized PP can reconstruct for scope 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 was not perceived as an out-of-the-blue scenario. In the example below, the preceding context is about lawyers and clients; this is because the corresponding doubly quantified sentence (as we will see) is about drawers and documents.

(10) **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 (11) is an exact calque of the structure of Cecchetto's example in (6):

(11) **Doubly Quantified sentence** (from an actual test item)

In	*un*	*cassetto,*	*Luigi*	*ha*	*riposto*	*ogni*	*documento.*
in	a	drawer,	Luigi	has	put	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.

(12) **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.'

The continuation sentence in (12) 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 (11). Under an inverse-scope interpretation of (11), the existential QP contained in the topicalized PP takes scope under the object universal (see 13a below); this results in an interpretation according to which we have multiple drawers. Under a surface scope (13b) interpretation of (11), on the other hand, there is a single drawer in which all documents are stored:

(13) Possible interpretations for *"In a drawer, Luigi has stored every document."*
  a. $\forall > \exists$ (inverse)
    For every document, there is a different drawer.
  b. $\exists > \forall$ (surface)
    There is a single drawer which contains all the documents.

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:

(14) **Instructions**
  "Is the sentence in bold (=continuation sentence) acceptable given what precedes it?"

☐ YES   ☐ NO

We expect that if participants could access the inverse-scope interpretation of (11), they would have found the continuation sentence in (12) acceptable, and hence they would have clicked on YES. If they could not access the inverse scope interpretation, they would have found (12) 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.

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 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").

(15) **Types of quantifiers**

*Qualche (*some*)*, e.g.	*In **qualche** cassetto, Luigi ha riposto ogni documento*
	in **some**[3] drawer, Luigi has put every document
*Un (*a*)*, e.g.	*In **un** cassetto, Luigi ha riposto ogni documento*
	in **a** drawer, Luigi has put every document
*Almeno un (*at least a*)*, e.g.	*In **almeno un** cassetto, Luigi ha riposto ogni documento*
	in **at least a** drawer, Luigi has put every document

More than one type of existential was included to control for possible quantifier-specific effect on scope taking. We decided to test modified numeral expressions like "almeno un" together with run-of-the-mill existential quantifiers like "un" because of reported differences in their scope-taking properties. According to Crisma (2012), for example, "almeno un" tends to force a narrow scope interpretation, regardless of whether the modified numeral appears in subject or object position. We then decided to test "qualche" alongside of "un" because of the special status of "qualche": "qualche" is morpho-syntactically singular but can receive a plural interpretation (Longobardi 1988; Zamparelli 2007).

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

(16) a. **With clitic**

In	*un cassetto,*		*Luigi*	***ci***	*ha*	*riposto ogni*	*documento.*
in	a drawer		Luigi	**there**CL	has	put every	document

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[3] Following Crisma (2012), we translate "qualche" as *some*, but see Zamparelli (2007) for differences between Italian "qualche" and English *some*.

b. **Without clitic**
   In un   cassetto,   Luigi ha   riposto ogni   documento.

We thus had two independent variables, both categorical: Type of Quantifier (three values: Some, A, At least A) and Clitic Resumption (two values: present or absent, i.e. yes or no), for a total of six experimental conditions. These are illustrated in Table 1:

Table 1. Experimental Conditions

	Some	**A**	**At least a**
Clitic Resumption	*Some* with CR	*A* with CR	*At least a* with CR
No Clitic Resumption	*Some* without CR	*A* without CR	*At least a* without CR

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

The specific combinations of verbs + PP used in our experiment were the following:

- "conservare in un espositore" ('keep in a display'),

- "vendere ad un cliente" ('to sell to a client'),

- "visitare con un amico" ('visit with a friend'),

- "riporre in un cassetto" ('put in a drawer').

3.3   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 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 more difficult to process, we tried limiting the number of experimental items each participant had to judge to complete the experiment: each participant saw twelve experimental items – two items per each experimental condition – and ten 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 demanding 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 six 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 six 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	*Some*, with CR	42,6 %
	Some, without CR	51,5 %
	A, with CR	8,8 %
	A, without CR	14,7 %
Modified Numeral	*At least a*, with CR	39,7 %
	At least a, 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 are also evident from Figure 1, which illustrates the number of positive and negative responses according to the type of quantifier.
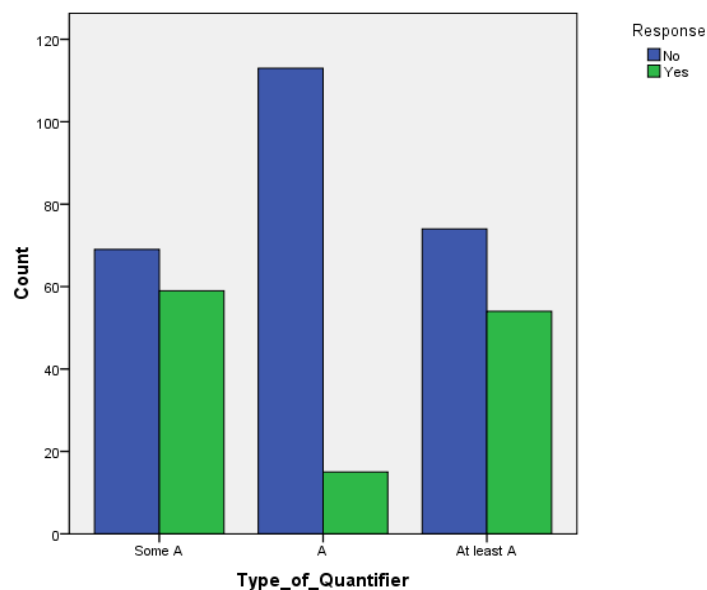

Figure 1. Number of positive and negative responses for type of quantifier

Figure 2 then shows the proportion of positive vs. negative responses as dependent on the presence vs. lack of a clitic resumption strategy:
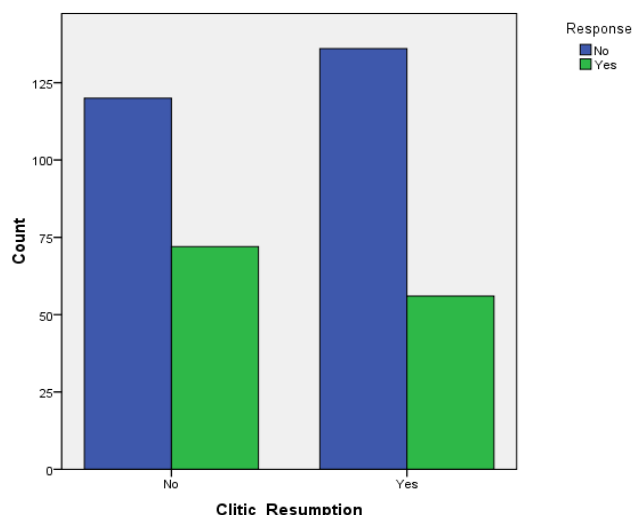
Figure 2. Number of positive and negative responses depending on the presence or absence of CR

We analyzed our data using generalized estimating equations (GEE) (SPSS 26.0), choosing an independent correlation structure. GEE results revealed that the variable "type of quantifier" was statistically significant, but the variable "presence vs. absence of CR" was not.

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 ; -.1.073)	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, the GEE also highlighted a statistically significant effect caused by subject ID: different subjects gave statistically significant different responses. This is also

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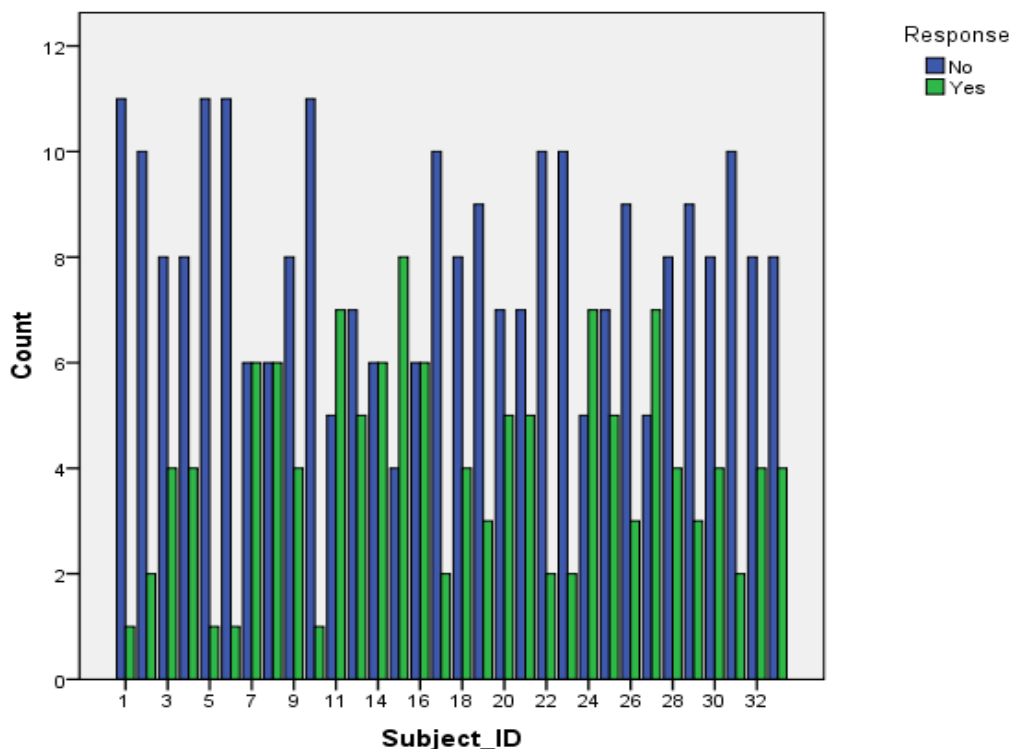

Figure 3. Proportion of positive vs. negative responses per individual participant

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 B).

B. We see a 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 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 appears 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 other 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 3.1, 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.

Conclusion B is on the other hand less obvious. None of the 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 & Hinterhölzl, 2007), or on the basis of the DP/PP status of the topicalized constituent (Cecchetto, 2001). 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 (17):

(17) | *In* | *un* | *cassetto,* | *Luigi* | *ha* | *riposto* | *ogni* | *documento* |
| | in | a | drawer | Luigi | has | put | every | document |

Presumably, participants interpreted sentences like (17) as describing a situation where there is a specific drawer being discussed. This forced an interpretation of (17) according to which there is a single drawer rather than multiple ones, as an inverse-scope interpretation of (17) would require.

We cannot really 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. Nevertheless, one could argue that if the possibility to reconstruct a topicalized PP had simply been due to the PP status of the topic, or to the absence of a corresponding resumptive clitic, 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 shows 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 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 a", 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). One the one hand, the inverse-scope interpretation was accessed in around half the total number of experimental items; this shows that reconstructing a topicalized PP *is* an option. On the other hand, in around half of the cases it was not; this is particularly remarkable if we consider that our examples were set up so as to compel the reconstruction of the topicalized PP. 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 of the cases. This subject-based variation could partly be due to regional differences: this represents an interesting question for a possible follow-up study.

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 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 CRed and CR-less items will become statistically significant.

Now that we have reflected on our data and their significance, we can 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 reconstruction was possible in at least some of those experimental items where the topicalized PP was clitic-resumed. These findings go against our interpretation of Frascarelli & Hinterhölzl (2007), according to which only 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 (2010): in our experiment, both CRed and cliticless topicalized PPs could reconstruct for scope, something which supports a movement derivation for both types of constituents, as assumed by the author.

6   Conclusions

In this short paper, we have presented the results of a small 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 and without a coindexed IP-internal clitic.

We found a statistically significant effect of the type of quantifier, with reconstruction for scope of the existential quantifier "un" ("a") being strongly disfavored. 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's (2010) take on 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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