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# Which *of* These Analyses Do You Prefer… *among* Those?

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**Abstract** In a series of influential works, Cardinaletti and Giusti argue that true partitivity in Italian is expressed by the preposition *di* (of), whereas the prepositions *tra/fra* (among) introduce *adjunct partitives*. In this paper, we speculate on the ability of the *wh*-item *quale* (which) to qualify as a selector of true partitives, and attempt to account for the relativized minimality-mitigation effect associated with the so-called lexical restriction, observed in superiority configurations. Despite the intuitive appeal of a 'selection' analysis distinguishing true partitives from adjunct partitives, the results of our experiments indicate that a formulation of featural relativized minimality in terms of selection may not make the right predictions.

**Keywords** Partitives. Adjunct-partitives. wh-questions. D-linking. Superiority effects. Selection.

**Summary** 1 Introduction. –2 Investigating the Structural Background. – 3 Experimental Evidence. – 4 Discussion.

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## 1 Introduction

D(iscourse)-linking (Comorovski 1989; Pesetsky 1987; 2000) has traditionally been regarded as a clear source of amelioration in *superiority* configurations with *wh*-questions. As illustrated in (1), the unacceptable configuration in (1a), headed by bare *what*, is (partially) "rescued" by D-linked *which book*, (1b), leading to better acceptability.

(1) a. **What* do you wonder [*who* read __]?
b. ?*Which book* do you wonder [*who* read __]?

This classic contrast has been extensively investigated both theoretically and experimentally (Rizzi 2001; Szabolcsi, Zwarts 1993; Villata et al. 2015; 2016). In this paper, we examine the specific case of argumental *wh-islands* through the lens of *featural relativized minimality* (*fRM*, Friedmann et al. 2009). This theoretical perspective follows the intuition of a featural hierarchy, namely the idea that a richer featural make-up can help escape (or mitigate) locality constraints (Starke 2001), and more generally facilitate processing of syntactic dependencies. This idea has been applied fruitfully to pathological speech, where individuals with poor representations of morphosyntactic features (e.g., aphasic patients) struggle to distinguish the relevant features on moved constituents from those on interveners, thus experiencing no advantage related to feature richness (Grillo 2008). The same logic applies to processing difficulties during acquisition: young children struggle with A'-dependencies in which the movement trigger and the intervener are featurally similar, and they cannot take advantage of the featural richness of the former to overcome this processing complexity (Friedmann et al. 2009).

In (1b), *which book* qualifies as a featurally richer constituent than embedded *who* due to the *lexical restriction* (+N) that the former, but not the latter, bears. This analysis, however, requires careful consideration (§2). The intent of this paper is twofold. First, we aim to determine the necessary selectional properties for a lexical restriction to modulate intervention configurations (§2.1), and we explore some diagnostics to assess them (§2.2). Second, we present a set of experimental results (§3) showing that, despite robust generalizations to distinguish selected and adjunct forms of lexical restriction, the intervention analysis requires further stipulations (§4).

## 2 Investigating the Structural Background

In this section, we explore the main intuition underlying the *fRM* framework to lexically-restricted *wh*-items. We then show how true

partitive arguments can be minimally distinguished from adjunct PPs adopting Cardinaletti and Giusti (1992; 2006; 2017). This distinction may play a role in intervention, since only features accessible to the DP edge domain should count for locality (§2.1). A tentative hypothesis for the structure of true partitive constructions (based on Falco, Zamparelli 2019) will then be linked to the idea that only true partitives behave as selected items, whereas adjunct partitives do not (§2.2).

## 2.1 Featural Relativized Minimality and Selection

The relevant featural configurations of the sentences in (1) are shown in (2), together with the intervention conditions assumed by the *fRM* framework (Friedmann et al. 2009):

| (2) | | Criterial position | | Intervener position | | Condition |
|---|---|---|---|---|---|---|
| | a. | *what*<br>+Q | … | *who*<br>+Q | … | *Identity* |
| | b. | *which book*<br>+Q +N | … | *who*<br>+Q | … | *Inclusion* |

When both a criterial and an intervener position host a bare *wh*-item, (2a), an *identity condition* is obtained – i.e., a classical *superiority* configuration in which the intervener *who* bears exactly the same features as the moved *what* (+Q), giving rise to the strongest case of intervention. In (2b), the criterial item *which book* bears not only +Q, but also a +N feature, the so-called *lexical restriction*. This is the *inclusion condition*: +N makes the criterial item featurally "richer" than the intervener, with a (partial) mitigation of the superiority effect.

This logic may in principle extend beyond *wh*-items with a simple NP complement. Since Obenauer's work on French, it has been observed that movement of bare *combien* (how many) to a criterial *wh*-position results in a sharp degradation if it crosses over an adverbial or negation, as in (3a). In contrast, if it pied-pipes a PP like *de problèmes* (of problems), (3b), a better outcome is obtained (Belletti, Rizzi 2013).

| (3) | | | | | | |
|---|---|---|---|---|---|---|
| | a. | **Combien*$_i$ | ne sais-tu pas | comment | résoudre | [$__i$ *de problèmes*] ? |
| | | how-many | don't you know | how | to solve | of problems |
| | b. | ?[*Combien* | *de problèmes*]$_i$ | ne sais-tu pas | comment | résoudre $__i$ ? |
| | | how-many | of problems | don't you know | how | to solve? |

Considering the PP (and the NP within it) as an instance of *lexical restriction*, the configuration in (3b) should also fall under the rubric

of the *inclusion condition*, where a lexically-restricted *wh*- (+Q +N) moves across a bare *wh*- (+Q).

Crucially, however, in the *fRM* framework only movement-triggering features (i.e., syntactically active features) are assumed to enter into play for intervention. This has two independent implications.

First, bare *wh*-items and lexically-restricted *wh*-items should target different criterial positions, under the reasonable assumption that both feature clusters trigger and direct movement, and that criterial probes are selective with respect to their goals. The distribution of bare vs. lexically-restricted *wh*-items in some varieties of Bellunese (Munaro et al. 2001) supports this distinction, with bare *wh*- remaining *in situ* and complex *wh*- moving to the beginning of the sentence (4).

| | | | | |
|---|---|---|---|---|
| (4) | a. | **Che* | a-tu | magnà? |
| | | What | have-you | eaten |
| | a'. | A-tu | magnà | *che*? |
| | | have-you | eaten | what |
| | b. | *Che vestito* | a-la | comprà? |
| | | What dress | has-she | bought |
| | b'. | *A-la | comprà | *che vestito*? |
| | | Has-she | bought | what dress |

Second, the +N feature, is not criterial and it is not expected to trigger movement *per se* (Rizzi 2018). Thus, to serve as goal for movement it should be accessible at the edge of the *wh*-constituent together with +Q (Chomsky 2001). This issue is more complex and theory-internal. To tackle it, consider Cecchetto and Donati (2010)'s discussion on the contrast between French (3a) and its Italian equivalent (5a), based on *labeling*.

| | | | | | |
|---|---|---|---|---|---|
| (5) | a. | **Quanti*$_i$ | non sai | come risolvere | |
| | | how-many-PL | don't (you) know | how to solve | |
| | | [ $__i$ *dei problemi*]? | | | |
| | | of-the problems | | | |
| | b. | ?[*Quanti dei problemi* ]$_i$ | non sai | come risolvere | $__i$ ? |
| | | how-many-PL of-the problems | don't (you) know | how to solve | |

In Italian, but not in French, *quanti* (how many) cannot move to its final landing site while stranding its PP. The contrast is explained in terms of agreement within the DP. In French, *combien* does not agree with its lexical restriction, whereas Italian *quanti* does. According to Cecchetto and Donati, the agreement probe (D) *quanti* (how many.PL)

labels the constituent *quanti dei problemi* (how many of the problems), blocking subextraction of D. When D does not label its complement, as in invariant *quanto* (6a), head movement of D alone is possible, instead.

| | | | | | | |
|---|---|---|---|---|---|---|
| (6) | a. | *Quanto*$_i$ | hai detto | che | sono | [_$_i$ *alti*]? |
| | | how-much-SG | have (you) said | that | (they) are | tall-PL |
| | b. | [*Quanto alti* ]$_i$ | hai detto | che | sono | _$_i$ ? |
| | | how-much-SG tall-PL | have (you) said | that | (they are) | |

While the agreement-based intuition may overgeneralize,[1] we retain the idea that a probe-goal relation is indeed crucial. As briefly noted in (Belletti, Rizzi 2013, fn. 2), if the features selected for by D count as criterial, a lexical restriction like *de problèmes* in (3b) might be visible at the edge of the DP, and count as syntactically active for *fRM*. Thus, the contrast in (3) would be driven precisely by +N, embedded in the complex *wh*-constituent. This suggestion would rephrase Cecchetto and Donati's intuition: *quali* would *select* its lexical restriction, while *quanto* would not. We leave the exact nature of the dependency between *quanto* and *alti* in (6) for further investigation, but we maintain the view that whenever selection is carried out by D, this may have consequences in terms of *fRM*, with embedded features visible for intervention computation.

## 2.2 Partitivity and Selection

In light of the above discussion, argumental *wh*-islands like (1) find a natural explanation in terms of intervention. In this sense, then, variations in their acceptability may be associated with different degrees of intervention strength, and with the featural properties of what is moved across the island boundary. As shown by Szabolcsi and Zwarts (1993), overt partitives yield the greatest improvement on the acceptability scale for extraction across weak islands (7):

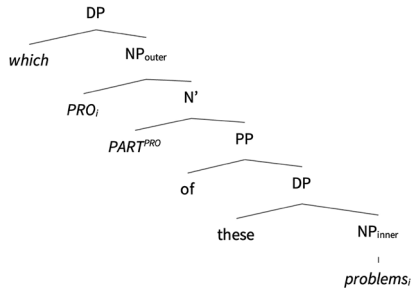
(7) [*Which of the men* > *which man* > *?Who* > *??What* > *??How many* > **How much* > ***Who the hell* ]$_i$ do you *regret* that I saw _$_i$ ?

Re-adapting Falco and Zamparelli's (2019) analysis of partitives, we assume the structure in (8) for the phrase *which of these problems*,

**1** Both overgeneralize – "*quali*$_i$ hai comprato [_$_i$ *di questi libri*]", "*which-PL* did you buy _ *of these books*" – and undergeneralize – as in (4) where invariant "*che*" does not label its complement, and yet they cannot be stranded.

where *problems* sits in the "inner NP" position, and it is in turn selected by a (phonologically null) PRO – the so-called "outer NP".[2]

(8)




From our selection perspective, the overt realization of the inner or the outer NP introduces a crucial structural distinction, as in (9):

(9) a. *Which* $PRO_i$ of these *problems*$_i$
b. *Which problems*$_i$ of these [e]$_i$

Ignoring the nature of the empty outer NP, we assume that (9a) is an exact instantiation of (8), while (9b) is not. There, the outer NP is overt, and the inner NP is a case of ellipsis. According to Cardinaletti and Giusti (2006), there are several reasons to assume this differential analysis. First, the non-overt realization of the outer NP, (9a), is only compatible with the pronominal determiner *uno*, and not with the weak determiner *un*, (10a). The opposite pattern is observed with an overt outer NP, (10b).

| | | | |
|---|---|---|---|
| (10) | a. | *Un/Uno | di questi problemi |
| | | One | of these problems |
| | b. | Un/*Uno | problema di questi |
| | | One | problem of these |

Second, while an overt inner NP can select a complement PP, e.g., *di matematica* (of maths), (11a), its phonologically empty counterpart cannot, (11b). This suggests that the inner NP cannot license a stranded partitive PP, in line with ellipsis properties.

**2** For reasons of space, we do not discuss here the full structure in (8), or the nature of its null functional elements, PRO and $PART^{PRO}$. We direct the reader to the original work for a wider discussion (Falco, Zamparelli 2019).

| | | | | | |
|---|---|---|---|---|---|
| (11) | a. | *Quali _ di questi problemi* | di matematica | hai | risolto? |
| | | Which of these problems | of maths | have (you) | solved? |
| | b. | **Quali problemi* | *di questi _* | di matematica | hai risolto? |
| | | Which problems | of these | of maths | have (you) solved? |

The two structures lead to different *fRM* predictions, if selection is one of its critical properties: only an overt outer NP, (9b), would enrich its selecting *wh*-item with a +N feature, while an empty outer NP would not (9a).

Cardinaletti and Giusti highlight a further distinction related to PPs specifying a lexical restriction in Italian: they distinguish true partitives, selected for by a D and introduced by the preposition *di* (of), (12a), from "adjunct" partitives (or semi-partitives, Hoeksema 1996), not selected by D and introduced by *tra/fra* (among), (12b).

| | | | | | |
|---|---|---|---|---|---|
| (12) | a. | Quali (problemi) | *di* questi (problemi) | hai | risolto? |
| | | Which (problems) | of these (problems) | have (you) | solved? |
| | b. | Quali (problemi) | *tra* questi (problemi) | hai | risolto? |
| | | Which (problems) | among these (problems) | have (you) | solved? |

This distinction is based on various pieces of evidence. First, "among" is infelicitous with mass partitives (13) and double genitives (14) (Falco, Zamparelli 2019).

(13) a. half *of* the people
b. *half *among* the people

(14) a. A problem *of* Hilbert's has just been solved.
b. *A problem *among* Hilbert's has just been solved.

Second, only adjunct partitives, (15b), are compatible with indefinite determiners like *dei*:

| | | | | |
|---|---|---|---|---|
| (15) | a. | *Ho risolto | dei problemi | *di* questi |
| | | (I) have solved | some problems | of these |
| | b. | Ho risolto | dei problemi | *tra* questi |
| | | (I) have solved | some problems | among these |

If true and adjunct partitives differ in terms of selection, this also has direct consequences for the characterization of *fRM* discussed in §2.1. Specifically, only true partitives selected by *wh*-phrases would bear a readable +N and modulate intervention (and acceptability) when moved from an argumental *wh*-island. The same is not expected

for adjunct partitives, instead. We move on to experimental work to verify this claim.

## 3 Experimental Evidence

Experimental works addressing the ameliorating effect of complex *wh*-items in *wh*-islands mainly focus on contrasts like (1), comparing *what* vs. *which N* questions. One of the few exceptions is Chesi et al. (2023)'s work, where (1) has been reduced to a more minimal comparison of two lexically restricted *wh*-items, *which N* and *what N*. The underlying reason was that a true minimal pair should only differ by one relevant feature; *which N*, however, differs from *what* both in terms of lexical restriction and in terms of the inherent D-linked interpretation it has, forcing a presupposition of existence. In the more minimal pair *which N* vs. *what N*, instead, both *wh*- bear a lexical restriction, while inherent D-linking only enriches the former (16):

| | | | | | |
|---|---|---|---|---|---|
| (16) | a. | *Which problem* | do you wonder | *who* | solved? |
| | | D-linked, +Q, +N | | +Q | |
| | b. | *What problem* | do you wonder | *who* | solved? |
| | | +Q, +N | | +Q | |

Despite suggestions that other factors might influence acceptability (e.g., animacy, Atkinson et al. 2016), here we focus on contrasts among Italian *wh*-items that directly address selection of a lexical restriction by the *wh-*, as discussed in §2. To set the stage, we start with a minimal contrast between morphologically similar *wh*- with a simple lexical restriction (§3.1); then, we move to critical contrasts including true (§3.2) and adjunct partitives (§3.3).

### 3.1 Different *wh*- Items: *Quanti* vs. *Quali*

The first contrast compares Italian *quanti N* (how many N) and *quali N* (which N). The two *wh*-items have similar morphosyntactic properties: both inflect for number and both may select a partitive structure. Crucially, however, they differ in their potential to trigger a D-linked interpretation: *quali N* naturally gives rise to a D-linked, presuppositional reading, while *quanti N* does not. Hence, if a difference in D-linking is sufficient to enrich the moved *wh*- in a significant way, better extractability is expected for *quali N* vs. *quanti N*. On the contrary, if (selection of a) lexical restriction is the critical factor, no substantial contrast is expected between the two *wh*-.

### 3.1.1 Materials and Procedures

We created a 2x2 design crossing *wh*-type (D-linked *quali* vs. non-D-linked *quanti*), and extraction type (no-intervention, i.e., extraction out of a *that*-clause, vs. intervention, i.e., extraction out of a *wh*-island). One of the 24 lexically-matched paradigms is reported in (17):

(17) a. Quali libri pensi che abbia letto? *[quali, no-interv.]*
Which books (do you) think that (he) has read?
b. Quanti libri pensi che abbia letto? *[quanti, no-interv.]*
How.many books (do you) think that (he) has read?
c. Quali libri ti chiedi chi abbia letto? *[quali, interv.]*
Which books (do you) to.you wonder who has read?
d. Quanti libri ti chiedi chi abbia letto? *[quanti, interv.]*
How.many books (do you) to.you wonder who has read?

Four lists were created, each including 24 stimuli (six per condition, one per paradigm). All lists included 48 fillers of varying degrees of acceptability. Each participant saw a total of 72 trials.

A web-based acceptability judgment study was prepared (JSPsych platform, De Leeuw 2015), to be performed on a smartphone, laptop or tablet. Each trial consisted of the visual presentation of one stimulus in isolation, screen-centered, and on a single line. Participants were required to read each stimulus and assign it an acceptability judgment on a 7-point Likert scale (7=fully acceptable, 1=fully unacceptable) by clicking on numerical values on their screen.

42 native speakers of Italian took part in the study (age range=21-60, M=31.77, SD=9.63; variety of Italian: northern=25, central=9, southern/insular=6).

### 3.1.2 Results and Analyses

2 participants were excluded since they did not meet our inclusion criteria (coherent judgments to clearly acceptable and clearly unacceptable fillers below 80%; 2.44% of our datapoints excluded).

Observation of the mean acceptability in the four conditions **[fig. 1]** clearly revealed a degrading effect of intervention, whereas the same did not emerge for *wh*-type: both *quali N* and *quanti N* received low acceptability in intervention (~2 out of 7) and higher acceptability in no-intervention (>6).

Acceptability was then modelled with mixed-effects ordinal logistic regressions (Christensen 2023; R Core Team 2023) using *wh*-type and extraction type as fixed factors, as well as random adjustments by-subject and by-item. A main effect of extraction type emerged, with intervention

conditions significantly decreasing acceptability ($Est_{interv.vs.no\text{-}interv}$=-3.896, $SE$=0.176, $z$=-22.096, $p$<.0001). On the contrary, no significant effect of *wh*-type was detected ($Est_{quali.vs.quanti}$=0.027, $SE$=0.069, $z$=0.392, $p$=.695).

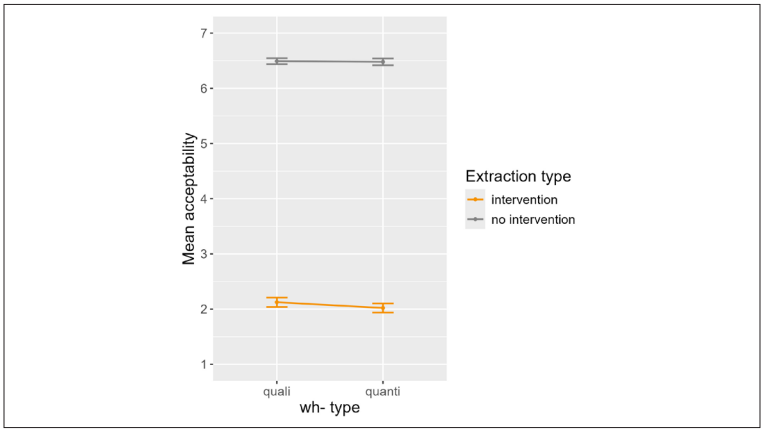



**Figure 1** Mean acceptability in the four conditions. Error bars represent standard error

## 3.2 The Presence of True Partitives: *Quali di Questi* vs. *Quanti di Questi*

### 3.2.1 Materials and Procedure

To test the possible relation between selection and partitivity, we added a two-level variable (*presence* vs. *absence* of a true partitive PP) to the 2×2 design in the previous study (18). If overt selection is the relevant feature, we expect overt partitives to mark the selection feature in D and induce similar ameliorations both with *quali* and *quanti*.

| | | | | | |
|---|---|---|---|---|---|
| (18) | a. | Quali {ø/di questi} libri<br>Which {ø/of these} books | pensi<br>(do you) think | che abbia letto?<br>that (he) has read? | *[quali, no-PP/PP, no-interv.]* |
| | b. | Quanti {ø/di questi} libri<br>How.many {ø/of these} books | pensi<br>(do you) think | che abbia letto?<br>that (he) has read? | [*quanti, no-PP/PP, no- interv.*] |
| | c. | Quali {ø/di questi} libri<br>Which {ø/of these} books | ti chiedi<br>(do you) to.you wonder | chi abbia letto?<br>who has read? | [*quali, no-PP/PP, interv.*] |
| | d. | Quanti {ø/di questi} libri<br>How.many {ø/of these} books | ti chiedi<br>(do you) to.you wonder | chi abbia letto?<br>who has read? | [quanti, *no-PP/PP, interv.*] |

Stimuli were grouped into eight counterbalanced lists, each including three stimuli per condition, and one per paradigm. All lists included the same fillers as in the previous study. Each participant saw a total of 72 stimuli.

The same procedure as the previous study was adopted.

49 native speakers of Italian took part in the study (age range=22-62, M=34.94, SD=13.13; variety of Italian: northern=32, central=15, southern/insular=2).

### 3.2.2 Results and Analyses

Inspection of judgements on the fillers resulted in the exclusion of one participant, who did not comply with the inclusion criteria outlined in the previous experiment (2.04% of our datapoints).

Looking at mean acceptability, extraction type was again associated with sharply asymmetrical ratings **[fig. 2]**, with intervention overall much less acceptable (<2.5) than no-intervention (>6). *Wh*-type, instead, only showed a slight advantage for the absence of partitive PP (~6.6) against its presence (~6.3), but limited to no-intervention conditions.

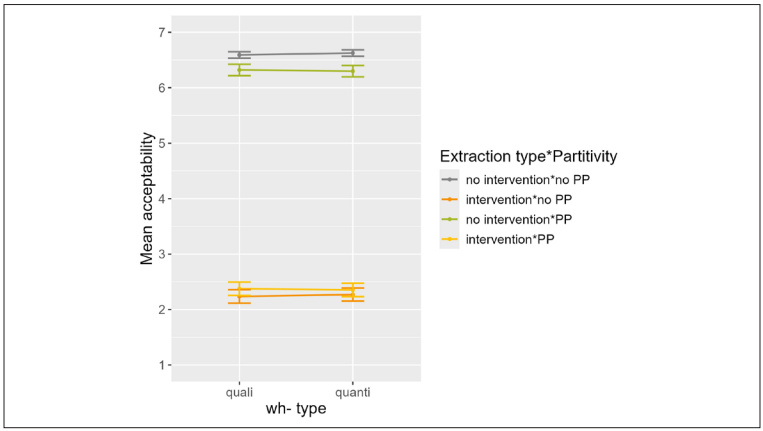



**Figure 2** Mean acceptability in the eight conditions. Error bars represent standard error

As for data modelling, the procedure was similar to the previous experiment. The most complete converging model included extraction type and partitivity as predictors, as well as random adjustments by subject and item. *Wh*-type was not included since it did not contribute any significant increase in model fit. A main effect of extraction type was obtained ($Est_{interv.vs.no.interv.}$=-3.900, $SE$=0.285, $z$=-13.685, $p$<.0001), again showing a negative effect of intervention on acceptability. A

main effect of partitivity emerged, as well ($Est_{part.vs.no\text{-}part.}$=-0.299, $SE$=0.082, $z$=-3.662, $p$=.0003), as well as the interaction between partitivity and extraction type ($Est$=0.410, $SE$=0.115, $z$=3.662, $p$=.0015). *Post-hoc* pairwise comparisons (*emmeans*, Lenth 2023) revealed that this was driven by the no-intervention condition: focusing on the two contrasts with similar intervention values (no-intervention.no-PP vs. no-intervention.PP; intervention.no-PP vs. intervention.PP; Table 1), we observe that manipulations on the partitive significantly affect acceptability only in the no-intervention condition, when the *wh-* is moved from a *that*-clause. By contrast, no significant contrast emerges within intervention conditions, where the effect of partitivity seems to be bleached by the island violation.

**Table 1** Summary of post-hoc pairwise comparisons among conditions via emmeans. Stars mark statistical significance

| ***contrasts*** | ***estimate*** | ***SE*** | ***z-value*** | ***p-value*** |
|---|---|---|---|---|
| no-intervention.no-PP vs. intervention.no-PP | -8.361 | 0.598 | -13.982 | <.0001* |
| no-intervention.no-PP vs. no-intervention.PP | -0.851 | 0.213 | -3.997 | .0004* |
| no-intervention.no-PP vs. intervention.PP | -8.090 | 0.594 | -13.610 | <.0001* |
| intervention.no-PP vs. no-intervention.PP | 7.510 | 0.576 | 13.033 | <.0001* |
| intervention.no-PP vs. intervention.PP | 0.271 | 0.162 | 1.669 | .3401 |
| no-intervention.PP vs. intervention.PP | -7.239 | 0.573 | -12.638 | <.0001* |

## 3.3 True Partitives and Adjunct Partitives: *Quali di Questi* vs. *Quali tra Questi*

### 3.3.1 Materials and Procedures

In the final experiment, we focused on *quali* with a 2×3 design including extraction type (intervention vs. no-intervention) and partitivity, which was refined into three levels inspired by Cardinaletti and Giusti (1992; 2006; 2017): bare N vs. partitive vs. adjunct (19):

| | | | | | |
|---|---|---|---|---|---|
| (19) | a. | Quali libri | pensi | che abbia letto? | *[bare N,* |
| | | Which books | (do you) think | that (he) has read? | *no- interv.]* |
| | b. | Quali di questi libri | pensi | che abbia letto? | *[partitive,* |
| | | Which of these books | (do you) think | that (he) has read? | *no- interv.]* |
| | c. | Quali tra questi libri | pensi | che abbia letto? | *[adjunct,* |
| | | Which among these books | (do you) think | that (he) has read? | *no- interv.]* |
| | d. | Quali libri | ti chiedi | chi abbia letto? | *[bare N,* |
| | | Which books | (do you) to.you wonder | who has read? | *interv.]* |
| | e. | Quali di questi libri | ti chiedi | chi abbia letto? | *[partitive,* |
| | | Which of these books | (do you) to.you wonder | who has read? | *interv.]* |
| | f. | Quali tra questi libri | ti chiedi | chi abbia letto? | *[adjunct,* |
| | | Which among these books | (do you) to.you wonder | who has read? | *interv.]* |

If selection of a lexical restriction induces a measurable effect, we expect a difference between true and adjunct partitives, since the latter is necessarily unselected by the partitive head. Adjunct partitives, then, should induce milder ameliorations than true (selected) partitives.

We created 24 lexically-matched paradigms. The stimuli were grouped into six lists, each including four stimuli per condition and one per paradigm. All lists included the same fillers as in the previous studies. Each participant saw 72 trials.

The same procedure as the previous studies was adopted.

44 native speakers of Italian took part in the study (age range=19-61, M=33.16, SD=12.54; variety of Italian: northern=35, central=4, southern/insular=5). One additional participant completed the experiment but was excluded due to age not matching our desired range.

### 3.3.2 Results and Analyses

As in the two studies above, we performed filler analysis as a premise for further exploration of acceptability. One experimental subject was excluded due to inconsistent responses (2.78% of our data).

Exploration of mean acceptability ratings confirmed a sharp difference between the two extraction types: intervention received very low judgments (~2-2.5), while no-intervention received full acceptability (>6) **[fig. 3]**.

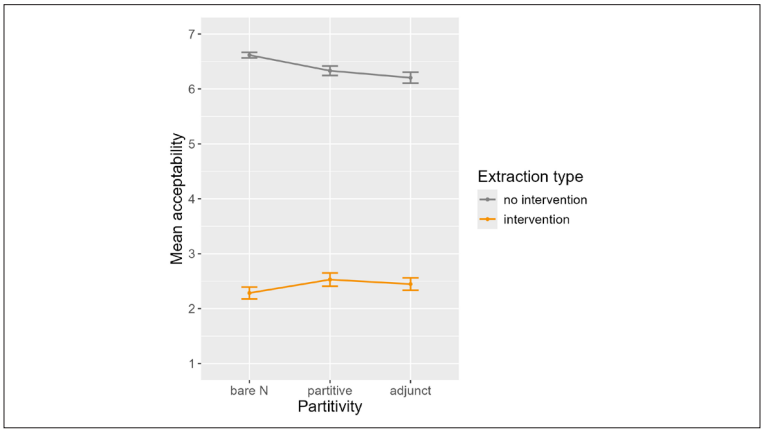



**Figure 3** Mean acceptability in the six conditions. Error bars represent standard error

Finally, mixed-effects ordinal logistic regressions were run over acceptability. The most complete converging model had extraction type, partitivity, and their interaction as fixed effects, and random intercepts for subjects and items. A main effect of extraction type was detected ($Est_{interv.vs.no.interv}$=-3.009, $SE$=0.121, $z$=-24.798, $p$<.0001), mirroring the previous studies. Moreover, an effect of partitivity emerged, driven by bare N ($Est_{bare.N.vs.grand.mean}$=0.186, $SE$=0.092, $z$=2.016, $p$=.044), which significantly interacted with intervention (*bare-N:interv.*: $Est$=-0.352, $SE$=0.093, $z$=-3.801, $p$=.0001). *Post-hoc* pairwise comparisons among conditions clarified that partitivity contrasts only reach significance in the no-intervention conditions, i.e., when the *wh*- undergoes licit movement from a *that*-clause **[tab. 2]**. Specifically, *wh*-items with a bare N extract significantly better than both true and adjunct partitives, while no significant contrast between the latter two emerges.

**Table 2** Summary of post-hoc pairwise comparisons among selected conditions via emmeans. We report contrasts mismatching in partitivity values only. Stars mark statistical significance

| ***contrasts*** | ***estimate*** | ***SE*** | ***z-value*** | ***p-value*** |
|---|---|---|---|---|
| no-interv.bare N vs. no-interv.partitive | -0.707 | 0.245 | -2.887 | .0450* |
| no-interv.bare N vs. no-interv.adjunct | -0.907 | 0.244 | -3.711 | .0028* |
| interv.bare N vs. interv.partitive | 0.311 | 0.200 | 1.551 | .6312 |
| interv.bare vs. interv.adjunct | 0.816 | 0.202 | 0.920 | .9416 |
| no-interv.partitive vs. no-interv.adjunct | -0.200 | 0.231 | -0.869 | .9540 |
| interv.partitive vs. interv.adjunct | -0.125 | 0.202 | -0.620 | .9896 |

## 4 Discussion

In sum, none of the contrasts tested resulted in selective ameliorations in the intervention condition, where selectional properties on the lexical restriction were expected to interact with *fRM* in interesting ways. Overall, the effects of D-linking in Italian superiority configurations appear rather modest, despite the alleged advantage with respect to prototypical "*what … who* $_{\text{–what}}$" configurations, commonly assumed in the literature. *Quali* (D-linked *wh*-item) and *quanti* (an allegedly non-D-linked *wh*-item) produce comparable effects (§3.1). The overt presence of the PP partitive, compared with its absence on both *quali* and *quanti* does not lead to significant amelioration in the extraction condition, even though it slightly improves acceptability in the non-intervention conditions (§3.2). Lastly, "of" vs. "among" partitives do not differ significantly, but a mild effect is observed between bare lexical restriction and either partitive under the no-intervention condition (§3.3).

Crucially, Anna's (and Giuliana's) intuition that *of*-partitives only qualify as "true partitives", resulting in PP selection by the outer NP under the *wh*-item (as opposed to *among*-partitives, which behave as adjuncts) allows us to precisely assess the hypothesis that overt selection may be at issue in determining whether a *wh*-determiner qualifies as a featurally richer item, able to escape locality constraints. So far, we can conclude that either realization of the outer NP (in Falco and Zamparelli's terminology), as a phonologically empty PRO or as a full-fledged N, contributes in comparable ways to determining intervention, and neither suffices to save weak island extraction.

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