

# ELLIPSIS IN ITALIAN SPLIT QUESTIONS

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**Abstract:** *The goal of this paper is to investigate the syntax of split questions in Italian. Split questions are interrogative structures formed by two parts: a wh-part which corresponds to a standard wh-question and a tag which constitutes a possible answer for that wh-question. Building on previous work by Arregi (2010) I propose that these structures are actually formed by two distinct interrogatives, one of which undergoes ellipsis. This proposal has implications which go beyond the domain of split questions. First, it contributes to a better understanding of ellipsis phenomena. Second, it allows us to deepen our knowledge of the interrogative system in different varieties. Third, it enables us to reconsider some aspects of the interaction between interrogative structures and focus fronting.*

**Keywords:** *split questions, ellipsis, focus fronting, fragments, question-answer congruence*

## 1. Introduction

Descriptively, split questions are questions introduced by a wh-phrase with a tag in final position, separated from the preceding material by an intonation break. The use of split questions is attested in colloquial varieties of several languages, among which Italian, Spanish, Catalan, Basque, English and German<sup>1</sup>. Examples of split questions in Italian are given in (1):

- (1) a. Chi è venuto, Gianni?  
      ‘Who came, Gianni?’  
      b. Cosa avete mangiato, la pizza?  
          ‘What did you eat, pizza?’  
      c. Quale hai scelto, quello blu?  
          ‘Which one did you choose, the blue one?’  
      d. Quanto pesa il tuo pacco, un chilo?  
          ‘How much does your package weigh, one kilo?’  
      e. Dove vivono, a Roma?  
          ‘Where do they live, in Rome?’  
      f. Quando tornate, sabato?  
          ‘When will you come back, on Saturday?’  
      g. Come siete arrivati, in treno?

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<sup>1</sup>Previous work on these structures includes Camacho (2002) and Arregi (2010). Lorenzo (1994), Contreras and Roca (2007) and Lopez-Cortina (2009) deal with the variant construction illustrated in examples (2) for Spanish and Catalan varieties.

- ‘How did you arrive, by train?’  
 h. Perché l’hai fatto, per divertimento?  
 ‘Why did you do that, for fun?’

Although in all the languages in which this construction is used, any *wh*-word can seemingly introduce a split question, there are varieties in which split questions are introduced by *what* or its equivalent regardless of what the question is about. For instance, in the following examples, the *wh*-word is always realized as *what* or its equivalent but the intended meaning is that of *who*, *where*, *when*, *how old* respectively.

- (2) a. Qué conoces, a María?  
 what (you) know.2.SG. to M.  
 ‘Who do you know, María?’ (Asturian Spanish, López-Cortina 2009, 14c)
- b. Què anirem demà, a la platja?  
 what (we) go.FUT.1.PL. tomorrow to the beach  
 ‘Where are we going tomorrow, to the beach?’  
 (Catalan, Contreras and Roca 2007, 3)
- c. Icché parti, domani?  
 what (you) leave.2.SG. tomorrow  
 ‘When are you leaving, tomorrow?’ (Fiorentino)
- d. What are you, twelve? (English, from *Closer* (2004) by M. Nichols)

The goal of this article is twofold. First, I will discuss the basic properties of split questions in Italian. Building on Arregi’s (2010) proposal, I will argue that split questions are formed by two clauses, a *wh*-question and a non *wh*-question which undergoes ellipsis. I will also discuss the properties of the variant construction exemplified in (2c) with respect to the Fiorentino dialect. Second, I will discuss the main aspects of the semantics and pragmatics of split questions in the framework of a cooperative model of conversation (Roberts 1996 and related work).

## 2. Connectivity effects

The *wh*-phrase and the tag of a split question show connectivity effects. In all examples reported in (1) above, the tag is intuitively a correlate of the *wh*-phrase, in the sense that they are interpreted as having the same thematic role and grammatical function. The following examples illustrate the point. When the question is introduced by *chi*, ‘who’, the tag cannot be, say, a temporal adjunct. Conversely, a question introduced by *quando*, ‘when’, requires a temporal adjunct as tag.

- (3) a. Chi è partito, Gianni/\*ieri?  
 who is left.M.SG. G./yesterday  
 b. Quando è partito, \*Gianni/ieri?  
 when is left.M.SG. G./yesterday

Furthermore, when the *wh*-phrase is a selected argument, the tag must respect the categorial and lexico-semantic requirements imposed by the selecting predicate as well. This is shown in the following examples. The verb *dire*, ‘say, tell’, selects either a DP or a CP. As (4a) shows, in split questions where it is the verbal argument to be questioned, the tag can be either a DP or a CP, as expected. Example (4b) shows that when the verb selects an inanimate argument, both the *wh*-word and the tag must be non animate. (4c) shows that when the *wh*-phrase is selected by a collective predicate, the matching tag can be a morphologically singular DP only if it denotes a group. Finally, (4d) shows that idiomatic readings, in this case *parlare al vento*, lit. to speak to the wind, ‘to waste one’s breath’ are preserved when part of the idiomatic chunk occurs in the tag.

- (4) a. Cosa ti ha detto Gianni, una bugia/che torna domani?  
 what to-you.CL. has told G. a lie / that (he) comes tomorrow  
 ‘What did Gianni tell you, a lie /that he comes back tomorrow?’  
 b. Cosa/\*Chi fuma Gianni, la pipa?  
 what/who smokes G. the pipe  
 ‘What/Who does Gianni smoke, the pipe?’  
 c. Chi si riunirà alle due, la commissione/\*il professore ?  
 who itself.CL gather.FUT.3.SG. at two the committee / the professor  
 ‘Who will gather at two, the committee/\*the professor?’  
 d. A chi parlo, al vento?  
 to who (I) speak.1.SG. to the wind

The *wh*-phrase and the tag must also have the same morphological case when they are DPs (5 a-c). For instance, in (5a) the *wh*-word is the object of *premiare*, ‘award’; consequently, the pronoun in the tag must occur in the accusative form. (5b-c) illustrate the same point with examples from Spanish and Basque respectively.

- (5) a. Chi hanno premiato, me/\*io?  
 who (they) have.3.PL. awarded, me/I  
 b. A quién vio Juan en el parque, a mí/\*yo?  
 to who saw.3.SG. J. in the park, me/I  
 ‘Who did Juan see in the park, me?’ (Spanish, Arregi 2010, 79b)  
 c. Se arbola ipiñi ban Jonek, aritze?  
 what tree.ABS planted had John.ERG oak.ABS  
 ‘What tree did John plant, an oak?’ (Basque, Arregi 2010, 22)

Finally, when the *wh*-phrase is embedded under a preposition, the tag must be headed by the same preposition.

- (6) a. A chi l’hai detto, \*(a) Maria?  
 to who it-CL have.2.SG. told to M.  
 ‘To whom did you tell it, to Maria?’  
 b. Di chi hai paura, \*(di) Giulio?  
 of who (you) have.2.SG. fear of G.  
 ‘Who are you afraid of, Giulio?’

We will see below that the situation is different in English, a language which allows P-stranding.

### 3. Ellipsis in split questions

In his analysis of split questions in Spanish, Arregi (2010) proposes that these structures are formed by two separate questions: a wh-question (dubbed ‘the wh-part’) and a non wh-question (the source of the tag) which undergoes ellipsis<sup>2</sup>. For instance, under this analysis, (7a) below is constituted by the wh-question *Chi è venuto?* ‘Who came?’ and the polar question *È venuto Gianni?* ‘Did Gianni come?’ as represented in (7b).

- (7) a. *Chi è venuto, Gianni?*  
       ‘Who came, G.?’  
       b. [*Chi è venuto?*] [*è venuto Gianni*]

In the non wh-question (here a polar question but examples will be given below where the tag comes from an alternative question) the XP *Gianni* is Focus-fronted and the remnant is elided, as shown in (8)<sup>3</sup>:

- (8) *Gianni è venuto* <*Gianni*>

Arregi (2010) argues that the main reason to adopt an ellipsis account of split questions comes from the parallel behaviour of tags and other allegedly elliptical structures (in particular fragment answers) with respect to the presence, or absence, of connectivity effects<sup>4</sup>. It is well known that there are connectivity effects between the wh-phrase in a question and the corresponding XP in its full (propositional) answers. Generally speaking,

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<sup>2</sup>Arregi adopts Merchant (2001)’s analysis of ellipsis, according to which non pronunciation is licensed by a semantic condition, identified as e-GIVENESS. More specifically, Merchant argues that ellipsis is triggered by the feature E, located on a head H, which instructs the PF component not to pronounce the complement of H. Semantically, E denotes a partial identity function over propositions which is defined only if the proposition it combines with is e-GIVEN. In turn, e-GIVENness is defined as follows.

- i. An expression E is e-GIVEN iff it has a salient antecedent A and, modulo  $\exists$ -type shifting,  
       (a) A entails F-clo (E), and  
       (b) E entails F-clo (A)

where  $\exists$ -type shifting raises expressions to type t by existentially binding unfilled arguments and Focus-closure is the result of replacing Focus-marked parts of an expression with existentially bound variables of the appropriate type.

<sup>3</sup>In all the examples discussed so far the tag contains only the XP matching the wh-phrase in thematic role, grammatical function and case. Note however that the tag can contain other material in addition to the correlate of the wh-phrase (*Chi arriverà Gianni domani?*, ‘Who will come, G. tomorrow?’) which should involve backward ellipsis. I leave a more systematic investigation of examples of this kind for further research.

<sup>4</sup>For ellipsis-based accounts of fragment answers, see Brunetti (2004) and Merchant (2004). We will see below that the structural analogy between fragments and tags defended here has a semantic-pragmatic correlate: congruence to a question under discussion in the sense of Roberts (2012).

given a pair of wh-question/answer, the wh-phrase and the corresponding XP in the answer must bear the same thematic role and, when DPs, also the same morphological case. Crucially, the same happens if one replaces the full answer with a fragment. Merchant (2004) takes this to indicate the presence of silent structure in fragment answers; in (9), for example, the fact that the pronoun in the fragment answer requires accusative case, can be naturally interpreted as indicating that it is the direct object of *vedere* ‘see’ in the elided TP.

- (9) Q. Chi hanno visto?  
 who (they) have.3.PL. seen?  
 A. Me/\*Io.

The same line of reasoning applies straightforwardly to split questions. Consider the following example (10):

- (10) Chi hanno visto, me/\*io?  
 who (they) have.3.PL. seen, me/\*I?

Recall that under the present analysis (10) is formed by *Chi hanno visto? Hanno visto me?* (‘Who did they see? Did they see me?’). The fact that the pronominal DP in the tag bears accusative suggests that it has been generated as the object of *vedere* ‘to see’ in the elided part.

Tags and fragments pattern in a parallel way for the purposes of binding theory as well. In (11a) the tag contains a reflexive which must be interpreted as bound by *Luca*. Conversely, in (11b), the pronoun in the tag cannot be interpreted as bound by *Luca*. Finally, in (11c) the reading in which the null subject of the matrix question is coindexed with the DP in the tag is impossible.

- (11) a. Con chi *pro*<sub>i</sub> ha detto che Luca<sub>j</sub> stava parlando, con se stesso<sub>j/\*i</sub>?  
 with who (he<sub>i</sub>) has said that Luca<sub>j</sub> was.3.SG. speaking with himself<sub>j/\*i</sub>?  
 b. Con chi *pro*<sub>i</sub> ha detto che Luca<sub>j</sub> stava parlando, con lui<sub>i/\*j</sub>?  
 with who (he<sub>i</sub>) has said that Luca<sub>j</sub> was.3.SG. speaking with him<sub>i/\*j</sub>?  
 c. Con chi *pro*<sub>j/\*i</sub> ha detto che stavo parlando, con Luca<sub>i</sub>?  
 with who (he<sub>j/\*i</sub>) has told that (I) was.1.SG. speaking with Luca<sub>i</sub>

With fragments we observe an analogous pattern. For instance, the reflexive in the fragment (12b), must be bound by *Luca* in the question, as shown in (12a-b) :

- (12) a. Con chi *pro*<sub>i</sub> ha detto che Luca<sub>j</sub> stava parlando?  
 with who (he<sub>i</sub>) has said that Luca<sub>j</sub> was.3.SG. speaking  
 b. Con se stesso<sub>j/\*i</sub>  
 with himself<sub>j/\*i</sub>

Analogous considerations hold w.r.t. Condition B (ex. (13a-b), parallel to (11b)) and Condition C (ex. (14a-b), parallel to (11c)):

- (13) a. Con chi *pro*<sub>i</sub> ha detto che Luca<sub>j</sub> stava parlando?  
 with who (he<sub>i</sub>) has said that Luca<sub>j</sub> was.3.SG. speaking

- b. Con lui<sub>i</sub>/\*<sub>j</sub>  
with him<sub>i</sub>/\*<sub>j</sub>
- (14) a. Con chi *pro*<sub>i</sub> ha detto che stavo parlando?  
with who (he<sub>i</sub>) has said that (I) was.1.SG. speaking
- b. Con Luca<sub>i</sub>  
with Luca<sub>i</sub>

Connectivity can also be observed with respect to scope phenomena. For instance, in (15) the possessive in the tag can be interpreted as bound by the quantificational subject in *ogni studente*.

- (15) Cosa discuterà [ogni studente]<sub>j</sub>, la sua<sub>j</sub> relazione?  
what discuss.FUT.3.SG. every student the his report  
'What will [every student]<sub>i</sub> discuss, his<sub>j</sub> report?'

The same happens in question-fragment pairs (16a-b):

- (16) a. Cosa discuterà [ogni studente]<sub>j</sub>?  
'What will [every student]<sub>i</sub> discuss?'
- b. La sua<sub>j</sub> relazione.  
'His<sub>j</sub> report'.

An alternative possibility to account for these data would be to assume that the tag belongs in the same sentence of the c-commanding wh-phrase, as proposed in Camacho (2002). In a nutshell, Camacho proposes that the wh-phrase and the tag form a constituent at an initial step of the derivation, which should explain why they share the same thematic role and case. The author proposes two alternative technical implementations: the tag is adjunct to the wh-phrase, or the wh-phrase and the tag form a small-clause with the latter being in the Spec of some silent functional head whose complement is the wh-phrase. Be that as it may, at a later step of the derivation, the wh-phrase moves to the left periphery of the clause stranding the tag. Under such hypothesis, in (11a) above the reflexive in the tag could be bound by the c-commanding subject of the embedded clause. On the other hand, the null subject would be too far away to bind it. Condition B would rule out coindexing between Luca and the pronoun in the tag and Condition C coindexing between the DP in the tag and any other referential expression in (11b) and (11c) respectively. In (15a) the bound reading would be possible because the QP *ogni studente* c-commands the pronoun. Although appealing, this line of reasoning would fail to explain why in some cases connectivity effects are not found. Consider (17):

- (17) Chi ha corretto l'articolo di Luca<sub>i</sub>, lui<sub>i</sub>?  
who has corrected the article of Luca<sub>i</sub>, he<sub>i</sub>?

If the analysis developed so far is correct, the tag derives from *Lui ha corretto l'articolo di Luca?*, lit. 'He has corrected the article of John', where Condition C should forbid coindexing between the subject pronoun *lui* and *Luca*. However, it is well known that in elliptical contexts a referential expression in the elided material can be c-commanded by a coreferential pronoun without inducing violation of Condition C (so called 'Vehicle

Change', after Fiengo and May 1994) so that lack of Condition C effects in (17) would come with no surprise. Crucially, Vehicle Change is found in fragment answers as well:

- (18) a. Chi ha corretto l'articolo di Luca<sub>i</sub>?  
           who has corrected the article of Luca<sub>i</sub>  
       b. Lui<sub>i</sub>

On the other hand, in a monoclausal account, the DP *l'articolo di Luca* should be moved past the postverbal subject to derive the VOS order and there would be no obvious way to prevent *lui* from c-commanding inside the lower copy of the object DP, inducing a violation of Condition C. One could object that, strictly speaking, if the wh-phrase and the tag form a constituent prior to movement, the pronominal subject in (17) does not c-command the lower copy of the object, because it is contained in a larger constituent. However, the possibility of getting the bound reading in examples like *Chi discuterà il suo<sub>i</sub> articolo, ogni studente<sub>i</sub>?* ('Who will discuss each paper, each student?'), shows that either the lower copy of the wh-phrase or the tag should be able to c-command the lower copy of the object.

#### 4. Word order and Agreement mismatches

We have already seen that the wh-phrase and the tag must bear the same morphological case. For example, in (19) both *chi* and *Leonardo* must have accusative case.

- (19) a. Chi hai invitato, Leonardo?  
           who (you) have.2.SG. invited L.  
           'Who did you invited, Leonardo?'

In our analysis the fact the *chi* and *Leonardo* have accusative is ensured by the fact that both are generated as internal argument of a transitive verb, respectively *invitare* in the wh-part and *invitare* in the elided TP (*Leonardo*(*pro*)*hai invitato* <*Leonardo*>). Now consider the following examples (the intended reading of (20a) is the one with *Matteo* as subject and *chi/Leonardo* as object):

- (20) a. Chi ha invitato Matteo, Leonardo?  
           who has invited M., L.?  
       b. Cosa ha portato Sara, la cena?  
           what has brought S., the dinner?

If *Matteo* and *Leonardo*, and *Sara* and *the dinner*, were generated in the same clause, the grammaticality of examples in (20) would be problematic given that in Italian a postverbal subject cannot generally occur between a verb and a direct object<sup>5</sup>:

<sup>5</sup> Belletti (2004) proposes that VSO is ruled out by the intervention of the subject DP between the object DP and the (accusative) case checking head, located in some upper position at the edge of the vP. Notice that VSO is possible when the subject is a personal pronoun as in *Ho chiamato io la polizia*, lit. 'have called I the police'. This leads Belletti to assume that pronominal subjects can move to a position higher than the Accusative checking position, avoiding intervention in case-checking

- (21) a. \*Ha invitato Matteo Leonardo.  
           has invited M.    L.  
       b. \*Ha portato Sara la cena.  
           has brought S. the dinner

A possibility to make the sentences in (21) acceptable, maintaining VSO, would be to (right) dislocate the object, as in (22):

- (22) a. L'        ha invitato Matteo, Leonardo.  
           him.CL has invited M,    L.  
       b. L'        ha portata Sara, la cena.  
           It.CL has brought S.,   the dinner

Note however that this possibility is not open to Split questions, as the ungrammaticality of (23a) - in the intended reading - and (23b) shows. This comes with no surprise under the present analysis: in fact neither the *wh*-phrase nor, more relevantly, the tag can be clitic-resumed, which is expected if they undergo A-bar movement (*wh*-movement in the *wh*-question and Focus movement in the polar question).

- (23) a. \*Chi l'        ha invitato Matteo, Leonardo?  
           who him.CL. has invited M.    L.  
       b. \*Cosa l'        ha portata Sara, la cena?  
           what it.CL. has brought S.    the dinner

On the other hand, if *Matteo* and *Leonardo* (as well as *Sara* and *la cena*) belong in separate sentences, no word order problems arise and the grammaticality of (20) is readily explained: the *wh*-part is a *wh*-question with the subject in final position, while the DP interpreted as the object is Focus-fronted in the polar question.

Let us now consider a potential problem for our analysis. As mentioned above, Split questions can be formed by a *wh*-question and an alternative question:

- (24) Chi è venuto, Gianni o Luca?  
       'Who came, Gianni or Luca?'

I assume that the structure of the tag in (25) involves the coordination of two sentences; in each of the disjuncts the correlate of the *wh*-phrase in the *wh*-question is focus-fronted and the TP undergoes ellipsis. This is rendered in (25).

- (25) [Chi è venuto?] [Gianni ~~è venuto~~ <Gianni>?] o [Luca ~~è venuto~~ <Luca>?]

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relations. This possibility receives supporting evidence from the fact that pronominal subjects precedes adverbs low in the Cinque's hierarchy while lexical subject must follow them (I refer the reader to Belletti's work for relevant discussion). Notice that VSO is also (marginally) possible in the peculiar case of *marginalization* (Cinque and Antinucci 1977 and related work) which however is only possible if the postverbal subject is interpreted contrastively (*Ha invitato MATTEO Leonardo*, 'It was Matteo that invited Leonardo (not someone else)'), which is not the case in the construction discussed here.

Note that mismatches in number and person between the verb in the antecedent (the *wh*-part) and the verb in the elided TP are possible, as shown in (26a-b).

- (26) a. Chi è stato licenziato, Gianni ~~è stato licenziato~~ <Gianni> o i suoi colleghi ~~sono stati licenziati~~ <i suoi colleghi>?  
 ‘Who has been fired, Gianni or his colleagues?’  
 b. Chi deve parlare, Giulia ~~deve parlare~~ o io ~~devo parlare~~?  
 ‘Who has to speak, Giulia or I?’

However, this is not a problem for our analysis. In fact there are other contexts where TP ellipsis is independently known not to require strict identity between the antecedent TP and the elliptical TP. This is illustrated below with Comparative Ellipsis (Kennedy and Merchant 2000 and related work), which allows mismatches between the  $\phi$ -features of the overt adjective and those of the elided one (ex. 27a) and “edge coordination” (Bianchi and Zamparelli 2004), that is pseudo-coordination of two DPs by means of a pair of correlative elements, such as a negative particle and an adversative conjunction (27b).

- (27) a. Gianni è più alto di Giulia ~~è x-alta~~.  
 ‘Gianni is taller than Giulia’  
 b. Non è venuto solo Gianni, ma ~~sono venuti~~ anche i suoi amici.  
 ‘Not only Gianni came but also his friends.’

This suggests that we can safely extend the ellipsis-based account of split questions to examples of this kind as well.

### 5. *The tag moves*

In the analysis developed so far the tag undergoes left peripheral movement. Capitalizing again on the parallelism between tags and fragments, Arregi (2010) shows that there are some empirical reasons to suggest that this is correct. In this section I will shortly review Arregi’s arguments and show that they can be applied to Italian as well. First, in languages which do not allow preposition stranding like Italian an XP embedded in a PP must pied-pipe the preposition when fronted. Consequently, if the *wh*-phrase introducing a split question is embedded in a PP, we expect the matching tag to contain the preposition as well. On the other hand, in a language like English which allows *p*-stranding, the tag should not need to contain the preposition, which could be stranded in the elided TP. Both predictions are borne out:

- (28) a. Con chi ha parlato Gianni, \*(con) Chiara? (Italian)  
 with who has spoken Gianni with Chiara  
 b. Who did you talk with yesterday, (with) Dave? (English)

Cinque (1990, 50-51) observes that in Italian some prepositions like *vicino*, *lontano*, *accanto*, *addosso* take a PP complement which can be extracted without pied-piping the preposition (29a), something which is impossible with DP complements<sup>6</sup>. Consequently,

<sup>6</sup> Cinque attributes to L. Rizzi the observation that PP-extraction can only take place from PP subcategorized by a selecting predicate.

the fact that these prepositions don't need to occur in the tag of a split question comes with no surprise. In (29b), the PP complement of *accanto* can either move alone stranding *accanto* in the elided IP, or can pied-pipe it.

- (29) a. Chiara a cui Gianni è seduto accanto ...  
       C. to whom G. is sat.M.SG. next  
       b. Accanto a chi è seduto Gianni, (accanto) a Chiara?  
           next to who is sat.M.SG. G. next to C.

Another argument in favour of movement of the tag is provided by the distribution of strong and weak pronouns. Given that only the former can be Focus-fronted (Cardinaletti and Starke (1999) among the others), we expect that only strong pronouns can occur in the tag of a split question. Again, this prediction is borne out.

- (30) Chi vogliono al telefono te/\*ti?  
       who (they) want.3.PL. at the phone you

As well known, the same happens in fragment answers:

- (31) Q. Chi vogliono al telefono?  
       A. Te/\*Ti.

Another argument in favour of displacement of fragments is the distribution of the null declarative complementizer CHE (mnemonic for 'silent *che*'). CHE is not available in displaced CPs, which must be headed by overt *che* (32b) even if CHE/complementizer deletion is allowed when the CP stays in situ (32a). Crucially, when a that-clause occurs as the tag of a split questions, CHE is not admitted either (32c).

- (32) a. Tutti pensavano (che) avrebbe cambiato idea.  
       Everyone thought.3.PL (that) (she) have.COND.3.SG. changed idea  
       b. \*(Che) avrebbe cambiato idea lo pensavano tutti.  
           that (she) have.COND.3.SG. changed idea it.CL. thought.3.PL. everyone  
       c. Cosa pensavano, \*(che) avrebbe cambiato idea?  
           what (they) thought.3.PL. that (she) had.COND.3.SING. changed idea

Unsurprisingly, CHE cannot head CPs which are fragment answers, on a pair with English THAT (Merchant 2008):

- (33) Q. Cosa pensavano?  
       what (they) thought.3.PL.  
       A. \*(Che) avrebbe cambiato idea.  
           that (she) had.COND.3.SING. changed idea

Let's take stock. The parallel behaviour of fragment answers and the tags of split questions with respect to several tests suggests that they should be analyzed in a similar way. Furthermore, given that TP-ellipsis seems to be independently needed to account for other structures (e.g. sluicing, fragments), an ellipsis analysis for split questions seems to be preferred on the theoretical side, all other things being equal. We have also seen that there

are also empirical reasons to prefer an ellipsis approach to Split questions (absence of connectivity effects, word order, mismatches in  $\phi$ -features between material in the *wh*-part and its correlate in the elided non *wh*-part). Finally, we have seen that there is some evidence that the tag is moved to a left peripheral position.

### 6. *Split questions in Fiorentino*

Recall that Fiorentino is among those varieties which avail themselves of a special type of split questions in which the question is introduced by the counterpart of *what*, independently of the content of the tag. The examples in (34) make this clear. As these examples show, *(ic)ché*<sup>7</sup> ('what') can replace all *wh*-words<sup>8</sup>.

- (34) a. *Icché è arrivato, Gianni?*  
 what is arrived.M.SG. G.  
 'Who arrived, Gianni?'  
 b. *Icché inizia oggi, il campionato?*  
 what starts today the championship  
 'What starts today, the championship?'  
 c. *Icché vuoi, quello blu?*  
 what (you) want.2.SG. that blue  
 'Which one do you want, the blue one?'  
 d. *Icché vive, a Firenze?*  
 what (she) lives in Florence  
 'Where does (s)he live, in Florence?'  
 e. *Icché è partito, ieri?*  
 what is left.M.SG. yesterday  
 When did he leave, yesterday?  
 f. *Icché andate, in treno?*  
 What (you) go.2.PL. by train  
 How are you going, by train?  
 g. *Icché costa, solo venti euro?*  
 What costs only twenty euros  
 How much does it cost, only twenty euros?  
 h. *Icché è stato licenziato, perché era sempre in ritardo?*

<sup>7</sup> All speakers I have consulted accept both *icché* and the reduced form *che*. Notice that Fiorentino realizes as *che* also the interrogative complementizer which introduces matrix polar question (and which is in turn homophonous to the declarative complementizer). I will show below that the interrogative pronoun (which I will indicate as *ic(ché)*) and the complementizer cannot be one and the same item. In the examples I have decided to always use *icché* (instead of *ic(ché)*) to improve readability.

<sup>8</sup> Apart from adjectival *what* and *which* (respectively *che* and *quale*). Notice that *icché* can only be used as a pronoun in standard *wh*-questions as well (*\*Icché libro stai leggendo* 'What book are you reading?'). Note further that some speakers, included myself, require or strongly prefer that when *icché* is meant to replace a PP, the governing P must be unpronounced (*?\*A icché hai parlato, a Gianni?* 'To whom did you speak to, to Gianni?'). However there seems to be some variation and a more systematic investigation is needed.

What (he) is been fired.M.SG. because (he) was always late  
 ‘Why was he fired, because he was always late?’

Dropping the tag induces agrammaticality in all the previous examples, apart from those cases where *icché* has its canonical meaning of *what/which one*. In other words, it is the very presence of the tag to allow this “special” interpretation of the *wh*-word. In order to account for this fact, I tentatively take *icché* to be lexically ambiguous between *icché*<sub>1</sub>, i.e. the Tuscan counterpart of *what*, which should always be followed by a silent head THING (à la Kayne (2005)), and *icché*<sub>2</sub> which could instead be compatible with more silent heads (PLACE, TIME, etc.)<sup>9</sup>. The structure of 34(d) above would thus be something like *Icché TIME è partito, ieri?*, lit. What TIME (he) is left, yesterday?, with the functional head specifying the range of the variable, among which there is the denotation of the tag. Note that the possibility of interpreting *icché* as a *wh*-word different from ‘what’ is not totally unconstrained<sup>10</sup>.

Although previous work on analogous structures in Spanish adopt a monoclausal approach (see the reference quoted in fn. 1), Fiorentino suggests that a biclausal analysis is to be adopted for this variant as well. If we apply again the tests we used in the previous sections to argue for a biclausal analysis of split questions we get the same results as above. The *wh*-word and the tag show connectivity effects with respect to thematic role (35a), case (35b), duplication of prepositions in the tag (35c), and binding ((35d), illustrating Condition C effects). On the other hand, Vehicle Change effects are found in split questions in Fiorentino as well, as shown in (35e):

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<sup>9</sup> I owe this idea to Valentina Bianchi (p.c.).

<sup>10</sup> A condition which seems to affect the possibility of realizing the *wh*-word as *icché* is the “distance” between it and the matching tag. In all the questions reported below *icché* is meant to replace *chi*, ‘who’, and a DP or PP intervene between it and the tag. All the speakers I have consulted judge examples like these very marginal or ungrammatical.

- (i) a. ?\**Icché* ha portato la cena, Sara?  
       what has brought the dinner S.  
    b. ?\**Icché* è arrivato ieri, Gianni?  
       what is arrived.M.SG. yesterday G.  
    c. ?\**Icché* si è trasferito a Milano, Gianni?  
       what himself.CL. is moved.M.SG. in Milan G.

The same happens if we try to interpret *icché* as *quando* (ii.a), *dove* (ii.b), *come* (ii.c) or *perché* (ii.d) in presence of an ‘intervening’ phrase:

- (ii) a. ?\**Icché* andate al cinema, sabato?  
       what (you) go.2.PL. to the cinema Saturday  
    b. ?\**Icché* porterai Giulio, allo stadio?  
       what (you) take.FUT.2.SG. G. to the stadium  
    c. ?\**Icché* è andata a Roma, in treno?  
       what (she) is gone.F.SG. to Rome by train  
    d. ?\**Icché* sei partito in quel modo, per colpa di tuo fratello?  
       what (you) are left.M.SG. in that way for fault of your brother

It is tempting to see this limitation as a kind of garden-path effect, an intuition which I leave for further study.

- (35) a. *Icché* hai invitato, #la macchina  
 what (you) have.2.SG. invited the car  
 b. *Icché* hanno visto, me/\*io?  
 what (they) have.3.PL. seen me/I  
 c. *Icché* l' hai detto, \*(a) Sara?  
 what (you) it.CL. have.2.SG. said to S.  
 d. *Icché* *pro*<sub>j/\*i</sub> ha invitato, Luca<sub>i</sub>?  
 what (she) has invited L.  
 e. *Icché* l' ha corretto l'articolo di Gianni, lui<sub>i</sub>?  
 what it.CL. has corrected the article of G. he

These data suggest that this variety of split questions should be analyzed along the lines developed in section (3).

I mentioned in fn. (8) that split questions in Fiorentino could be confused with polar questions given that in this variety polar questions can be introduced by the morpheme *che*, omophonous to the wh-word (*ic*)*ché*<sup>11</sup>. The converse case does not occur: it is never possible to realize the particle introducing polar questions as *icché*. This is clearly shown by the following example:

- (36) *Che*/\**Icché* dormi?  
 that/what (you) sleep.2.SG.

Example (36) shows that (*ic*)*ché* cannot replace the interrogative particle (otherwise the sentence should be grammatical given that *che* is perfect here) and can only mean *what* (apart from its peculiar use in split questions, which is not at stake here). As such, it cannot occur in (36) given that *dormire* is an unergative verb. The possible confusion between polar questions headed by *che* and split questions introduced by (*ic*)*ché* may be favoured by the fact that the interpretation of the two structures (which have nonetheless a different intonation) is similar. However, there is compelling evidence that polar questions and split questions have a completely different structure, monoclausal the former and biclausal the latter. Consider the following minimal pair:

- (37) a. (*Che*)/\**Icché* hai visto Gianni?  
 that/what (you) have.2.SG. seen G.  
 b. \*(*Che*)/*Icché* hai visto, Gianni?  
 that/what (you) have.2.SG. seen G.

(37a) is a polar question ('Did you see Gianni?'), in fact *che* (an interrogative particle/complementizer) can be omitted and cannot be replaced by *icché*. On the other hand, (37b) is a split question ('Who did you see, Gianni?') and (*ic*)*ché* cannot be omitted given that it is the internal argument of *vedere*. Extra evidence supporting a different

<sup>11</sup> In the remainder of this article I assume that the particle/complementizer *che* is optional and abstract away from its semantic contribution. Note however the distribution of *che* is not unconstrained when it interacts with the interrogative particle *o* which is associated to "non canonical" interrogative interpretation (*surprise* questions, etc.) Since this issue is orthogonal to our concerns here, I leave it out of the discussion and refer the readers to Botteri (in prep.). See also Garzonio (2005).

analysis for pairs like (37a-b) comes from clitic resumption and island sensitivity. Clitic resumption of the object DP *Gianni* is possible in the polar question (*Che l'hai visto Gianni?*), whilst it is never possible to resume the wh-moved XP in a split question, nor in a standard wh-question (*Iché (\*l') hai visto, Gianni?*) (recall the discussion around (23) above). Furthermore, in both parts of a split question, A-bar movement occurs which, as expected, is sensitive to island constraints (as in *\*Iché ti dà fastidio il fatto [che abbia visto <icché>], Gianni?* 'What bothers you, the fact that I have seen Gianni?'). On the other hand, the complementizer *che* has no relation with the material inside the island and no island effect arises (*Che ti dà fastidio il fatto che abbia visto Gianni?*). These arguments clearly indicate that split questions and polar questions have a completely different structure. Interestingly enough, a closely related variety as Siense seems to always have *che* in place of *icché* so that the problem of disambiguating minimal pairs like the one proposed in (37a-b) is still more troubling. Crucially, also in Siense *che* can be omitted when it is a particle/complementizer but not when it is an argument<sup>12</sup>. Keeping this in mind, let's now consider a related structure attested in Siense and discussed by Lusini (2013), which is constituted by questions introduced by *che* and a tensed form of *fare* 'do'<sup>13</sup>.

- (38) *Che fate andate a Roma?*  
 what (you) do.2.PL. (you) go.2.PL. to Rome  
 'What are you doing? Are you going to Rome?'

Although Lusini (2013) analyzes these structures as polar questions headed by *che* and optional occurrence of *fare* as a functional, non contentful verb, there is evidence that they should be analyzed as biclausal instead (in fact as pairs formed by a wh-question and a non-wh question with broad focus in the latter)<sup>14</sup>. First of all, it must be noticed that the morpheme introducing these questions cannot be the interrogative complementizer. We have just seen that *che* can usually be omitted as a complementizer. As shown by (39), this is not possible in the case at hand.

- (39) *\*(Che) fate andate a Roma?*

This can be explained assuming that structures like these are formed by a wh-question with *che* as the internal argument of *fare* (which explains why it cannot be omitted) and a non wh-question. Extra evidence for this hypothesis comes from cross-linguistic comparison. We saw above that Fiorentino realizes the wh-word corresponding to pronominal *what* as *(ic)ché*. In all cases of *fare* insertion, *che* can be replaced by *(ic)ché*

<sup>12</sup> As expected, in all the cases in which *che* is an interrogative pronoun the word-by-word translation in Fiorentino allows *icché*, which is never case when *che* is a complementizer. The cliticization and island-sensitivity tests used in the discussion around example (37) apply consistently to Siense too.

<sup>13</sup> The same structure is found also in Fiorentino, modulo the possibility of realising *che* as *icché* as we will see in a while.

<sup>14</sup> Lusini (2013) observes that in examples like (39), which she calls '*che fare* questions', *fare* can combine with verbs which do not assign any thematic role, which should prove that *che* is not extracted from any clause-internal position (as expected in a monoclausal analysis). However this is questionable given the possibility of questions like *Che fa domani?* meaning 'What's the weather like tomorrow?' where it is apparent that *che* is not a complementizer (*\*Fa domani?*).

(40a), which is never possible when *che* introduces a plain polar question (40b).

- (40) a. *Iché fa, piove?*  
           what (it) does (it) rains  
       b. \**Iché piove?*<sup>15</sup>  
           what (it) rains (Fiorentino)

There is another piece of evidence in favour of a biclausal treatment of this type of questions. Like “canonical” (i.e. elliptical) split questions, *che*-fare questions cannot be embedded, even when *che* is replaced by *se* ‘whether’, which usually introduces embedded polar questions.

- (41) \**Non so che/se fate, andate a Roma?*  
       (I)don’t know that/whether (you.2.PL.) do.2.PL go.2.PL. to Rome

In a monoclausal analysis the impossibility of embedding this type of questions should be explained. On the other hand, if this type of questions (as split questions in general) are indeed a sequence of questions, the ban on embedding is readily explained.

### 7. *The conversational import of split questions*

In the analysis defended here, split questions are formed by two questions. Obviously, the fact that questions follow one another in everyday conversations is not a peculiar property of split questions. Following Roberts (2012), which in turn follows Stalnaker (1978), we can think of conversation as a cooperative task in which the speakers try to discover and share with each other information on the world<sup>16</sup>. In order to achieve this, the speakers usually make use of strategies of inquiry, that is

«sequences of setup moves, or questions, designed to (at least partially) satisfy the aims of the game while obeying the game’s constraints»

(Roberts 2012, 6)

where the game’s constraints are constraints on the speakers’ linguistic behaviour and can themselves be linguistic (e.g. syntax and compositional semantics) or not (involving, for instance, the speakers’ ability to rationally evaluate the goal of the game or cognitive limitations). Particularly relevant for our purposes is the fact that questions can be followed by other logically related questions uttered to simplify the task of answering the question under discussion (QUD), that is the topic of discussion. Let’s try to be more precise. First of all, Roberts adopts the proposition set analysis for the semantics of questions (Hamblin 1973) and much related work) according to which the denotation of a question is a set of propositions. Consider the following example:

<sup>15</sup> In the intended reading ‘Is it raining?’.

<sup>16</sup> Ultimately the goal of a conversation is to answer what Roberts calls ‘the Big Question (*What is the way things are?*)’. Consequently, all the questions posed in a conversation can be seen as moves made to make this task easier.

(42) What is John reading?

Assuming for simplicity that the restriction of the wh-phrase consists of the following set:={Tender is the night, A farewell to arms, To kill a mockingbird}, the denotation of (42) is the set whose members are the propositions ‘John is reading Tender is the night’, ‘John is reading A farewell to arms’, ‘John is reading To kill a mockingbird’.

(43)  $[[\text{What is John reading? }]] = \{ \{w : \text{John is reading Tender is the night in } w\}, \{w : \text{John is reading A farewell to arms in } w\}, \{w : \text{John is reading To kill a mockingbird in } w\} \}$

On a pair with questions, also assertions (i.e. answers to questions) are associated with sets of alternatives which can be generated on the bases of the placement of prosodic focus. Consider the following sentences:

(44) a. John is reading [Tender is the night]<sub>F</sub>  
 b. [John]<sub>F</sub> is reading Tender is the night.

In the Alternative Semantics framework (Rooth 1985, 1992 and much related work), a linguistic expression has two semantic values: an ordinary value (its standard denotation) and a focal value which consists of a set of alternative denotations of the same semantic type. The ordinary semantic value of (44a-b) is the proposition that John is reading Tender is the night (type  $\langle s, t \rangle$ ). The focal semantic value can be obtained by substituting for the denotation of the focused constituent the alternative values introduced by focus marking. More precisely, the focus operator introduces a free variable of the type of a set of objects of the same type as the constituent  $\alpha$  to which the focus operator attaches (e.g. at the propositional level – type  $\langle s, t \rangle$  – the free variable will be of type  $\langle \langle s, t \rangle, t \rangle$ ), which must be a contextually relevant subset of the focus semantic value of  $\alpha$ , containing both its ordinary semantic value and at least one distinct alternative. Accordingly, the focal value of (44a-b) will be the following.

(45) a.  $[[\text{John is reading [Tender is the night]}_F]]^f = \{p: p = \text{John is reading } x \mid x \in D_e\}$   
 b.  $[[\text{[John]}_F \text{ is reading Tender is the night}]]^f = \{p: p = y \text{ is reading Tender is the night} \mid y \in D_e\}$

We saw above that the denotation of a question is a set of propositions (type  $\langle st, t \rangle$ ) and that, in the answer, the value of the free variable introduced by the focus operator at the propositional level is also of type  $\langle st, t \rangle$ . Questions—answer congruence requires that the denotation of the question is the value given to the free variable introduced by the focus operator. Since the free variable must be a subset of the focus semantic value of the subtree which contains the focus-marked constituent, the set of propositions denoted by the question must be a subset of the set of alternative propositions generated by the focus in the answer as well. In our examples, this happens in (45a) but not in (45b). Since the question denotation (43) is a subset of the focus semantic value of (44a), that is, the set of propositions in the form ‘John is reading x’, the latter can be felicitously uttered to answer (42). Consider now (45b). This time, the focal value of the answer is the set whose members are propositions in the form ‘y is reading Tender is the night’ (e.g. ‘Mary is reading Tender is the night’, ‘Dave is reading Tender is the night’, etc.). Here the

congruence requirement between question and answer is not met; that's why (44b) cannot be uttered as a felicitous answer to question (42).

We can now return to consider logical relations between questions. Consider the following definitions, given by Roberts:

- (46) A partial answer to a question  $q$  is a proposition which contextually entails the evaluation – either true or false – of at least one element of  $Q\text{-alt}(q)$ .  
 A complete answer to a question  $q$  is a proposition which contextually entails an evaluation for each element of  $Q\text{-alt}(q)$ .<sup>17</sup> (Roberts 2012, 11)  
 A question  $q_1$  entails another question  $q_2$  iff answering  $q_1$  yields a complete answer to  $q_2$ .<sup>18</sup> (Roberts 2012, 12)

Let's clarify the entailment relation defined in (46) with an example. Imagine a conversation where the speakers are talking about what John is studying at University. One of the speakers utters.

- (47) What is John studying?

Suppose that there are only two possible things for John to study, Syntax or Semantics. In this scenario, giving a complete answer to (47) entails answering to each of the following:

- (48) a. Is John studying Syntax?  
 b. Is John studying Semantics?

Consequently, according to definition (46), question (47) - the super-question - entails (48a-b) - the sub-questions. Given this, if both the sub-questions are answered, the super-question is answered too and can be removed by the QUD stack<sup>19</sup>. Maintaining the discussion on this rather informal level, we might say that the sequence constituted by (47) and (48a-b) is a felicitous strategy of inquiry through which the speaker tries to achieve his aim of discovering what John is studying. Imagine now that (49), a split question, is uttered instead:

- (49) What is he studying, Syntax?

Under the analysis developed in the previous sections, (49) is formed by the sequence of (50a-b):

- (50) a. What is he studying?  
 b. [Syntax]<sub>F</sub> is he studying <Syntax>?

The crucial point here is that in (50b) the constituent matching the wh-phrase in (50a) is focus marked. We have already seen that in the framework adopted here, focus marks

<sup>17</sup>  $Q\text{-alt}$  is the denotation of  $q$  under a proposition set analysis.

<sup>18</sup> That is, iff every proposition that answers  $q_1$  answers  $q_2$  as well (Groenendijk & Stokhof 1984, 16).

<sup>19</sup> Technically, the QUD stack is an ordered set of unanswered questions.

congruence with a question under discussion. Now, what is crucial for our purposes is that the presupposition of prosodic focus in an utterance can be defined independently of whether we are dealing with an assertion or a question.

- (51) Given \*B, an utterance of B with \* a mood variable ranging over interrogative/assertive operators, we can define Presupposition of prosodic focus in an utterance \*B as follows:

Presupposition of prosodic focus in an utterance \*B

B is congruent to the question under discussion at the time of utterance.

(Roberts 2012, 33)

In (50b), focus on *Syntax* generates at the clausal level a set of alternative propositions in the form ‘He is studying x’, in the scope of the interrogative operator. The denotation of the wh-question is a set of propositions, which has two members (the propositions ‘John is studying Syntax’ and ‘John is studying Semantics’). Question-question congruence is guaranteed because the question denotation is a subset of the set of alternative propositions generated by the focus in the polar question (i.e. the set of propositions in the form ‘John is studying x |  $x \in D_e$ ’)<sup>20</sup>. In our scenario, question (50a) entails question (50b), and also the alternative propositions generated by the focus. A split question is thus a sequence of questions which constitute a felicitous strategy of inquiry (recall the discussion around the sequence of questions (47) and (48a-b) above). Let’s summarize what we have been discussed in this section. A split question can be seen as a sequence of two questions where the question uttered first is the super-question which the speaker tries to answer by posing the second question, a sub-question of the former. The pragmatic contribution of split questions can thus be seen as to make explicit the strategy of inquiry adopted by the speakers. In this sense it can be seen as a move made to ensure that the intentions of the speaker are recognized by the other participants to the conversation.

## 6. Conclusions

In this article I have argued in favour of an ellipsis account of split questions. Taking into account Italian data, I have discussed evidence already considered in the literature (in particular in Arregi 2010) involving connectivity effects between the wh-word and the tag of a Split Question. I have discussed three extra arguments in favour of a biclausal analysis of these structures: the relative position of argumental DPs, featural mismatches in split questions construed on an alternative question and the properties of the peculiar type of split questions found in Fiorentino. Finally, I have discussed some aspects of the semantics and pragmatics of Split questions, trying to characterize their conversational import.

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<sup>20</sup> As Valentina Bianchi (p.c.) points out to me even without extending question-answer congruence to question-question congruence, the strategy is felicitous because the wh-question entails the polar question.

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